



April 02, 2018

Ms. Tara L. Rutland
Project Manager, Bureau of Eastern Remedial Action
Division of Environmental Remediation, 11th Floor
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7015

Dear Ms. Rutland:

WSP USA Inc. (WSP) has prepared the attached OU-2 Remedial Investigation Report for the former TransTechnology Corporation facility in Glen Head, New York. The previous version of the report, dated June 16, 2016, was revised in response to comments by the New York State Department of Environmental Conservation in a letter dated January 3, 2018. The comments and responses are summarized below.

Comment

Please include the following certification statement complete with necessary signature (DER-10 Section 1.5, pg. 22).

"I _____ certify that I am currently a [NYS registered professional engineer or Qualified Environmental Professional as defined in 6 NYCRR Part 375] and that this Remedial Investigation Report was prepared in accordance with all applicable statutes and regulations. I also certify that this report was prepared in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10), and that all activities were performed in full accordance with the DER-approved work plan along with any DER-approved modifications."

Response

WSP has included the certification statement, which is signed by James Sobieraj, P.E.

Comment

Please title the report: OU2 Remedial Investigation Report, as it is a final report for this operable unit.

Response

WSP has changed the title as requested.

Comment

Please provide a qualitative human health exposure assessment, in accordance with DER-10 section 3.14(a)4, paragraph (c)17, and Appendix 3B.

Response

A qualitative human health exposure assessment is included as new Section 4.4 of the report.

Comment

Per DER-10, Section 3.14(c)3, please include the relevant SCG in the text of the report when referring to specific “ambient water quality standards”. For example, in Section 2.4.1 “...at concentrations above the NYSDEC’s ambient water quality standards of X µg/l.” Do the same on page 20 for the 2nd & 9th bullets.

Response

The ambient water quality standards have been specified in the referenced sections and other places where achievement of standards is discussed.

Comment

Correct the word ‘stage’ to the word ‘staged’ on Page 9, in the First Paragraph, on Line 9

Response

This correction has been made.

Comment

Correct the designation of GP-06 from G-06 on Page 13, in the Second Paragraph, on Line 10

Response

This correction has been made.

Comment

Page 19, last paragraph: Please remove the last sentence as there is no data to support any correlation of onsite soil gas contamination with upgradient sources.

Response

The sentence has been removed.

Comment

Correct the designation of TT-MW-09 from TTMW-09 on Page 20, in the Second Paragraph, on Line 9

Response

This correction has been made.

Comment

Page 20: Please replace the second to last bullet with the following: Both plumes are attenuating under ambient conditions over time as demonstrated in Graph 1 and Graph 2. Of the 13 wells currently included in the monitoring program, only 3 are downgradient of TTC. TCE is present in concentrations above its ambient water quality criterion of 5 µg/l in the 3 downgradient wells.

Response

This change has been made.

Comment

Page 21, Second Paragraph, Line 5, Change “overly” to “overlay”

Response

This change was made in the third paragraph of Section 4.3, which was apparently the only place in the report with the word “overly”.

Comment

The graphs on page 50 & 51 need to have a legend identifying which colors represent which well as seen on the pg. 14 graphs.

Response

The graphs have a legend identifying which colors represent which well (in the lower-right portion of each figure).

Comment

Figure 11: Please add a groundwater flow direction identifier and a legend that speaks to the years of the data represented.

Response

A groundwater flow direction identifier and information on the years represented have been added to Figure 11. In addition, Figure 10 has been modified to show the results for each sampling round between 2012 and 2016 (it previously showed data only from 2012).

We also made minor changes to reflect updated information on the site conditions, such as the building demolition having been completed.

Sincerely yours,



Michael J. Brown, Ph.D.
Vice President

Enclosure

BREEZE-EASTERN LLC

OU-2 REMEDIAL INVESTIGATION REPORT

FORMER TRANSTECHNOLOGY
CORPORATION FACILITY, GLEN HEAD, NEW
YORK

APRIL 2, 2018





OU-2 REMEDIAL INVESTIGATION REPORT FORMER TRANSTECHNOLOGY CORPORATION FACILITY, GLEN HEAD, NEW YORK

BREEZE-EASTERN LLC

PROJECT NO.: 31400522
DATE: APRIL 2, 2018

WSP
4TH FLOOR
75 ARLINGTON STREET
BOSTON, MA 02116

TEL.: +1 617 426-7330
FAX: +1 617 960-4987
WSP.COM



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CERTIFICATION

I, James A. Sobieraj, certify that I am currently a New York State registered professional engineer and that this Remedial Investigation Report was prepared in accordance with all applicable statutes and regulations. I also certify that this report was prepared in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were prepared in full accordance with the DER-approved work plan along with any DER-approved modifications.

James A. Sobieraj

Name



Signature

April 2, 2018

Date

1 INTRODUCTION

In September 2005, Geomatrix Consulting Engineers¹, of Amherst, New York, completed a Remedial Investigation (RI) for the former TransTechnology Corporation (TTC) facility in Glen Head, New York. The report, which was the culmination of investigations initiated in the early 1990s, identified the presence of chemicals of concern (COCs) related to past use of the facility as an electronics manufacturer. The COCs included metals from past plating operations and chlorinated volatile organic compounds (VOCs) from the facility's degreasers. These constituents were present in surface soil, in the groundwater (VOCs only), and in the sediment within a number of subsurface drainage structures (leach pits, cesspools, catch basins, etc.) at the site. A concurrent Feasibility Study (FS) prepared by Geomatrix, identified excavation as the most appropriate remedy for the impacted soil and sediment at the site. The New York State Department of Environmental Conservation (NYSDEC) agreed with the proposed plan issuing a Record of Decision (ROD)² in 2006 approving the remedy for soil and sediment, later designated as Operable Unit No. 1 (OU-1). Geomatrix performed the first phase of excavation in 2009 with the balance of the OU 1 work completed by WSP Engineering of New York, P.C. in 2011 and early 2012.

The chlorinated VOCs detected in groundwater, as interpreted in the 2005 RI/FS, were the result of a release of trichloroethene (TCE) from the facility's degreaser. The area of TCE-affected groundwater was limited in extent, apparently had not migrated offsite, and was comingled with a substantially larger, regional tetrachloroethene (PCE) dominated plume resulting from offsite releases at several nearby dry cleaning facilities. Geomatrix concluded that the remediation of the affected groundwater at the site was impracticable given the overlap with the regional PCE plume and unwarranted given the limited nature of the TCE plume and anticipated future land use. The NYSDEC indicated that additional data were necessary to develop this type of conclusion. The state requested supplemental investigations to verify the extent of the affected groundwater (and later, the soil gas), which was designated by the NYSDEC as Operable Unit No. 2 (OU-2).

Subsequent investigations performed by Geomatrix in 2008 confirmed that TCE-affected groundwater was present along the western property line and appeared, based on the regional flow field, to possibly be migrating offsite. Geomatrix developed a follow-up work plan for OU-2 in early 2010 to evaluate the potential offsite extent of the TCE-affected groundwater and any impact it may have, if present, on the soil gas above the plume. The plan was approved by the NYSDEC later that year. In December 2010, Breeze-Eastern Corporation³ (TransTechnology changed its name to Breeze-Eastern in 2006) retained WSP USA Corp⁴ to perform the remainder of the supplemental OU-2 activities (and other work) at the site.

WSP implemented Geomatrix's work plan in late 2010 and performed additional investigations in 2011 and early 2012 to further characterize the affected groundwater and soil vapor. These activities included sampling monitoring wells, delineating the vertical and horizontal extent of TTC-related VOCs in groundwater using profiling techniques, and evaluating the onsite and offsite soil gas. WSP also initiated a follow-up groundwater sampling program, conducted on an approximately semiannual basis between 2012 and 2016, to document the fate of the chlorinated VOCs in groundwater over time. WSP's data verified that TCE-affected groundwater had migrated offsite and overlapped the regional PCE plume. Both TCE and PCE were also detected in soil gas samples from the adjacent neighborhood and in samples collected from select onsite locations sampled in 2011.

This revised⁵ report documents the additional OU-2 groundwater and soil gas investigations requested by the NYSDEC and is being submitted as a supplement to the original 2005 RI (i.e., a supplemental RI or SRI for OU-2). Specifically, the report details the work performed by WSP between 2010 and 2016 after being retained by Breeze-Eastern to complete the OU-2 activities. Data from these investigations have not been officially reported to the NYSDEC prior to this document.

¹ Geomatrix Engineering, LLC, also known as Geomatrix Consultants, Inc., was acquired by AMEC becoming AMEC-Geomatrix, Inc. For discussion purposes, all three entities are referred to as Geomatrix.

² Record of Decision, TransTechnology, Operable Unit No. 1, Glen Head, Nassau County, New York, Site Number 1-30-101, dated June 2006

³ Breeze-Eastern Corporation subsequently was renamed as Breeze-Eastern LLC following its purchase by TransDigm Group in 2016.

⁴ Formerly WSP Engineering of New York, P.C.

⁵ WSP performed additional groundwater sampling between 2012 and 2016 while the original version of this report was under review by the NYSDEC. The methods and results of the additional groundwater sampling are presented below. WSP also, at the request of the Department, removed soil investigation findings that appeared in the original SRI. The soil investigations, which are post-dénouement (OU-1) activities, are being performed as part of the effort to reclassify a portion of the site for residential use, as detailed in the Residential Reclassification and Feasibility Study Work Plan, Former TransTechnology Facility, Glen Head, New York, dated December 9, 2011. The results of the investigation were provided in the *Final Shallow Soil Characterization and Deep Soil Investigation Report*, dated October 12, 2017.

Supplemental investigation conducted by Geomatrix shortly after the RI (designated by Geomatrix as Phase 1), which was reported to the NYSDEC, is included, but is presented in the background section of the report. Data from both phases of supplemental investigation (and from the RI) are included in the discussion of the nature and extent of affected groundwater and soil gas at the site.

1.1 REPORT ORGANIZATION

The format and content of this SRI were developed based on the guidance in DER-10, Technical Guidance for Site Investigation and Remediation, May 2010. The report is divided into five sections, including this introduction (Section 1):

- Section 2 describes the site location and setting, the operational history, and provides background on the previous investigation and remedial measures implemented at the site.
- Section 3 summarizes the supplemental investigation activities performed, and provides a summary of the results obtained with a comparison to the appropriate regulatory limits.
- Section 4 includes a discussion of the nature and extent of the affected media for OU-2 and WSP's conceptual site model.
- Section 5 provides a summary of the SRI findings and conclusions.

It is important to note that this report is an addendum to the original RI submitted in 2005 and is not intended to be comprehensive. Historical investigations, including the RI itself, are summarized, where appropriate, for context but are otherwise not detailed in this report. Likewise, information regarding the OU-1 remedial activities (some of which were performed concurrent to the OU-2 investigations) is not discussed in this document except to provide a setting for the analysis of the supplemental data. Additional information regarding the relevant pre-SRI activities can be found in the following documents:

- *Remedial Investigation/Feasibility Study Work Plan for the TransTechnology Corporation Glen Head Site*, dated July 2002 and prepared by Geomatrix Consultants, Inc. (RI/FS Work Plan)
- *Remedial Investigation Report, TransTechnology Corporation Glen Head Site, Site Number 1-30-101*, dated September 2005 and prepared by Geomatrix Consultants, LLC. (RI Report)
- *Supplemental Work Plan for Operable Unit No. 2*, dated April 2008 and prepared by Geomatrix Consultants, LLC
- *Technical Memorandum: Operable Unit No. 2 Supplemental Investigation Phase I Results*, dated October 9, 2009 and prepared by AMEC-Geomatrix, Inc.
- *Work Plan, Operable Unit 2 Supplemental Investigation, Phase 2, TransTechnology site #1-30-101*, dated July 2010 and prepared by AMEC-Geomatrix Inc. (Supplemental RI Work Plan)
- *Residential Reclassification and Feasibility Study Work Plan, Former TransTechnology Facility, Glen Head, New York*, dated December 9, 2011 and prepared by WSP Engineering of New York, P.C. (Reclassification Work Plan)
- *Final Shallow Soil Characterization and Deep Soil Investigation Report, Former TransTechnology Corporation Facility Glen Head, New York*, dated October 12, 2017 and prepared by WSP USA.

It is also important to note that the offsite soil gas data collected as part of the SRI activities led to an additional phase of work to evaluate the potential for the chlorinated compounds detected to impact the indoor air quality in homes (via vapor intrusion) near the facility. These activities are being conducted under a separate, parallel investigation and soil vapor mitigation track overseen by both the NYSDEC and the New York State Department of Health (NYSDOH). This approach was adopted to allow immediate action to address, if necessary, the only potentially open exposure pathway related to groundwater at the site. All of the vapor intrusion data are being reported to the Departments under separate cover and are not included in this report.

2 BACKGROUND

The former TTC site facility is located at 1 Robert Lane in the City of Glen Head, New York, in the northwest portion of Long Island (Figure 1). Originally developed for the Lundy Electronics Company in the late 1950s, the site formerly consisted of a 96,000-square-foot main manufacturing building with several smaller outbuildings on a 7.75-acre site in a mixed-use commercial and residential area (Figure 2). The site is generally flat and rectangular-shaped with the long axis oriented north-south. Prominent features at the site prior to its redevelopment (described below) include the main building, which was constructed from a series of smaller, connected, single-story concrete block structures that were expanded over time from south to north (labeled as Buildings E, F, G, H, and I; Figure 3). Most of the manufacturing activities were conducted within these joined buildings. Several smaller one-story concrete block buildings formerly located at the south end of the site, labeled as Buildings B, C, and D, were used for circuit board cleaning and wave soldering operations with the southernmost building, Building A, used as a research and development facility. Large paved areas were located directly north of the main building (a parking lot) and between the main and outbuildings (the former loading dock and shipping areas). Access to the site is via a paved drive leading from Dumond Street west of the site. The site legal description and meets and bounds survey are included in Appendix A.

2.1 SITE REDEVELOPMENT

Demolition of the site structures, including the main and outbuildings, was begun in late 2015 following completion of the OU-1 soil remediation activities at the site. The deconstruction was performed in advance of the planned redevelopment of the site as a mixed residential community. At the time this revised report was prepared, most of the above grade features at the site have been razed with only portions of the hardscape asphalt removal remaining. The asphalt removal is anticipated to be completed during 2018 or 2019.

To minimize confusion, WSP has elected to retain the buildings and other site features in the text descriptions of the site and on the figures included with this report. These structures aid in locating specific areas of the site and provide context for the conceptual site model discussed below.

2.2 OPERATIONAL HISTORY

Lundy began manufacturing aircraft actuators, printed circuit boards, and a variety of computer components in the late 1950s, shortly after the site was developed, through the 1980s. Solvents, including TCE, were used for metal finishing and degreasing activities at the plant. Lundy reportedly reduced its solvent use after 1978 when machining activities were discontinued. The facility was later purchased by TTC in 1984. Manufacturing operations continued under TTC until 1994 when operations ceased and the facility was decommissioned. TransTechnology changed its name to Breeze-Eastern in 2006.

Portions of the main and outbuildings were leased to small business beginning in the mid-1990s shortly after the decommissioning was completed. Tenants and a Breeze-Eastern caretaker occupied the site through 2004 when Breeze-Eastern began vacating the facility in preparation for the remedial work. The caretaker reportedly remained at the facility through 2009 when the first soil excavations began. The site is currently vacant.

2.3 PREVIOUS INVESTIGATION

Chlorinated solvents were first detected at the site in the early 1990s as part of a groundwater screen associated with the removal of an underground fuel oil tank east of former Building G (Figure 3). No fuel oil was detected at the water table approximately 100 feet below ground surface (bgs); however, concentrations of TCE (44 micrograms per liter [µg/l]), PCE (2.5 µg/l), and several other chlorinated VOCs were detected as dissolved constituents in the groundwater. The NYSDEC and Nassau County Department of Health (NCDH) were notified of the presence of VOCs in groundwater and preparations were made for additional investigations.

Six follow-up investigations were performed at the site between 1992 and 2002 to characterize the soil quality in and around suspected source areas (including some leach pits) and further evaluate the extent of chlorinated VOCs in the groundwater, including:

- A 1992 Hydrogeologic Assessment performed by Environmental Resources Management – Northeast (ERM Northeast), of Woodbury, New York.
- A Phase I Environmental Audit (1992) and follow-up Phase II Investigation (1993) performed by Eder Associates of Locust Valley, New York.
- A 1996 Subsurface Soil and Groundwater Investigation performed by Conestoga-Rovers and Associates of Niagara Falls, New York.
- Leach pit and cesspool investigations⁶ performed by Geomatrix of Williamsville, New York in 2001 and 2002.

These investigations included a number of soil borings, soil vapor sampling points, and 11 groundwater monitoring wells, designated⁷ TT-MW-1 through TT-MW-11, three of which, wells TT-MW-7, TT-MW-9, and TT-MW-11, were installed at deeper intervals (125 to 150 feet bgs) to evaluate the deeper groundwater quality (i.e., approximately 25 to 50 feet below the top of the water table elevation; Figure 4). All of the wells were screened in similar geologic materials consisting primarily of coarse sand and gravel with occasional silty and micaceous sand interbeds and clay seams. These materials are comparable with the descriptions of the Pleistocene-aged Upper Glacial and the upper portions of the Cretaceous-aged Magothy Formations, hydraulically connected unconsolidated units that underlie much of Long Island and are the primary source of potable water for Nassau County⁸.

Groundwater samples collected from the wells contained up to 1,800 µg/l of TCE and 16,000 µg/l of PCE. The TCE groundwater results, when plotted, appeared to outline a shallow (i.e., in the upper 10 to 20 feet of the water bearing zone) groundwater plume extending from the southeast corner of the facility north-northwest towards the property line along the interpreted groundwater flow direction. Soil gas samples collected during the Eder Associates investigation showed a similar pattern. The distribution of the PCE in groundwater and soil gas, which was detected primarily in the southern portion of the site upgradient from the former manufacturing areas of the facility, suggested an offsite release. The NYSDEC, based on these (and other) findings, listed the former TTC facility as a Class 2 Inactive Hazardous Waste Disposal Site (#1-30-101) and launched separate investigations (the 2000 Preliminary Site Assessment for the Glen Head Region Groundwater Plume and the 2007 Site Characterization Report, Glen Head Groundwater Plume) into the upgradient release of PCE (see Section 2.3.1 below).

The work at the TTC site eventually led to an Order on Consent (Index #WI-0913-02-02) filed with the Nassau County Clerk's Office by NYSDEC in May 2002. The order required that TTC undertake remedial work at the site to address the impacts to soil and groundwater beginning with the submission of a RI/FS Work Plan. TransTechnology Corporation retained Geomatrix to develop the plan, which was submitted later that year. Approval of the RI/FS work plan was granted in September 2002.

2.3.1 NYSDEC INVESTIGATIONS

The NYSDEC investigations in 2000 and 2007 included evaluating soil and sediments, groundwater, and soil vapor over a 40-acre study area that included portions of the TTC site. The focus of the work was a series of former and active dry cleaning facilities (and one automobile repair facility) south and southeast (upgradient) of the TTC facility, including the former Fresh and Clean Dry Cleaners, Glen Head Dry Cleaners, and Soundview Dry Cleaners, all of which had documented

⁶ Geomatrix's investigations, which focused on the soil and sediment at the site, did not include any additional groundwater sampling. The investigation findings were integral in the NYSDEC's decision to file an Order on Consent for the site in 2002, but are otherwise not relevant to this report.

⁷ The identification numbers for wells installed at the former TTC site in the 1990s did not include the "TT" prefix. The prefix was added by the NYSDEC during their related investigations (detailed below) to distinguish between the existing wells related to the former TTC facility and those with similar names (e.g., MW-1, MW-2, etc.) installed specifically for the NYSDEC's offsite investigation. The naming convention was adopted for this document to maintain consistence and avoid confusion between the two sets of wells.

⁸ It is important to note that, although the Upper Glacial and Magothy units provide drinking water for the county, there is no exposure to affected groundwater at the site or in the neighborhoods directly downgradient of the facility. These areas are supplied by the Sea Cliff Water District municipal water system, which is tested and treated, if necessary. Individual water supply wells are prohibited by local ordinance.

releases of PCE to the environment (Figure 2). Eleven groundwater monitoring wells, designated MW-01 through MW-11, were installed and sampled (along with eight of the existing wells at the former TTC facility) over the course of the two investigation cycles (Figure 4).

The results of the groundwater investigations revealed five chlorinated VOCs, PCE, TCE, cis-1,2-dichloroethene (cis-1,2-DCE), 1,1,1-trichloroethane (1,1,1-TCA), and 1,1-dichloroethane (1,1-DCA), at concentrations above the NYSDEC's ambient water quality standards⁹ for class GA groundwater (5 µg/l for each principal organic compound). The predominant compound, PCE (10 to 18,000 µg/l¹⁰), was detected in samples from all of the wells with the highest concentrations detected in wells MW-01, MW-04, and TT-MW-4 (Figure 4). These three wells traced out what appeared to be the core of a plume extending from Glen Head Road (near the intersection of the LIRR tracks) northwest parallel to the regional groundwater flow direction beneath the adjacent residential neighborhoods and the southern portion of the former TTC site. The full extent of the plume, both horizontally and vertically, remained undefined at the conclusion of the investigations.

The NYSDEC also performed multi-level soil gas sampling perpendicular to the suspected plume axis at sample locations SGI-01 through SGI-03 (Figure 5). Like the groundwater investigation, a range of chlorinated VOCs were detected with PCE (260 micrograms per cubic meter [µg/m³] to 280,000 µg/m³) and, to a lesser extent, TCE (9.1 to 1,200 µg/m³) present in nearly all of the vapor samples. Concentrations of PCE were highest in samples collected directly above the core of the groundwater plume near the southern portions of the former TTC site. These data agree well with the soil gas data collected for the RI investigation, which are summarized below.

2.4 REMEDIAL INVESTIGATION

The RI work at the former TTC site began in 2002 and included, among other activities, evaluating the site groundwater and the soil gas below the facility. Geomatrix gauged and sampled all 11 of the onsite wells installed during the previous investigations, including the three deeper interval wells, TT-MW-07, TT-MW-09, and TT-MW-11, and one offsite well, MW-07, installed during the NYSDEC assessments (Figure 4). Soil vapor was sampled at monitoring points installed in six of the soil boreholes (RI-3, RI-6, RI-7, RI-9, RI-11, and RI-15) completed within the onsite buildings during the investigation activities related to OU-1 with an additional eight follow-up soil vapor points (SVP-1 through SVP-7, and FS-1) installed in the southern portion of the site near Building A (Figure 5).

The gauging results¹¹ indicated that groundwater elevations ranged between 43.69 feet above mean sea level (AMSL) at well TT-MW-07 and 48.14 feet AMSL at well TT-MW-04 yielding a gradient of approximately 0.002 across the site. Groundwater elevations derived from these measurements indicated a bowed or curved pattern with groundwater flowing generally west-northwest in the southern portion of the site (i.e., south of the main building) before turning northwest between wells TT-MW-02 and TT-MW-10 and finally north-northwest in the northern portion of the site (see Table 23 and Figures 18A, 18B, and 19 in the RI). These data suggested that wells TT-MW-07 and TT-MW-08 at the northwest corner of the site were the furthest downgradient. The analytical results of the groundwater investigation revealed five chlorinated VOCs,¹² including PCE (12 to 1,700 µg/l), TCE (14 to 940 µg/l), cis-1,2-DCE (28 to 180 µg/l), 1,1,1-TCA (13 to 20 µg/l), and 1,1-DCA (10 to 11 µg/l), at concentrations above the ambient water quality standards (5 µg/l for each compound) in the shallow groundwater with only trace concentrations below the standards in the deeper groundwater samples (see Tables 21 and 22 in the 2005 RI). The highest concentrations of PCE were detected in samples from onsite wells in the southern portion of the site closest to the reported offsite releases, including TT-MW-04 (1,700 µg/l), TT-MW-05 (930 µg/l), and TT-MW-06 (1,000 µg/l; Figure 4). Relatively high concentrations of PCE were also detected in the one offsite well sampled, MW-07 (1,700 µg/l), approximately 350 feet southwest of the TTC site. The highest concentrations of TCE, in contrast, were detected in samples collected from wells near the suspected source area MW-03 (600 µg/l) and wells along the western property line, including MW-2 (940 µg/l) and MW-10 (600 µg/l). The overall distribution of chlorinated VOCs was generally consistent

⁹ As presented in the NYSDEC's Division of Water Technical and Operational Guidance Series (TOGS 1.1.1) dated June 1998 with subsequent addendums.

¹⁰ Detected in well MW-01 during a groundwater sampling event conducted by the NYSDEC in November 2004. See pages 1-3 and 1-4 in the 2007 Site Characterization Report, Glen Head Groundwater Plume for additional information.

¹¹ As measured on November 15, 2002.

¹² Trace concentrations of an additional non-chlorinated VOC, methyl tert-butyl ether (MTBE), a common gasoline additive, were also detected in the groundwater samples; however, MTBE is not a site-related compound and, thus, is not discussed in this report.

with those of the previous onsite and offsite investigations, although Geomatrix concluded that the concentrations for most of the compounds detected in the onsite wells had decreased by 50 percent or more compared to the 1996 groundwater sampling results.

The soil gas samples contained concentrations of the same five chlorinated VOCs as those detected during the groundwater investigation with the majority of the VOC mass dominated by PCE (3 to 47,000 $\mu\text{g}/\text{m}^3$) and TCE (8.4 to 2,400 $\mu\text{g}/\text{m}^3$; see Tables 13 and 14 in the RI). Both compounds were detected together although the relative concentrations of each were inversely proportional and dependent upon the sample location. The highest concentrations of PCE, for example, detected in the follow-up samples collected from the southern portion of the site, were generally accompanied by relatively low concentrations of TCE. The opposite was noted in samples collected within the main building (particularly in those samples in or near the former degreasing department) where relatively high concentrations of TCE were detected with comparatively low levels of PCE. These results generally mimic the groundwater data.

The results of these investigations suggested that the TCE-affected groundwater originating from the site did not extend beyond the property boundaries and, more importantly, was comingled with the much larger (based on the results of the RI and the NYSDEC's concurrent investigations of the upgradient dry cleaning facilities) regional PCE plume. Similar results were noted for the soil gas, which appeared to correlate with the locations of the TCE and PCE releases. Geomatrix asserted that it would be technically impractical to remediate the relatively minor TCE affected groundwater without addressing the larger regional plume and, because of the lack of current or likely future use of the onsite groundwater for potable purposes, remediation was not warranted.

The NYSDEC provided comments based on Geomatrix's data and requested additional delineation of the groundwater flow direction and offsite extent of VOCs in groundwater. NYSDEC requested that a supplemental investigation be conducted after submission of the RI to evaluate the potential for offsite migration.

2.4.1 SUPPLEMENTAL GROUNDWATER INVESTIGATION (PHASE 1)

Geomatrix developed the Supplemental Work Plan for Operable Unit 2 (Phase 1) in 2008 in response to the NYSDEC's requests. The plan provided for a phased approach to implementing the work, allowing data to be collected, and subsequent steps to be designed based on investigation results. The first phase of work consisted of collecting groundwater samples from three onsite monitoring wells, TT-MW-02, TT-MW-09 (screened over a deeper interval than nearby well TT-MW-02), and TT-MW-10, to confirm the earlier RI groundwater investigation results (Figure 4). The work also included installing two groundwater profiling locations, designated as GP-01 and GP-02, along the likely flow path (using the regional flow pattern) directly downgradient of the suspected source area. The profile points were added to provide both horizontal and vertical information (samples were collected every 10 feet between 100 and 200 feet bgs) on the extent of chlorinated VOCs. Geomatrix conducted the Phase 1 work in early 2009 and reported the results to the NYSDEC in the Technical Memorandum: Operable Unit No. 2 Supplemental Investigation Phase I Results, dated October 9, 2009. The findings are summarized below.

Monitoring well samples collected from the shallower wells (TT-MW-02 and TT-MW-10) contained chlorinated VOCs, including TCE (560 to 720 $\mu\text{g}/\text{l}$) and PCE (14 to 15 $\mu\text{g}/\text{l}$), at concentrations above the ambient water quality standards of 5 $\mu\text{g}/\text{l}$ for each compound (Figure 4; Table 1). In both cases, the results were similar to the RI with higher concentrations of TCE than PCE. Neither compound was detected at concentrations above the standards in samples from the deeper well, TT-MW-09.

Concentrations of TCE (up to 290 $\mu\text{g}/\text{l}$) and PCE (up to 6.3 $\mu\text{g}/\text{l}$) were also detected in the profiling samples above the ambient water quality standards (5 $\mu\text{g}/\text{l}$ each) with the majority of the TCE mass located in the upper 20 feet of the water table (Figure 6; Table 1). Trace concentrations of TCE were detected below that interval in samples from GP-01, although the levels were only slightly above the standard and were not detected below 150 feet bgs. No TCE was detected below 120 feet bgs in samples from GP-02. No PCE was detected at concentrations above the standard in intervals deeper than 110 feet bgs) in samples from GP-01 or GP-02.

3 SUPPLEMENTAL REMEDIAL INVESTIGATIONS

The results of the 2008 supplemental groundwater investigation (Phase 1) suggested that additional offsite groundwater and soil vapor delineation was warranted, as outlined in Geomatrix's approved Supplemental Investigation, Phase 2¹³. Beginning in 2010, WSP performed a series of follow-up investigations designed to further evaluate the nature and extent of TCE affected groundwater both on and offsite. The investigations were performed in three stages that included:

- Offsite groundwater profiling and soil gas sampling.
- An onsite soil and soil gas survey (conducted as part of an effort to reclassify the site for residential use¹⁴).
- Hydraulic monitoring and analytical sampling of the onsite and offsite groundwater monitoring wells.

The groundwater profiling and offsite soil gas sampling work was conducted in a step-wise fashion beginning in December 2010 with each successive round of sampling extending the investigation further to the west. The initial phase of work followed the scope outlined in the Supplemental Investigation, Phase 2, which included installing three co-located groundwater profiling and soil gas sampling locations along Todd Drive East, parallel to the facility's western property line, with contingency sample locations (to be used if TCE was detected offsite) further west in the Todd Estates neighborhood. The work was performed during two field events in December 2010 and February 2011. WSP performed an additional groundwater profiling event in June 2011, based on the earlier findings, to fully define the plume and characterize the extent of comingling with the regional PCE plume. A brief summary of the sampling techniques and the results of each phase of the investigations were presented to the NYSDEC in informal interim (email) reports, dated April 1 and September 6, 2011, but have otherwise not been officially reported. The following discussion presents the detailed procedures used and the data generated.

The onsite soil gas survey, conducted in two phases, was primarily designed to assess the site conditions relative to the unrestricted (i.e., residential) use and restricted residential land use soil cleanup objectives. The preliminary soil gas sampling was conducted in July 2011 and included four soil gas sample points along the western property line of the facility. Data from these points were used to develop the Residential Reclassification and Feasibility Study Work Plan, dated December 9, 2011. Additional soil gas investigation, performed during a follow-up event in February 2012, included samples collected at 12 locations along the western and northern portions of the site that corresponded to the areas where potential future development could include single-family homes. These areas are away from the former manufacturing areas and, based on the preliminary onsite and offsite groundwater profiling and soil gas results, not located above areas of affected groundwater. Although both phases of work were intended to support the reclassification effort, the data are relevant to the OU-2 investigation and are presented below.

The Residential Reclassification and Feasibility Study Work Plan also detailed additional groundwater monitoring to be conducted using the onsite wells and several of the offsite wells used for the NYSDEC investigations in 2000 and 2007. Groundwater data for both the TTC and NYSDEC were, at the time of this supplemental investigation, already several years old and, thus, were likely unrepresentative of the current conditions. Data from the onsite and offsite wells collected during the first round of sampling in March 2012 were used to verify the groundwater flow direction and, when combined with the groundwater profiling results, to provide a reasonably contemporaneous and comprehensive overview of the nature and extent of affected groundwater within the study area. Subsequent groundwater data, collected on an approximately semiannual basis, were no longer concomitant with the profiling and, thus, could not be used to track the downgradient extent of the plume. These data were instead used to monitor the upgradient and onsite water quality trends over the four years since the profile was completed.

¹³ The Supplemental Investigation, Phase 2 work plan included a provision to install permanent offsite groundwater monitoring wells at the completion of the profiling activities; however, the NYSEC approved a modification to the work plan allowing additional profile locations to be installed in lieu of the permanent groundwater monitoring wells.

¹⁴ Concurrent soil samples results, which were presented in the original version of this document, have been removed from this revised document and will be presented under a separate cover.

These combined data sets, presented in detail below, establish the baseline upon which the OU-2 focused feasibility study (FFS) will be based.

All of the work was performed in accordance with DER-10, WSP's standard operating procedures (SOPs; Appendix B), the soil gas sampling procedures outlined in the NYSDOH's Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006, and, where appropriate, consistent with the approach used for the 2005 RI. Downhole equipment was decontaminated before work began, between each borehole, and at the end of site activities using a portable steam jenny or non-phosphate soap and laboratory supplied deionized water, as appropriate, in accordance with the procedures outlined in the Residential Reclassification and Feasibility Study Work Plan and WSP's SOP 6. Likewise, investigation-derived waste, including purge and decontamination water, residual soil cuttings, and personal protective equipment, were, as specified in the Work Plan, placed in Department of Transportation-approved 55-gallon steel drums and staged onsite for later disposal in accordance with state and federal regulations. The field activities included collecting quality assurance/quality control (QA/QC) samples, such as laboratory-blind duplicates, equipment blanks, matrix spike and matrix spike duplicate samples (MS/MSD), and trip blanks (in accordance with the Work Plan and WSP's SOP 4), and third party data validation. Data usability reports are included with the laboratory-supplied data packages in Appendix C. The detailed procedures for each phase of work and the results are presented below.

3.1 OFFSITE GROUNDWATER PROFILING AND SOIL GAS SAMPLING

The offsite groundwater investigations were conducted in several field events beginning in December 2010 and extending through June 2011. The first phase of work included installing eight co-located groundwater profile and soil gas sample locations, designated GP-03 through GP-10 (SG-03 through SG-10 for the co-located soil gas samples; Figures 4 and 5) installed in the Todd Estates neighborhood that directly adjoins the site to the west. Three of the locations, GP-03 through GP-05, were installed in a north-south transect along Todd Drive East perpendicular to the groundwater flow direction approximately 150 feet west of the previous onsite sample locations (i.e., west of GP-01 and GP-02). These points were the primary sample locations selected by Geomatrix in the Phase 2 Work Plan, which were designed to determine if site-related VOCs had migrated offsite. The remaining four points (originally designated as contingency points) were installed around the primary points to provide additional information on the extent of the plume. Locations GP-07 and GP-10 were installed further to the south and north, respectively, along the Todd Drive East transect to determine the lateral extent of the plume with locations GP-06, GP-08, and GP-09 installed further to the west to characterize the downgradient extent of the affected groundwater. The primary points were installed in December 2010 with the remaining points installed during a subsequent field event in February 2011.

Four additional sample locations, designated GP-11 through GP-14, were installed during an additional follow-up investigation in June 2011 (Figure 4). The locations were selected to delineate the downgradient edge of the site related plume, based on the previous data. Profile points GP-11 and GP-14 were selected to provide lateral control on the area of affected groundwater with the two additional points, GP-12 and GP-13, positioned to define the downgradient edge of the plume. No co-located soil gas samples were installed with these borings, based on the data collected during the installation of the first six points (see discussion below).

3.1.1 GROUNDWATER PROFILING METHODS

The groundwater profile borings were drilled by Zebra Environmental, Inc., of Lynbrook, New York, using a Geoprobe® 8040 series direct-push drilling rig equipped with 2-inch diameter drilling rods, a SP-15 screen point sampler, and an expendable drill point. The drilling rods were advanced from the ground surface to the bottom of the interval to be profiled: approximately 150 feet bgs for points GP-03 through GP-08 (nominally 50 feet below the upper surface of the water table) with somewhat deeper depths (up to 200 feet bgs) for the westernmost sample locations GP-11 through GP-14 (Figure 4). Once the maximum depth had been achieved, the rods were retracted approximately 4 feet to expose the screen point sampler to the surrounding formation and allow groundwater to enter the drill string. A minimum of three rod-volumes of groundwater was purged from the drilling/sampling apparatus using polyethylene tubing fitted with a stainless-steel check-ball valve before each sample was collected to ensure representative samples. Analytical samples were collected using the

same polyethylene tubing and stainless-steel check-ball valve. At the completion of the purge and sample process for the bottom interval, the drilling rods were retracted approximately 10 feet (with the screen point sampler exposed) to the next desired sample interval and the purge and sample process repeated. Samples were collected in 10-foot increments until the top of the water bearing zone was reached. This upper limit was determined based strictly on the absence of water recovery from the sample tubing.

The analytical samples, including the appropriate QA/QC samples, were placed in the appropriate laboratory supplied glassware, labeled and packed on wet ice for preservation, and shipped via overnight carrier to Accutest Laboratories of Marlborough, Massachusetts, for analysis of TCE, PCE, cis and trans-1,2-DCE, and vinyl chloride by US Environmental Protection Agency (EPA) Method 8260. All of the samples were handled and shipped in accordance with WSP's SOP 3 (Appendix B). Analytical laboratory reports for the groundwater profile samples are presented in Appendix C.

At the conclusion of the sampling activities, the boreholes were backfilled with clean sand and capped with material to match the surrounding ground cover (e.g., asphalt, concrete) in accordance with the procedures in DER-10 for Class 2 inactive hazardous waste sites. The locations were marked in the field with white spray paint, pin flags, or wooden stakes, and later surveyed by Richard Rybinski Land Surveying, a New York-certified Land Surveyor, of Manlius, New York.

3.1.2 OFFSITE SOIL GAS SAMPLING METHODS

The soil gas sample borings were drilled by Zebra during the groundwater investigation activities using the same Geoprobe® 8040 series direct-push drilling rig. The boreholes were advanced to a depth of approximately 8 feet bgs using 1.25-inch-diameter drilling rods fitted with an expendable point. Once the target depth was reached, Teflon®-lined tubing connected to a 6-inch-long stainless-steel screen implant was inserted through the hollow drill string and screwed into the top of the expendable point. The rods were then retracted leaving the implant with the expendable point in the bottom of the borehole and tubing leading to the surface. A clean sand filter pack was installed in the annular space around the screened interval to a minimum depth of approximately 6 inches above the top of the screen (i.e., 1-foot deep total), which was then capped with bentonite slurry to form a seal between the implant and the surface.

The integrity of each bentonite seal was verified using a tracer gas (in accordance with the NYSDOH guidelines) before sampling. Each sample point was covered with a laboratory-supplied 18-inch-diameter stainless-steel dome equipped with two stainless-steel quick-lock fittings. The Teflon®-lined tubing used for the sample point was fitted to one of the quick-lock connectors on the inside of the dome allowing monitoring of the sub-slab soil gas outside of the dome using a laboratory-supplied electronic helium detector and a short length of Teflon®-lined tubing. After the monitoring equipment was in place, the dome was charged with helium via the second quick-lock connector. The sample point was monitored for a period of 2 minutes to verify that the system did not short-circuit to the helium atmosphere inside the dome. Samples were only collected following satisfactory seal tests.

The soil gas samples were collected using evacuated 1-liter Entech-style canisters fitted with a dedicated flow controller that was pre-set by the laboratory to collect the soil gas sample over a 1-hour period. Each of the sample points were purged before sampling using a hand pump to remove dilution air. The purge removed one to three probe volumes of air from the tubing at a rate not exceeding 0.2 liter per minute. At the completion of the 1-hour period, the canister and regulator were disconnected; the sample name, location, time and date of sample collection, sample regulator and canister number, and the analytical method were recorded on the chain-of-custody form and in the field logbook; and the sample tubing was removed from the subsurface. The boreholes¹⁵ were backfilled using the same techniques as those listed above and patched to match the surrounding grade.

The canisters, including appropriate QA/QC samples, were labeled and shipped (under ambient conditions) via overnight carrier to Centek Laboratories, LLC, of East Syracuse, New York, for analysis of the site-related compounds PCE, TCE, cis- and trans-1,2-DCE, vinyl chloride, and 1,1-DCE by EPA Method TO-15. Laboratory reports for the soil gas sampling are presented in Appendix C.

¹⁵ The soil gas survey borings were considered, for the purposes of this investigation, co-located with the groundwater borings and, thus, were not surveyed as separate locations.

3.1.3 GROUNDWATER PROFILING RESULTS

The groundwater profiling results indicate that chlorinated VOCs are present in the groundwater beneath the Todd Estates neighborhood west of the facility. Three VOCs, PCE (5.3 to 774 µg/l), TCE (5.1 to 397 µg/l), and cis-1,2-DCE (5.1 to 69.6 µg/l) were detected in the samples at concentrations above the ambient water quality standard of 5 µg/l for each compound (Figure 6; Table 1). Shallow groundwater (i.e., 140 feet or less) samples collected from near site locations, including GP-05, GP-06, and GP-08, contained moderate concentrations of TCE (up to 397 µg/l) with only trace concentrations of PCE. These results are similar to those obtained onsite during the Phase 1 work and, when considered with those data, appear to outline a shallow plume of predominately TCE-affected groundwater extending from GP-01/GP-02 northwest through GP-08. Low TCE concentrations were detected in the samples north of this line (e.g., GP-03, and GP-10) or in the same sample intervals from the westernmost profile locations GP-11 through GP-13. Concentrations of TCE above the ambient water quality standard (5 µg/l) were detected in samples from locations south of this line (e.g., in GP-07 and GP-09), in the deeper (160 feet bgs and below) sample intervals of GP-08, and several of the westernmost profile locations, such as GP-13 and GP-14. The TCE in these samples, however, occurs only in the presence of equal or greater concentrations of PCE and are interpreted to be the result of dechlorination of PCE from the regional plume rather than the release at the TTC facility. The significance of these findings is discussed further in Section 4 below.

3.1.4 OFFSITE SOIL GAS RESULTS

The offsite soil gas sampling results revealed concentrations of four chlorinated VOCs, including TCE (1.6 to 610 µg/m³), PCE (1.6 to 340 µg/m³), cis-1,2-DCE (5.4 µg/m³), and 1,1-DCE (3.9 µg/m³), in soil gas samples collected from locations within the Todd Estates neighborhood (Figure 7; Table 2). As with the groundwater data, the soil gas results were dominated by TCE and PCE. The highest concentrations of both were detected in location SG-07 directly west of the site along Todd Drive East. Concentrations of TCE decrease rapidly and systematically to trace levels with increasing distance from SG-7 to the north along Todd Drive East and are at trace to non-detectable levels in the westernmost sample locations. These data suggest a correlation with the underlying TCE plume, which follows a similar pattern (see discussion below). Concentrations of PCE, in contrast, while lower in other locations, did not exhibit any systematic trends and, in most samples, remained at moderately high concentrations ranging from the 10s up to 100 µg/m³.

3.1.5 ONSITE SOIL GAS SURVEY

The onsite soil gas sampling was performed during two field events in July 2011 and February 2012. The preliminary investigation included installing four soil gas sample locations, designated SG-11 to SG-14, along the western property line of the facility (Figure 5). The results of the investigation were informally reported (via email) to the NYSDEC on September 8, 2011.

The follow-up phase of investigation, as outlined in the Residential Reclassification and Feasibility Study Work Plan, was designed to provide information for the northern and western perimeter of the site. These portions of the site, which were formerly parking lots, access roads, and landscaped areas, were historically separated from the metal plating and degreasing areas of the southwest portion of the site where the majority of soil remediation activities have been performed. Sampling during the RI confirmed this; however, additional sampling would be necessary to demonstrate that both the soil and soil gas in these portions of the site met the residential use criteria (without restrictions) instead of the restricted residential use classification specified in the ROD. The soil portion of these activities, which are post-dénouement investigations associated with OU-1, are not included in this report and will be presented under separate cover.

The soil gas samples, designated SG-15 through SG-26, were installed in two portions of the site (Figure 5). Ten of the borings, SB/SG-15 to SB/SG-24, were installed in a north-south line between the main building and the western fence line to evaluate the soil and soil gas quality for the proposed building lots along the western property line. The two remaining borings, SB/SG-25 and SB/SG-26, were installed in the eastern portion of the former parking lot to characterize the building lots in the northeast corner of the property.

The onsite soil gas samples for both the preliminary and follow-up phases were collected using the same techniques and procedures as outlined above. Analytical samples were shipped via overnight carrier to Centek Laboratories and analyzed for

the same suite of compounds by EPA Method TO-15. Laboratory reports for the soil gas sampling are provided in Appendix C. The procedures used to collect the soil samples are presented below.

Following the sampling activities, the boreholes were backfilled with clean sand and capped in accordance with the procedures in DER-10 for Class 2 inactive hazardous waste sites. The boring locations were marked in the field for later location with white paint, pin flags, or wooden stakes and later surveyed by Richard Rybinski Land Surveying. The soil and soil gas sample locations were considered, for the purposes of the investigation, to be co-located and, thus, were not surveyed as separate points.

3.1.6 ONSITE SOIL GAS SAMPLING RESULTS

The laboratory results for the onsite soil gas samples revealed the presence of chlorinated VOCs in the soil gas beneath the western and northern portions of the site. The preliminary soil gas samples collected in July 2011, with the exception of sample SG-13, contained only trace (or non-detectable) concentrations of the chlorinated VOCs PCE (6.6 to 8.1 $\mu\text{g}/\text{m}^3$) and TCE (0.25 to 1.3 $\mu\text{g}/\text{m}^3$; Figure 8; Table 2). These results agree with the previous results from the RI and the contention that these portions of the site were distant from the manufacturing areas and, thus, relatively unaffected. The sample from SG-13 contained higher concentrations of chlorinated VOCs, particularly TCE (2,700 $\mu\text{g}/\text{m}^3$), with a lower PCE concentration (180 $\mu\text{g}/\text{m}^3$) and two other dechlorination byproducts, cis- and trans-1,2-DCE (19 and 0.76 $\mu\text{g}/\text{m}^3$, respectively), although these results were anticipated given the position of the sample point directly above the area of affected groundwater (i.e., given the apparent correlation to the concentrations of TCE within the plume).

The results from the follow-up phase of investigation, in contrast, contained substantially higher concentrations of PCE. Concentrations of TCE generally decreased from the relatively high levels detected in samples from SG-15 (installed near SG-13 directly over the TCE plume) to trace or non-detectable levels with distance from the area of affected groundwater similar to the offsite results (Figure 8; Table 2). The concentrations of PCE, however, were two to three orders of magnitude, up to a concentration of 1,200 $\mu\text{g}/\text{m}^3$, above those detected during the preliminary investigation. These results were particularly notable given that PCE, based on the current information, was not used in significant quantities at the TTC facility (nor has it been detected in the soil in the northern half of the site) and the affected soil gas appears to be disconnected from any significant area of PCE-affected groundwater.

The significance of these findings is discussed in detail in the Interpretation and Conceptual Site Model section (Section 4) below.

3.2 GROUNDWATER MONITORING

Groundwater monitoring of the onsite and offsite wells was initially conducted as part of the plume delineation activities in 2012, with additional follow-up sampling performed on an approximately semiannual basis between 2012 and 2016. Both onsite¹⁶ (wells TT-MW-02, TT-MW-04, TT-MW-05, and TT-MW-07 through TT-MW-10) and offsite¹⁷ wells (i.e., those installed for the NYSDEC investigations; wells MW-01 and MW-03 through MW-08) were included in the activities to provide a comprehensive overview of the groundwater flow patterns and water quality within the study area (Figure 4). The methods used for the hydraulic monitoring and analytical sampling are presented below.

¹⁶ Onsite wells TT-MW-01, TT-MW-03, and TT-MW-11 were damaged or destroyed during the OU-1 soil remediation activities in 2011 and, thus, could not be sampled during the March 2012 or subsequent sampling events. Similarly, well TT-MW-06 could not be located and is presumed to have been destroyed.

¹⁷ Offsite wells MW-02 and MW-11 were initially gauged and PDBs deployed; however, inconsistencies noted in the depth to water and total depths of the well noted during retrieval suggested that the well casings were damaged below the ground surface. Because the integrity of the wells could not be verified, the gauging and sampling results from MW-02 were not included in the analysis. MW-11 was damaged during the winter of 2014 when the PDB was lost. WSP could not verify the integrity of the well and it has been removed from the groundwater monitoring activities.

3.2.1 GROUNDWATER MONITORING WELL GAUGING AND SAMPLING PROCEDURES

Groundwater elevations were measured from both onsite and offsite wells in advance¹⁸ of the passive diffusion bag (PDB) sampler deployment (described below) and prior to the recovery of analytical samples. Each well was uncapped and allowed to stand undisturbed (for equilibration with the atmosphere) for a minimum of 15 minutes before gauging in accordance with WSP's SOP 11 (Appendix A). The measurements were made to the nearest 0.01-foot using an electronic interface meter with the results recorded in the field notebook. Groundwater elevations, which are presented in Table 3, were calculated using reported casing elevations from a re-survey of wells at the site (completed in 2012) or, in the case of the offsite wells, using values reported in the 2007 NYSDEC report.

Groundwater quality samples were collected using PDB samplers in accordance with the methods outlined in the User's Guide for Polyethylene-Based Passive Diffusion Bag Samplers to Obtain Volatile Organic Compound Concentrations in Wells (Vroblesky 2001), the approved SRI work plan, and WSP's SOP 11. The PDBs, supplied by EON Products, Inc., of Snellville, Georgia, consist of 24-inch long, 1.25-inch diameter, heat-sealed, low-density polyethylene samplers that were pre-filled by the laboratory with 220 milliliters of laboratory-grade analyte-free, de-ionized water. The samplers were suspended at the midpoint of the screened interval in each well a minimum of two weeks in advance of the sample recovery (typically in January and July of each year) to allow equilibration with the surrounding formation water. Upon retrieval, each bag was sliced open at one end using decontaminated field scissors, and the contents were poured into the appropriate laboratory-supplied, pre-cleaned sample vials. The sampling activities included the collection of a blind duplicate and matrix spike and matrix-spike duplicate for quality assurance/quality control purposes in accordance with WSP's SOP 4.

The samples were labeled, packed on ice, and either shipped by overnight carrier to or delivered directly to Accutest Laboratories of Marlborough, Massachusetts, for analysis of site-related VOCs by U.S. Environmental Protection Agency (EPA) Method 8260. All samples were maintained and shipped in accordance with WSP's SOP 3 (Appendix B). Laboratory results for the groundwater samples are included in Appendix C.

3.2.2 GAUGING RESULTS

The gauging results between 2012 and 2016 indicate a relatively static groundwater flow pattern with elevations generally ranging between 49 and 61 feet above mean sea level (AMSL). Groundwater elevations for the most recent sampling event in February 2016, for example, ranged from a high of 58.14 feet AMSL in offsite well MW-06 to 49.37 feet AMSL in offsite well MW-08 (Table 3). Water level variations within each well over the reporting period were typically less than 1 foot with winter and early spring elevations slightly higher than those recorded during the late summer or early fall. Groundwater elevation contours generated from the measurements indicate a northwesterly flow direction towards the adjacent town of Sea Cliff and Hempstead Bay beyond (Figures 1 and 9 [2012 contours only]) consistent with the previously-described regional flow pattern. The data did not indicate more northerly flow direction for the onsite portion of the groundwater flow field as previously interpreted by Geomatrix during the RI (WSP has concluded that the direction change described by Geomatrix was likely an artifact of the interpretive method used, which yielded unrepresentative results). The average horizontal hydraulic gradient (dh/dl) between March 2012 and February 2016, as measured between offsite monitoring wells MW-01 and MW-08, was calculated at a relatively shallow 0.003 ft/ft.

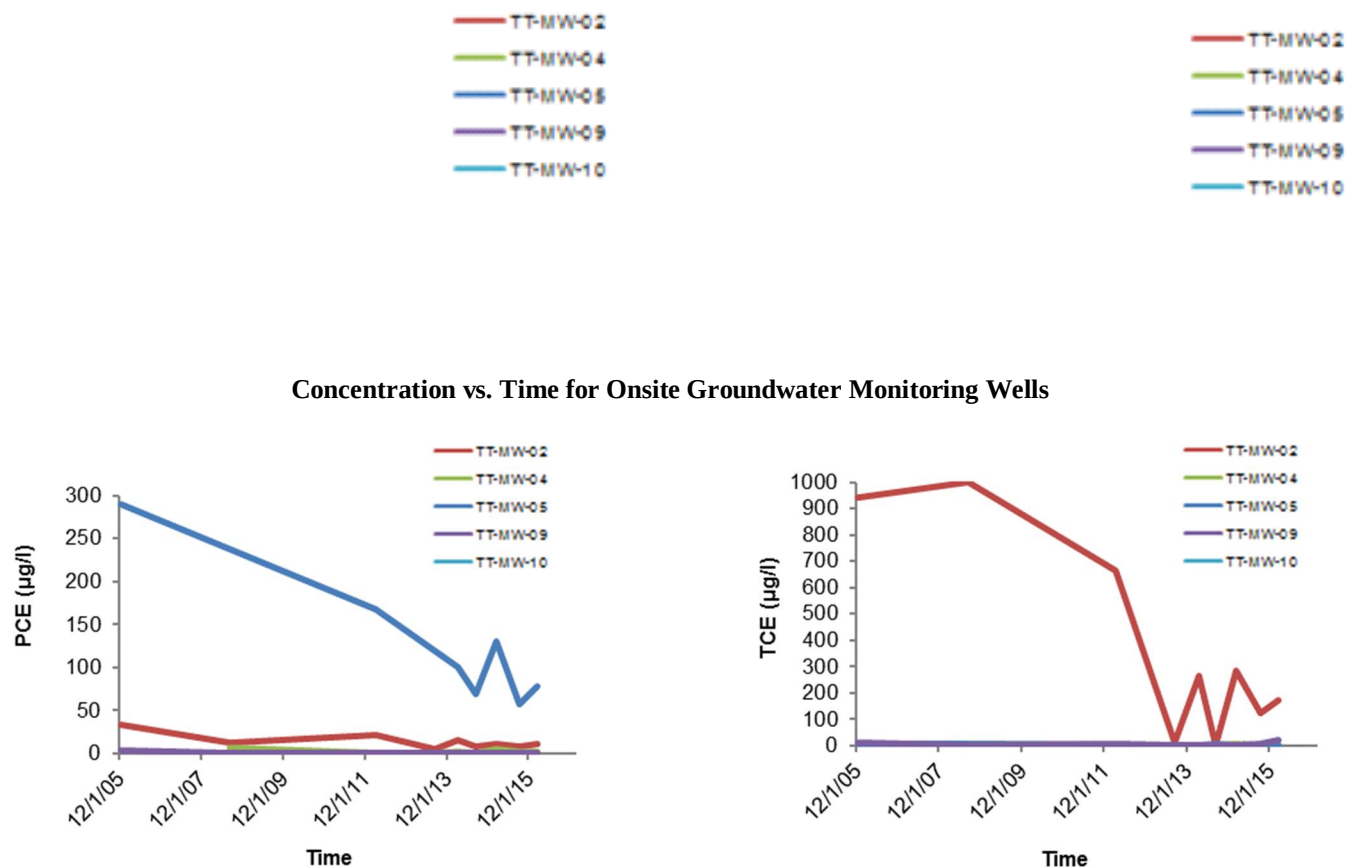
3.2.3 WATER QUALITY RESULTS

Three chlorinated VOCs, PCE (5.7 to 793 µg/l), TCE (5.2 to 663 µg/l), and cis-1,2-DCE (5.5 to 197 µg/l), were detected at concentrations above the ambient water quality standards (5 µg/l for each compound) in samples collected between March 2012 and February 2016 (Table 4). The distribution of the individual chlorinated compounds was comparable with the previous results with relatively high concentrations of PCE (and correspondingly low levels of TCE) detected in the wells associated with the regional plume (primarily offsite wells south and west of the TTC facility) and relatively high concentrations of TCE (with little PCE) dominating the onsite well samples. The highest concentrations of PCE, for example,

¹⁸ Groundwater elevation measurements were collected before PDB deployment in each well during sampling events conducted between 2014 and 2016.

were consistently detected in samples from wells MW-01, MW-04, and MW-07, which trace out the previously described core of the regional plume (Figure 10). Moderate levels of PCE were also detected in onsite wells TT-MW-04 and TT-MW-05 where the regional plume overlaps the former TTC site. The highest concentrations of TCE were detected in samples from the wells TT-MW-02 and TT-MW-10 along the western property line within the defined area of TCE-affected groundwater originating from the TTC site.

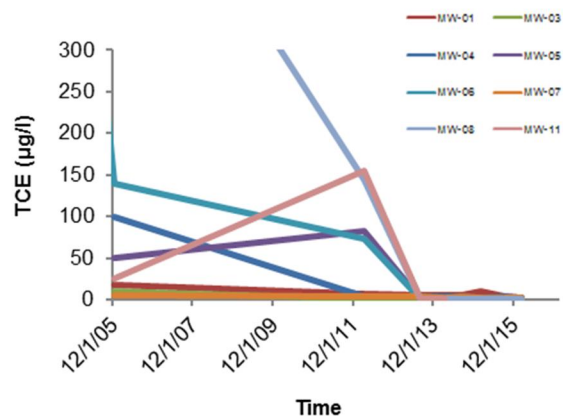
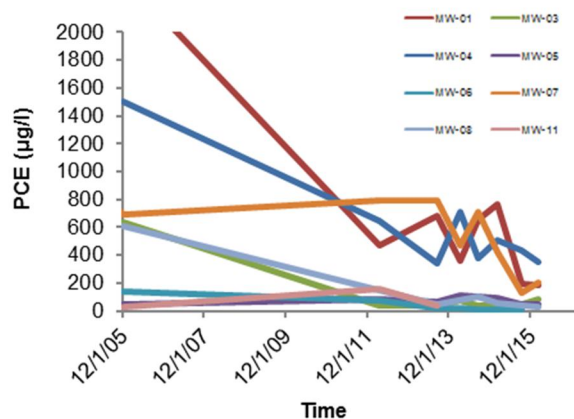
The data, when viewed over time, demonstrate a downward trend in the overall amount of dissolved chlorinated mass. Concentrations of TCE and the daughter product cis-1,2-DCE in samples from well TT-MW-02, for instance, decreased nearly 75 percent from 663 µg/l and 197 µg/l, respectively, in March 2012, to 172 µg/l and 48.5 µg/l, respectively, in February 2016 (Figure 10; Table 4; Graph 1).



Graph 1 – PCE and TCE Concentrations vs. Time for Onsite Groundwater Monitoring Wells. Concentration data for select onsite wells collected by Conestoga, Rovers & Associates (1996), Geomatrix (2002 and 2008), ERM (2005), and WSP (2012 through 2016). Not all wells were sampled during each event; trends are depicted over the last 10 years only (for clarity). A more detailed presentation of these trends, including a tabulation of the supporting data, is presented in Graph 1 in the *Tables* section of this report.

Nearly identical decreases (between 74 and 79 percent) were noted in the concentrations of TCE and cis-1,2-DCE in samples from well TT-MW-10 over the same period. These reductions were not uniform between individual sampling events, but nevertheless indicate a systematic decrease over the entire reporting period. Concentrations of PCE in samples from the wells associated with the regional plume were also notably lower with reductions of between 50 and 90 percent over the peak concentrations recorded between 2012 and 2016 (Graph 2).

Concentration vs. Time for Offsite Groundwater Monitoring Wells



Graph 2 – PCE and TCE Concentrations vs. Time for Offsite Groundwater Monitoring Wells. Concentration data for select offsite wells collected by Conestoga, Rovers & Associates (1996), Geomatrix (2002 and 2008), ERM (2005), and WSP (2012 through 2016). Not all wells were sampled during each event; trends are depicted over the last 10 years only (for clarity). A more detailed presentation of these trends, including a tabulation of the supporting data, is presented in Graph 2 in the *Tables* section of this report.

The trends in both plumes are even more pronounced when the data are viewed over a longer period. These concentration decrease are clearly visible in the decade-long data plots shown in Graphs 1 and 2 and are consistent with the previously described downward trend noted in the 2005 RI. The significance of these findings with respect to the overall fate of the chlorinated VOCs is discussed in Section 4 below.

4 INTERPRETATION AND CONCEPTUAL SITE MODEL

WSP's interpretation and conceptual site model is based primarily on the 119 groundwater and 26 soil gas samples collected for the supplemental activities through 2012. The water quality data were used to create two isoconcentration maps, the PCE-based plume in the left pane and the TCE-based plume in the right pane of Figure 11, that depict the two overlapping areas of affected groundwater. In instances where both PCE and TCE (a known dechlorination daughter product of PCE) were detected within a single profile, the interpretation of the origin of the compounds was based on their relative abundances, their location within the flow field, and their stratigraphic positions within the water column. Predominately high concentrations of TCE without any corresponding PCE (typically in the shallow groundwater directly downgradient of the TTC facility), for example, were interpreted as part of the TCE plume associated with the TTC facility. Concentrations of TCE that were accompanied by equal or greater (in most cases, substantially greater) amounts of PCE were interpreted as degradation byproducts and, thus, not included with the TCE isoconcentration map. The distinctions between the TCE and PCE were clear enough to determine the origin of the dominant compound in nearly every case, despite the overlap of the two plumes. Concentrations of other chlorinated compounds common to both degradation pathways, such as cis-1,2-DCE, while important for understanding the potential attenuation of the plumes, were typically detected at moderate or trace concentrations and not included in the analysis for clarity. Subsequent monitoring data, collected between 2012 and 2016, which are not included on the isoconcentration maps, are presented in tabular form and discussed below in the context of the overall fate and transport of the chlorinated VOCs.

The interpretation of the soil gas data is more problematic due to the vagaries of vapor flow in the subsurface. Both PCE and TCE are present in the majority of the soil gas samples collected on and around the TTC site reflecting the overlap of the two releases in the area. These data, however, do not lend themselves to mapping and, because migration mechanisms of the vapor plumes are not well understood, discussions of fate and transport are somewhat gratuitous. Nevertheless, these results are important for assessing the potential for indoor air impacts via vapor intrusion, both in the existing homes downgradient of the facility and any future structures that may be built at the site during redevelopment. A brief discussion of the vapor data is presented below.

4.1 NATURE AND EXTENT OF AFFECTED GROUNDWATER

The three phases of groundwater profiling and the contemporaneous (2012) groundwater monitoring well sampling refined the previous understanding of both the TCE and PCE plumes and the extent of overlap. In the northern and eastern portions of the study area, the data show an elongated plume of TCE-affected groundwater originating from the site (Figure 11). The plume is relatively narrow (approximately 400 feet wide at the western property line) and extends, based on the interpreted 5 µg/l isoconcentration contour,¹⁹ a maximum of approximately 1,900 feet beyond the TTC property beneath Todd Estates and the neighborhoods beyond Glen Cove Avenue.

The majority of the TCE mass detected in the profiling samples lies within the core of the interpreted plume along a line between onsite locations TT-MW-02/GP-02 and offsite profile points GP-05, GP-06, and GP-08 (Figure 11). Concentrations of TCE within this core were detected primarily in the upper 30 to 40 feet of the water-bearing zone (i.e., the vertical extent is defined) and, in 2012, appeared to systematically decrease from a high of 663 µg/l in samples from TT-MW-02 to 397 µg/l at GP-05 to 365 µg/l in GP-08. No significant concentrations of TCE were detected in any of the other profile locations sampled at these depth intervals (except when accompanied by PCE), suggesting that the plume is delineated to the north by GP-03, GP-10, and GP-11; to the west by GP-12 and GP-13; and to the south by points GP-9 and GP-14.

The interpreted area of PCE-affected groundwater (i.e., the regional plume) is significantly larger and, in 2012, was found to underlie most of the study area, including all but the northeastern portion of the TCE plume (Figure 11). The PCE plume is more than 3,600 feet long and is nearly as wide (as interpreted between the 5 µg/l standard isoconcentration lines), about

¹⁹ Based on the ambient water quality standard for TCE.

1,700 feet, as the TCE plume is long. The PCE plume is elongated along the prevailing groundwater flow direction and is characterized by a bifurcated core. The southern lobe extends approximately 2,000 feet from MW-04 through MW-07 to profile location GP-14 with concentrations of PCE ranging from 648 µg/l to 793 µg/l to 631 µg/l, respectively. The PCE is present at concentrations above the ambient water quality standard (5 µg/l), based on the results from GP-14, from the top of the water table to a depth of approximately 150 feet bgs with the highest concentrations detected between 130 and 140 feet bgs. The lobe is poorly constrained to the south and west by wells MW-8 and MW-11 and appears, based on the results from locations GP-12 and GP-14, to be undefined to the west.

The northern lobe of the interpreted PCE plume originates from the same general source area (i.e., near the intersection of Glen Head Road and the LIRR tracks) and, for the first 1,200 feet, extends along the same path as the southern lobe passing beneath the southwest corner of the TTC facility (Figure 11). Beyond MW-07, the PCE plume splits creating a narrow lobe that extends a minimum of 2,400 feet beyond flowing beneath Todd Estates and Glen Cove Road. Concentrations of PCE within the lobe are similar to those in the southern lobe ranging up to 774 µg/l near GP-08 before decreasing near GP-13. The majority of the detected PCE mass, based on the results from GP-08 and GP-13, is substantially deeper than the southern lobe occurring between 170 and 180 feet bgs with the highest PCE concentrations in GP-13 detected in the deepest interval (180 feet bgs) sampled (i.e., the vertical limits are not defined). The horizontal limits of the lobe are relatively well defined by onsite wells TT-MW-02 and TT-MW-09, and profile points GP-03, GP-04, GP-10, and GP-11, but remains undefined (based on the results from GP-13) to the west.

The post-2012 water quality data indicate an overall decrease in the chlorinated mass within each plume over time, which continues the trend noted during the 2005 RI. Onsite concentrations of TCE at the time of the RI had already been reduced by about 50 percent (as compared to the concentrations detected in the 1990s) and appear to have decreased an additional 75 percent between 2012 and 2016 (Table 4; Graph 1). Even greater reductions have occurred in the regional plume where the current concentrations appear to be up to two orders of magnitude below the maximum concentrations detected during the NYSDEC investigations between 2000 and 2007. The reason for these reductions is likely due to a combination of factors, including reduced flux from the vadose zone (the PCE releases from the dry cleaners were presumably discontinued after the NYSDEC investigation began and the TCE-affected soil at the former TTC facility was removed for offsite disposal) and natural attenuation via reductive dechlorination (biotic or abiotic) or physical properties, such as advection or dispersion. The VOC data alone, although it indicate the presence (albeit limited) of sequential dechlorination daughter products such as TCE (degraded from PCE) and cis-1,2-DCE, are insufficient to identify the specific dechlorinating mechanisms or characterize the overall intrinsic attenuation potential of the water-bearing zone. Nevertheless, these data indicate significantly reduced concentrations of dissolved chlorinated VOCs at the TTC site and suggest that the compounds will continue to attenuate under ambient conditions.

4.2 NATURE AND EXTENT OF AFFECTED SOIL GAS

The soil gas sampling performed for the supplemental investigation revealed chlorinated VOCs in the soil gas both on and offsite. For the onsite samples, the two predominant chlorinated VOCs, TCE and PCE, occur in different patterns with some overlap. The TCE is concentrated in soil gas samples collected from points that were installed directly over the core of the TTC portion of the groundwater plume (i.e., SG-13, SG-15, SG-17, and, to a lesser degree, SG-16; Figure 8). Concentrations range from 67 µg/m³ to 2,700 µg/m³ before decreasing to just trace levels further to the north. These results are generally consistent with the results obtained from the RI borings (i.e., borings RI-3, RI-6, RI-7, RI-9, RI-11, and RI-15) installed within the main building in the early 2000s. Concentrations of PCE were also detected in the samples collected above the TCE groundwater plume; however, the levels were significantly above those detected in the RI borings collected beneath the building and, unlike the TCE results, do not appear to decrease significantly to the north. Concentrations ranged from a low of 6.6 µg/m³ to 1,200 µg/m³ with the majority of the samples along the western property line north of the TCE plume containing hundreds of µg/m³.

The soil gas concentrations of PCE and TCE were generally lower in samples collected from offsite locations. The concentrations of TCE were detected near the areas of affected groundwater with the highest levels (610 µg/m³) detected in SG-07 directly adjacent of the core of the groundwater plume (Figure 8). The levels of TCE decreased rapidly to trace concentrations directly north of the TCE plume and to non-detectable levels in western sample locations SG-08 and SG-09. The highest concentrations of PCE were also detected in the samples from SG-07 near the TCE plume and decreased to the

north and west, although the levels remained generally higher than the TCE concentrations and did not exhibit any systematic changes attributable to the underlying groundwater.

These data suggest that the extent of TCE in soil gas that can be attributed to the TTC site is limited in extent and is present at concentrations warranting evaluation only in the areas directly above the groundwater plume for onsite and near site locations.

4.3 CONCEPTUAL SITE MODEL

The current investigations confirm and refine the understanding of the earlier findings. In the case of the TTC facility, TCE appears to have been released to the environment, most likely, based on the groundwater flow direction, the relatively narrow and elongated form, and the current and historical results, from the southeast corner of the main facility near the former degreaser department (this source has been remediated as part of the OU-1 activities). The TCE migrated vertically through the vadose zone impacting the groundwater table approximately 100 feet bgs. Concentrations of TCE dissolved in the groundwater then migrated northwest under the prevailing groundwater flow regime passing below the main building and the western property line near well locations TT-MW-02 and TT-MW-10 before flowing beneath Todd Estates (Figure 11). The plume appears to have increased slightly in depth with distance downgradient, most likely due to the infiltration of relatively clean (meteoric) water from above and diffusion/dispersion, although the bulk of the mass remains in the upper 30 to 40 feet of the water table.

The onsite portion of the TCE plume is attenuating over time under ambient conditions. This trend, which likely began after the facility was decommissioned in the 1990s, is anticipated to continue now that the onsite soil source areas and, thus, the mass flux through the vadose zone to the groundwater, have been addressed. The notable lack of any significant concentrations of dechlorination daughter products in the TCE plume, both in the 2012 and subsequent monitoring results, suggests that mechanisms other than hydrogenolysis, such as abiotic reductive dechlorination or, more likely, advection and dispersion, may be the dominant factors in the observed chlorinated mass reductions. This is consistent with the regional geology. The permeable Upper Glacial Formation, into which the onsite wells are screened, is primarily outwash sand and gravel. These formations typically have relatively low abundances of organic carbon, which is often the primary electron donor in microbially-mediated dechlorination reactions. Moreover, the Upper Glacial Formation has an average horizontal hydraulic conductivity of 270 feet per day and is capable of transmitting large volumes of groundwater (Stumm et al., 2004).

For onsite and near site locations, the TCE in the groundwater appears to have impacted (via partitioning to the vapor phase) the overlying soil gas. The data show a clear correlation between the core of the plume and highest concentrations of TCE in the soil gas with the levels decreasing rapidly to trace or non-detectable levels both cross gradient (i.e., north and south of the plume where dissolved concentrations of TCE are relatively low) and over the downgradient portions of the plume. In the latter case, WSP has concluded that intervals of relatively clean water that overlay the affected groundwater (e.g., at GP-08 and to a lesser degree at GP-06) may be isolating the TCE mass preventing partitioning resulting in the decrease in TCE in the soil gas.

In the case of the regional plume, PCE appears to have been released to the environment at several upgradient sources. The dual lobe shape of the plume suggests that portions were spills that occurred near the intersection of Glen Head Road and the LIRR with a second, significant source released somewhere to the west along Glen Head Road. The two lobes appear to be merged along their common flanks near MW-07, although the data within this area are sparse and the limited number of wells does not provide good control over the internal structure of the two plumes (Figure 11). Regardless, the data indicate that, in 2012, PCE dissolved in groundwater from these sources had migrated more than 3,200 feet beneath the southern portion of the TTC site, the adjacent neighborhoods, including nearly all of Todd Estates, and the area beyond Glen Cove Avenue, and is (horizontally) undefined to the northwest.

Affected groundwater within the PCE plume increased in depth with distance from the sources and is undefined vertically at the western edge of the plume. The bulk of the PCE mass in 2012 was between 170 and 180 feet bgs in the westernmost profiles, including the area directly below the TCE plume near location GP-08. There is an apparent decrease in the concentrations between GP-08 and GP-13, the westernmost sample; however, this is likely an artifact of the sampling scheme (Figure 11). The 180-foot-deep sample was collected at the limit of the equipment used and, thus, deeper samples where, based on the upgradient rate of descent (i.e., between the source and GP-08), the bulk of the PCE should lie, could not be collected. The increase in depth with distance downgradient is consistent with the physical properties of the PCE (e.g., denser than water), the release location within a recharge area (i.e., an area with relatively high meteoric infiltration rates), and U.S.

Geological Survey (USGS) studies of the area (e.g., Busciolano and others, 1998; Stumm and others, 2004) which indicate (downward) vertical gradients in the area of the site. The data also corroborate the conclusions of a 2008 investigation performed by Dvirka & Bartilucci Consulting Engineers, of Woodbury, New York, for their client, National Grid. Dvirka & Bartilucci suggested that PCE released from the dry cleaners south of the TTC facility migrated under both horizontal and vertical flow components through the underlying Upper Glacial Formation before upwelling near Hempstead Harbor, approximately 1 mile downgradient from the source (see Figure 4-5 of the Dvirka & Bartilucci report).

The distribution of chlorinated VOCs within the PCE plume, like that of the TCE plume, was heavily weighted towards the parent material with a relatively low percentage of dechlorination daughter products. These data suggest only moderate natural attenuation (via sequential dechlorination) of the PCE is occurring within the organic carbon-poor outwash deposits forming the water-bearing unit. Concentrations of PCE, however, have decreased over time. The 1999 samples collected from well MW-01 south of the TTC property and close to several of the dry cleaners, for example, contained PCE concentrations greater than 18,000 µg/l; whereas, the most recent sample from this well collected by WSP in February 2016 only contained 189 µg/l of PCE, a two order of magnitude decrease. Similarly, samples from well MW-4, which contained 10,000 µg/l PCE in 2000, contained only 648 µg/l in 2012 and by February 2016, was down to 350 µg/l. Both wells are screened in the permeable Upper Glacial Formation suggesting that, like the TCE plume associated with the TTC facility, the attenuation of the regional PCE plume may be dominated by advection and dispersion rather than microbial or geochemical dechlorination.

The distribution of PCE in the soil gas, unlike that associated with the TCE plume, does not appear to be directly correlated with the areas of affected groundwater. In most cases throughout the study area, samples from the upper few feet of the water-bearing zone (i.e., the area in contact and available for partitioning to the overlying soil gas) contained only trace concentrations of PCE and their distribution was sporadic. The concentrations of PCE detected in the onsite soil gas samples are of particular note because, based on the data available, they are not underlain by affected groundwater associated with either plume. WSP believes that the PCE detected in the soil gas here and elsewhere within the investigated areas are likely residual concentrations remaining from relatively high concentrations of PCE previously detected in the groundwater (up to 16,000 µg/l in samples collected in the mid-1990s) and soil gas (up to 47,000 µg/m³) at the site (southern portion close to the dry cleaner sources). The PCE may have been trapped beneath the impervious cap of the main building or the paved areas of the site and subject to movement independent of the groundwater depending on the weather and barometric conditions. It is worth noting that the preliminary samples, which showed relatively low concentrations of PCE, were collected in July while the samples in the second event, which contained substantially higher concentrations, were collected during the winter. It is also notable that significant portions of the site, particularly along the eastern property line, were disturbed (including removal of paved surfaces) during the OU-1 excavation activities. The excavation may have altered the barometric gradients in the subsurface resulting in some redistribution of the PCE-affected soil gas.

4.4 QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT

The qualitative human health exposure assessment describes the sources of COCs in groundwater, the migration pathways, human exposure points, the routes of exposure, and the receptor populations. The assessment focuses on the environmental media relevant to OU-2 (groundwater and soil gas) and considers current, proposed, and reasonably anticipated site uses.

4.4.1 SOURCES OF CHEMICALS OF CONCERN

The main COCs in groundwater and soil gas are PCE, TCE, and related chlorinated VOCs. As discussed in greater detail above in Section 4.3, a release of TCE occurred from the former degreaser area in the southeast portion of the former TTC facility. This release affected the soil, which in turn became a source of the TCE and other compounds to the underlying groundwater. The soil was identified as OU-1 and was previously investigated and cleaned up, so that the source has been removed. WSP summarized the source removal activities in the Operable Unit No. 1 Remedial Activity Construction Completion Report, dated November 9, 2015. The NYSDEC approved this report in correspondence, dated February 9, 2016.

Additional releases occurred in upgradient, offsite locations, resulting in the predominantly PCE-containing groundwater in the southern portion of the property. The main sources are believed to be offsite dry cleaners.

4.4.2 ENVIRONMENTAL MEDIA AND TRANSPORT MECHANISMS

As discussed in greater detail above in Section 4.3, TCE released from the onsite degreaser to the soil migrated downward to the water table. Transport from soil to groundwater could occur by the force of gravity, by diffusion or advection of vapors, and by infiltration of precipitation and dissolution of COCs. The TCE then migrated with the glacial outwash groundwater in the direction of groundwater flow, resulting in a plume extending from the source area towards the northwest. Migration of PCE released at upgradient dry cleaner sites follows a similar pattern, with the northern edge of the PCE plume affecting the southern portion of the TTC site. The depth of TCE- or PCE-containing groundwater increases with distance from the source, due to storm water recharge and a downward hydraulic gradient.

VOCs may volatilize from the groundwater into the overlying vadose zone, resulting in VOC-containing soil gas. The vapors can diffuse to locations beneath buildings. If there are openings or cracks in building foundations, and a lower air pressure inside buildings relative to subsurface soil pores, the affected vapors may migrate into buildings (vapor intrusion). Vapor intrusion is most likely to occur in locations near the source, on the property or nearby downgradient locations, where VOC concentrations in groundwater are highest and are concentrated in the shallow portion of the aquifer.

4.4.3 POINTS OF EXPOSURE

Exposure to groundwater could potentially occur if affected groundwater were to be used as a source of drinking water. Groundwater is not currently used as a source of water on the property or affected downgradient properties. The site and surrounding area are served by a public water supply, the Sea Cliff Water District, and a local ordinance prohibits the installation of private water supply wells. There are no private or public water supply wells near the site that could potentially be affected by groundwater containing COCs from the site. No future use of groundwater near the site as a source of water is anticipated. As a result, exposure involving consumption of groundwater is not expected to occur.

Direct contact with groundwater during construction or excavation activities is improbable because the water table at the site and within the vicinity of the VOC plume is over 100 feet deep, and no construction or excavation would occur at such depths.

Chlorinated VOCs in the groundwater may volatilize, migrate to locations beneath buildings, and enter the buildings (vapor intrusion). There are currently no buildings on the property, and thus no points of exposure for vapor intrusion. The planned use of the property includes single- or multi-family residences. The planned residences are potential points of exposure for vapor intrusion. VOC-containing groundwater has migrated to residential properties northwest of the site, and residences in the affected area may be points of exposure. The potential for off-site migration has been investigated and Breeze-Eastern is implementing mitigation and monitoring measures under NYSDEC and NYSDOH oversight. As discussed below, any future onsite or offsite exposures are or will be addressed with engineering controls.

4.4.4 ROUTES OF EXPOSURE

Points of exposure have been identified due to potential vapor intrusion in future residences on the property and current residences downgradient of the property. The route of exposure for vapor intrusion is inhalation of indoor air. Other potential routes of exposure, such as ingestion of groundwater or dermal contact with affected groundwater, will not occur, because these exposure pathways are not complete as previously discussed.

4.4.5 RECEPTOR POPULATIONS

VOC-containing soil gas is present beneath the former TTC site and in the adjacent residential neighborhood to the west. The former TTC site is currently vacant with no activity other than investigation and remediation. Receptors at the site include remediation workers and trespassers. However, in the absence of buildings, there is currently no complete vapor intrusion pathway. After the property is redeveloped, future residents will be potential receptors. The residences will be

constructed with vapor barriers and sub-slab depressurization (SSD) systems, which will render the vapor intrusion pathway incomplete²⁰.

Current residents in the neighborhood west of the site are also potential receptors for the vapor intrusion pathway. Soil vapor and indoor air sampling has been conducted in the adjacent residential area to identify locations where vapor intrusion is occurring. SSDs were installed in two residences in 2013, and periodic inspections and maintenance are conducted. Annual sampling is also conducted in two additional residences, where subslab soil vapor and indoor air sampling results did not warrant active engineering controls.

4.4.6 SUMMARY

The qualitative human health exposure assessment is summarized below.

Environmental Media and Exposure Route	Human Exposure Assessment
Ingestion of groundwater	— Affected groundwater is not used as a source of drinking water and no such use is anticipated. — The site and surrounding area are served by a municipal water supply, and no public or private wells are present at or downgradient of the site. — Human exposure from groundwater consumption is not a complete pathway.
Direct contact with groundwater	— The water table is more than 100 feet deep. — No foreseeable construction or excavation activities would extend to the depth of groundwater, so direct contact with groundwater is not a complete pathway.
Vapor intrusion and inhalation of air in buildings	— There are no buildings on the site and therefore no current onsite exposure. — Vapor intrusion could potentially occur in planned residences after site redevelopment. The residences will be constructed with vapor barriers and SSD systems, eliminating the exposure pathway. — Current residences in the adjacent neighborhood could be affected by vapor intrusion. Vapor intrusion investigations have been conducted, and SSD systems or periodic monitoring have been implemented where warranted.

²⁰ Section 3.3.2 of the Interim Site Management Plan, which is Appendix A of the NYSDEC-approved OU-1 Construction Completion Report, describes the SSD and passive barrier requirements.

5 CONCLUSIONS

The SRI activities have increased the understanding of the affected media and have enabled the development of a sound conceptual site model for both groundwater and soil gas at the TTC site. The data confirm that a release of TCE occurred at the site in the vicinity of the degreaser area, which has been remediated, and that affected groundwater has migrated offsite where it overlaps a much larger regional plume of chlorinated VOCs. Specifically, the findings of the SRI include:

- The groundwater flow direction across the TTC site and directly downgradient of the property is to the northwest, consistent with the regional flow direction.
- TCE-affected groundwater associated with the former TTC site has migrated offsite and is present at concentrations above the ambient water quality standard of 5 µg/l beneath the adjacent Todd Estates neighborhood.
- Based on groundwater profile data collected in 2010 and 2011, the TCE plume extended approximately 1,900 feet northwest of the site; however, based on the observed attenuation, the extent of the plume has likely reduced.
- The majority of the TCE mass was detected in samples from the upper 30 feet of the water-bearing unit.
- The horizontal and vertical extent of the TCE plume has been defined.
- Soil gas associated with the TCE release at the facility is limited in extent and is present in actionable concentrations only in onsite and near site locations.
- The TCE in soil gas appears to be correlated with the area of TCE-affected groundwater more than 100 feet bgs and is largely restricted to the area over the core of the TCE plume.
- The TCE groundwater plume overlaps and is comingled with the previously defined regional plume associated with a release of PCE from several former dry cleaning facilities south of the site.
- Concentrations of PCE above the ambient water quality standard of 5 µg/l extend beneath the southwest corner of the TTC facility and the neighborhoods west of the site.
- The regional plume appears to be the result of multiple releases from separate dry cleaner sites.
- The area of PCE-affected groundwater, as defined by the 2010 through 2012 data, is more than 1,700 feet wide and extends more than 3,200 feet covering most of the investigation study area; reports published by National Grid allege that the PCE in groundwater extends from the dry cleaners to Hempstead Harbor approximately 1 mile downgradient of the TTC site.
- The regional plume is undefined vertically, but is believed to decrease in depth as the plume migrates to the west and then upwells as the plume migrates closer to Hempstead Harbor.
- The PCE in soil gas does not appear to be correlated with specific PCE concentrations in the underlying groundwater and is likely residuals associated with the higher PCE levels detected in the past.
- Both plumes are attenuating under ambient conditions over time as demonstrated in Graph 1 and Graph 2. Of the 13 wells currently included in the monitoring program, only 3 are downgradient of TTC. TCE is present in concentrations above its ambient water quality criterion of 5 µg/l in the 3 downgradient wells.
- Concentrations of dechlorination daughter products were noted in the results from both plumes; however, their relatively low abundance suggest that the observed attenuation is attributable to mechanisms other than microbially-mediated reductive dechlorination (i.e., abiotic dechlorination or physical processes, such as advection and dispersion).

WSP believes that these data have sufficiently characterized the nature and extent of affected groundwater migrating from the TTC facility and soil gas both on and offsite and provide basis for the FFS analysis for OU-2.

6 ACRONYM LIST

µg/l	micrograms per liter
µg/m ³	micrograms per cubic meter
AMSL	above mean sea level
bgs	below ground surface
COC	chemicals of concern
DCA	dichloroethane
DCE	dichloroethene
EPA	Environmental Protection Agency
ERM	Environmental Resources Management
FFS	focused feasibility study
LIRR	Long Island Railroad
mg/kg	milligrams per kilogram
MS/MSD	matrix spike and matrix spike duplicate
MTBE	methyl tert-butyl ether
NCDH	Nassau County Department of Health
NYCRR	New York Code of Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OU-1	Operable Unit No. 1
OU-2	Operable Unit No. 2
PCE	tetrachloroethene
PDB	passive diffusion bag
PID	photoionization detector
QA/QC	quality assurance and control
RI/FS	remedial investigation/feasibility study
ROD	Record of Decision
SOP	standard operating procedure
SRI	supplemental remedial investigation
TCA	trichloroethane
TCE	trichloroethene
TTC	TransTechnology Corporation
USGS	US Geological Survey
VOC	volatile organic compound

7 REFERENCES

- Dvirka & Bartilucci Consulting Engineers. 2008. Groundwater Investigation Findings Report, Glenwood Landing Former Gas Plant Site. June.
- Busciolano, R., Monti, J., and Chu, A., 1998. Water and Potentiometric-surface Altitudes of the Upper Glacial, Magothy, and Lloyd Aquifers on Long Island, New York, in March-April 1997, with a Summary of Hydrogeologic Conditions. U.S. Geological Survey Water-Resources Investigations Report 98-4019
- Stumm, F., Lange, A.D., and Candela, F.L.2004. Hydrogeology and Extent of Saltwater Intrusions in the Northern Part of the Town of Oyster Bay, Nassau County, New York. U.S. Geological Survey Water-Resources Investigations Report 03-4288.
- Vroblesky, Don A., 2001. User's Guide to Polyethylene-Based Passive Diffusion Bag Samplers to Obtain Volatile Organic Compound Concentrations in Wells, Part 1: Deployment, Recovery, Data Interpretation, and Quality Control and Assurance. U.S. Geological Survey Water-Resources Investigations Report 01-460.

FIGURES



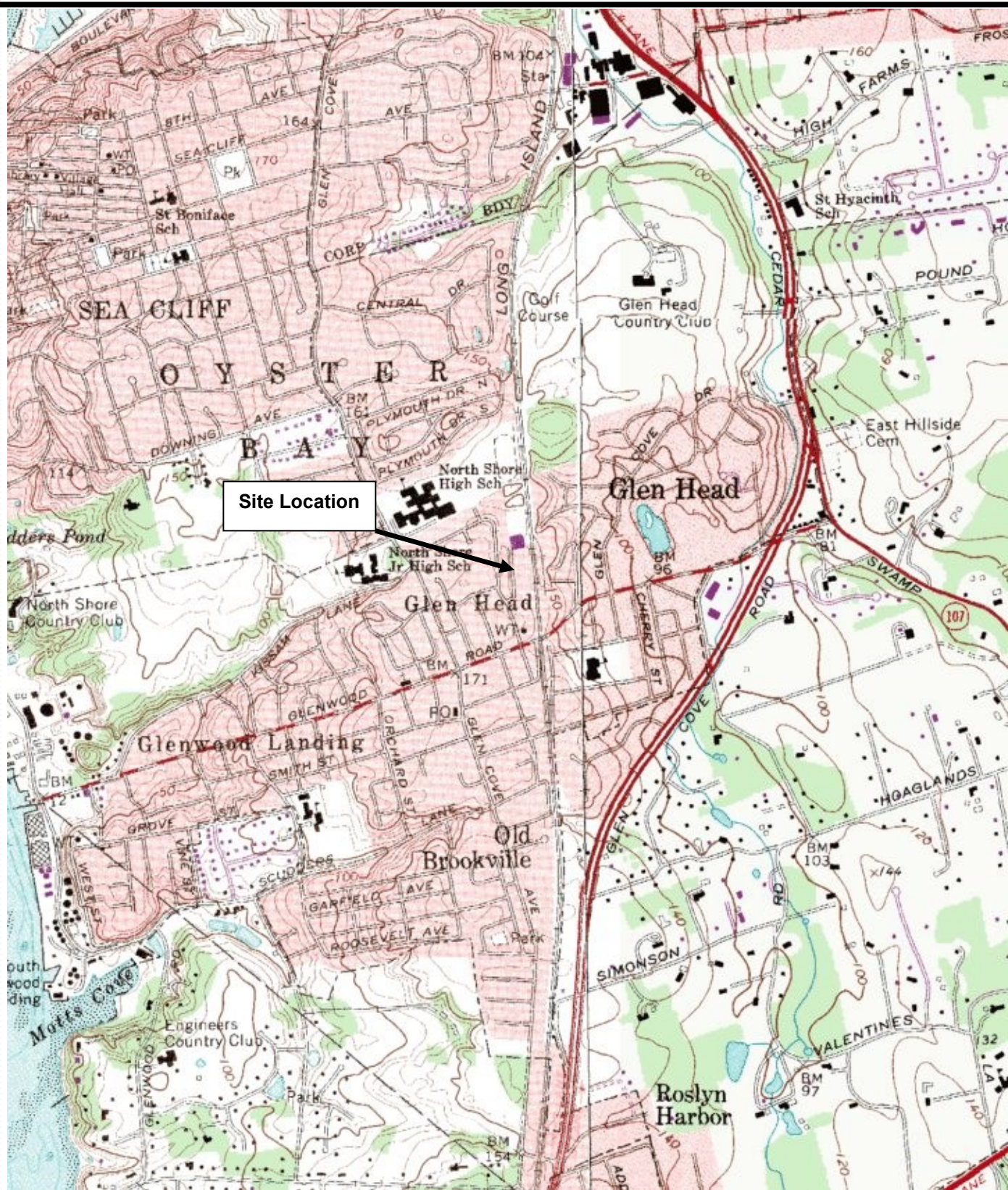
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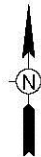
Approved:

Drawn By:

A



Reference
7.5 Minute Series Topographic Quadrangle
Sea Cliff, New York
Photorevised 1979; Scale 1:24,000



0 1000 2000 4000
SCALE, FEET



WSP Environment & Energy, LLC
300 Trade Center, Suite 4690
Woburn, MA 01801
(781) 933-7340

FIGURE 1

SITE LOCATION MAP

FORMER TRANSTECHNOLOGY CORPORATION
FACILITY — GLEN HEAD, NEW YORK

PREPARED FOR
Breeze-Eastern Corporation
Whippany, New Jersey



C:\Temp\314P0552-D09.dwg 2/23/2012 2:21 PM User01192

D

REVISIONS

REV	DESCRIPTION
1	Added GP-11, GP-12, GP-13, GP-14, GP-06, GP-08, GP-09, GP-10, GP-03, GP-04, GP-05, GP-07, GP-01, GP-02, GP-11, GP-12, GP-13, GP-14, GP-06, GP-08, GP-09, GP-10, GP-03, GP-04, GP-05, GP-07, GP-01, GP-02
2	Added GP-01, GP-02, GP-03, GP-04, GP-05, GP-07, GP-08, GP-09, GP-10, GP-11, GP-12, GP-13, GP-14, GP-06, GP-08, GP-09, GP-10, GP-03, GP-04, GP-05, GP-07, GP-01, GP-02
3	Added GP-01, GP-02, GP-03, GP-04, GP-05, GP-07, GP-08, GP-09, GP-10, GP-11, GP-12, GP-13, GP-14, GP-06, GP-08, GP-09, GP-10, GP-03, GP-04, GP-05, GP-07, GP-01, GP-02
4	Added GP-01, GP-02, GP-03, GP-04, GP-05, GP-07, GP-08, GP-09, GP-10, GP-11, GP-12, GP-13, GP-14, GP-06, GP-08, GP-09, GP-10, GP-03, GP-04, GP-05, GP-07, GP-01, GP-02

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GLEN HEAD, NEW YORK
PREPARED FOR
BREEZE-EASTERN CORPORATION, LLC
WHIPPANY, NEW JERSEY



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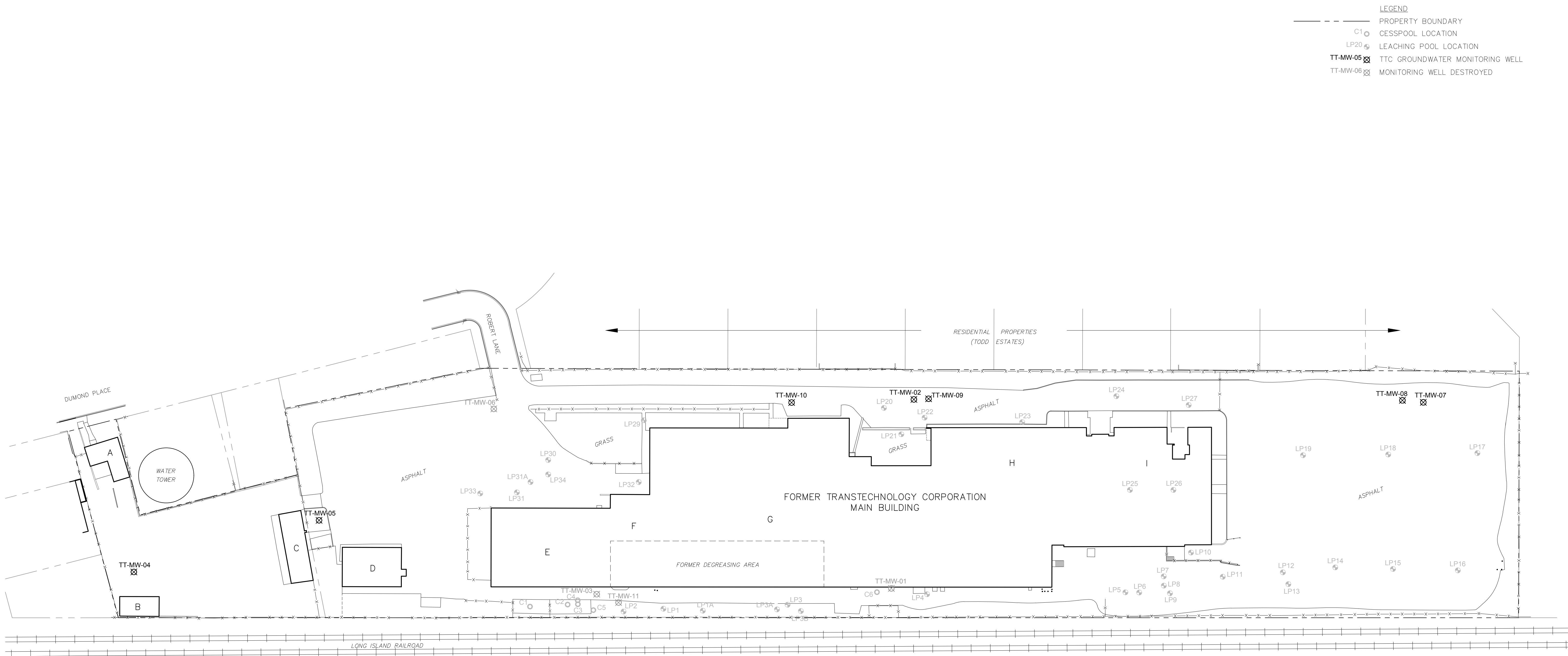
FIGURE 2

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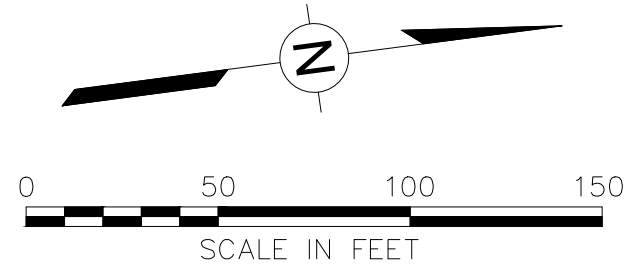
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SITE LAYOUT

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FIGURE 3

Drawing Number
314P0552-D10



GROUNDWATER PROFILING LOCATIONS
AND MONITORING WELL NETWORK

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FIGURE 4

Drawing Number
314P0552-D11

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FIGURE 5

Drawing Number
314P0552-D12

SOIL VAPOR SAMPLING LOCATIONS

FORMER TRANSTECHNOLOGY CORPORATION FACILITY

GLEN HEAD, NEW YORK

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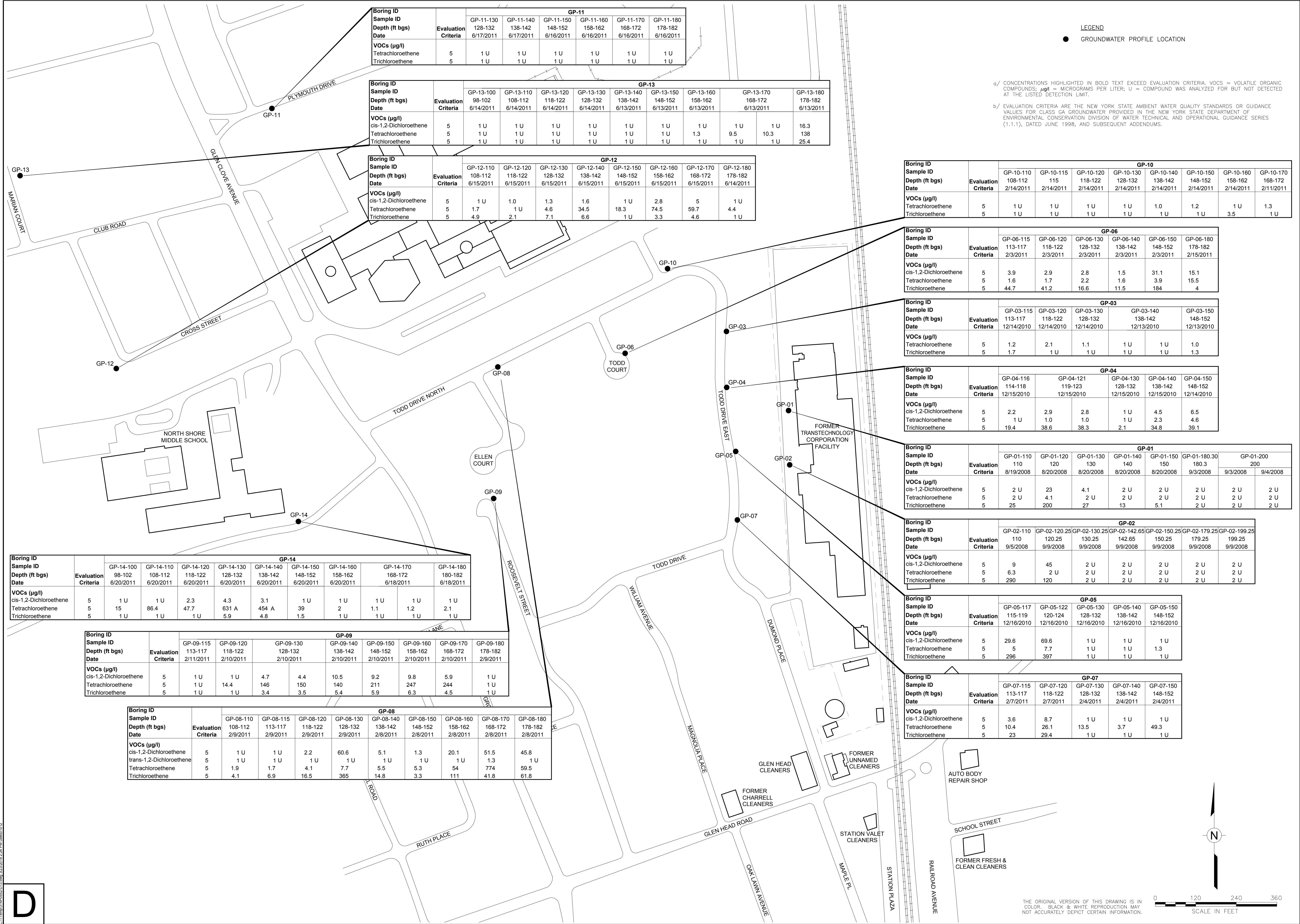
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GROUNDWATER PROFILING RESULTS

FORMER TRANSTECHNOLOGY CORPORATION FACILITY
GLEN HEAD, NEW YORK
PREPARED FOR
BREEZE-EASTERN CORPORATION, LLC
WHIPPANY, NEW JERSEY

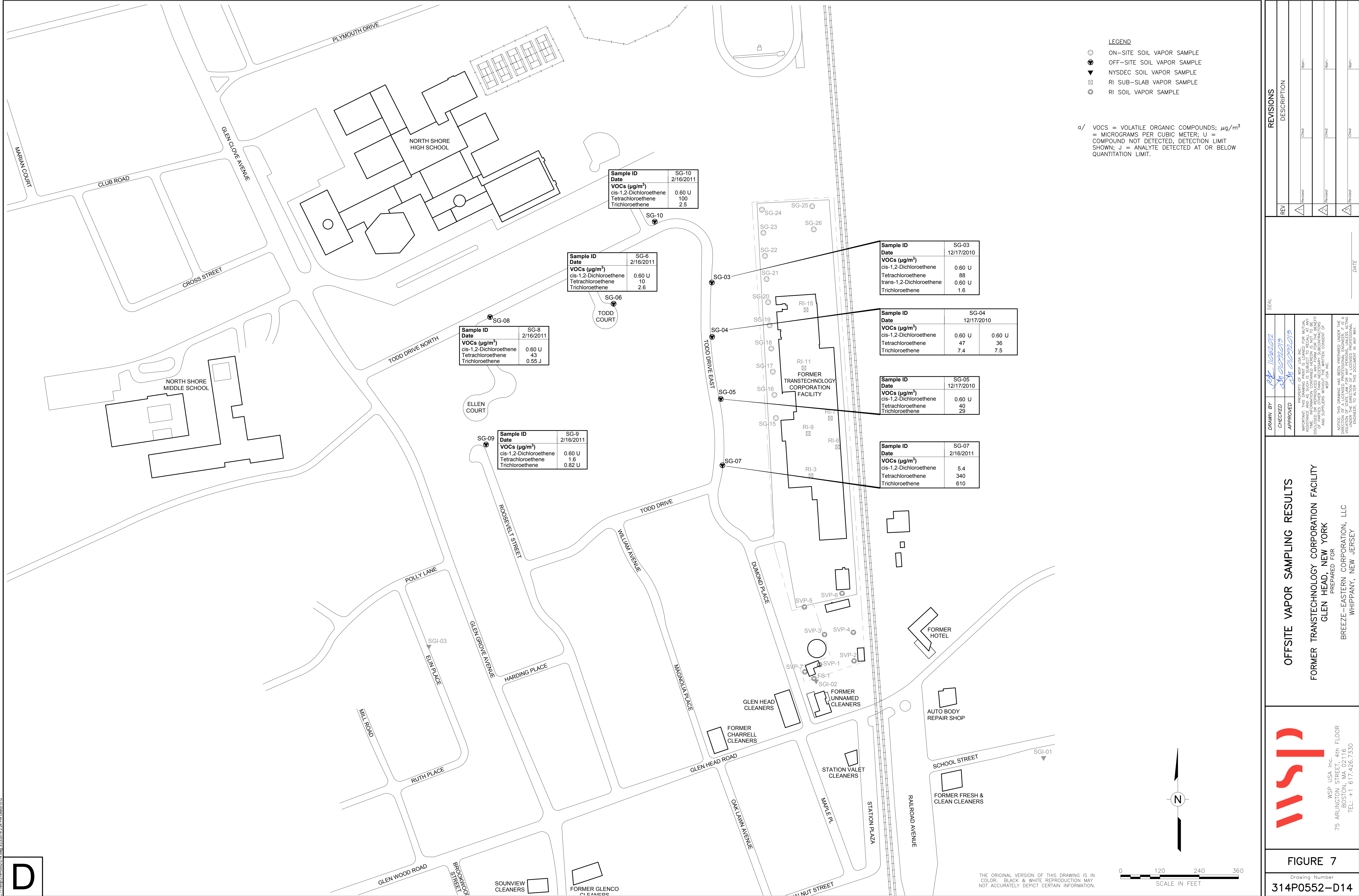
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FIGURE 6

Drawing Number
314P0552-D13

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FIGURE 7
Drawing Number
314P0552-D14

OFFSITE VAPOR SAMPLING RESULTS

FORMER TRANSTECHNOLOGY CORPORATION FACILITY
GLEN HEAD, NEW YORK
PREPARED FOR
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ONSITE SOIL VAPOR RESULTS

FORMER TRANSTECHNOLOGY CORPORATION FACILITY

GLEN HEAD, NEW YORK

BREEZE-EASTERN CORPORATION, LLC

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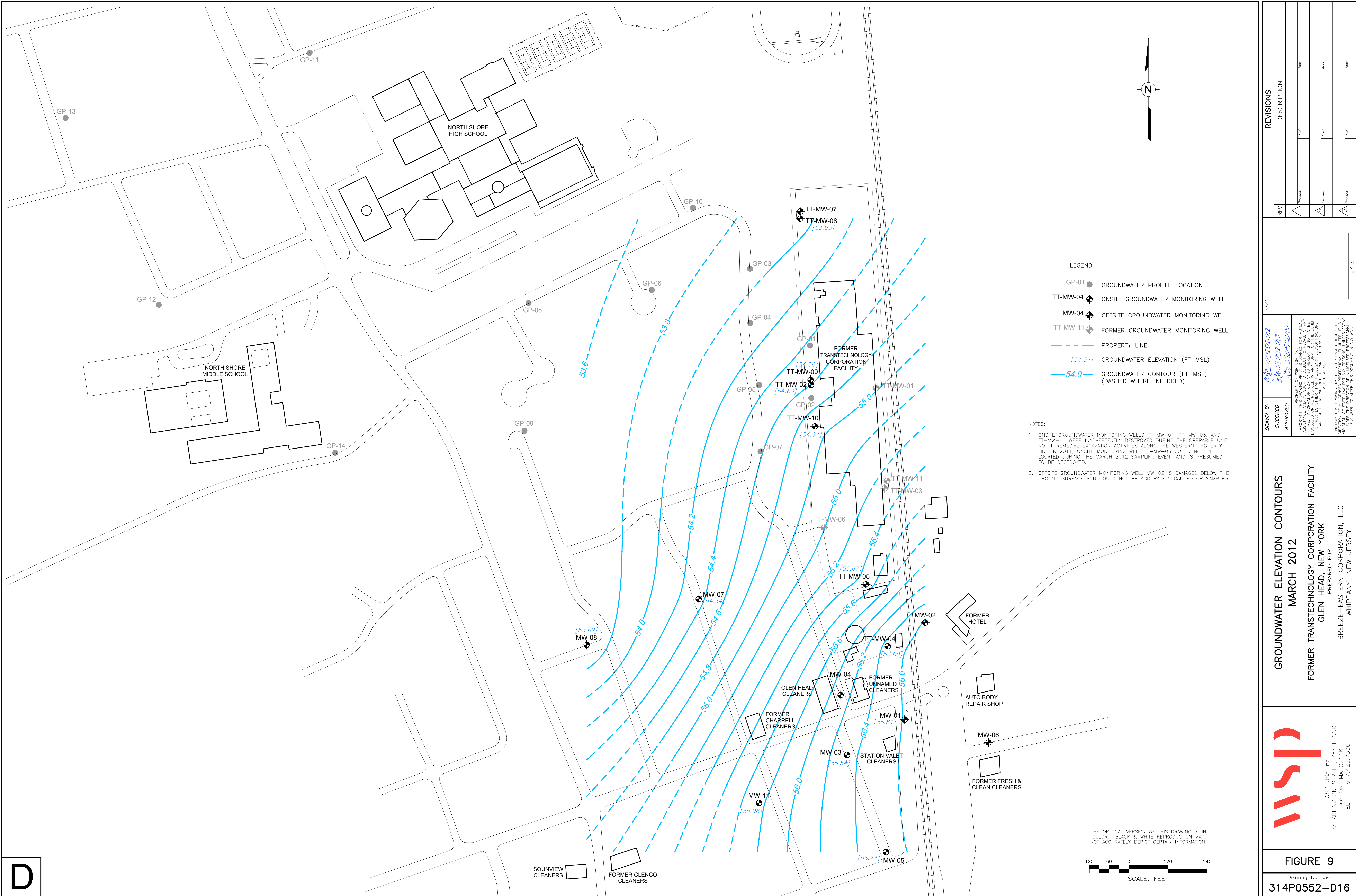
FIGURE 8

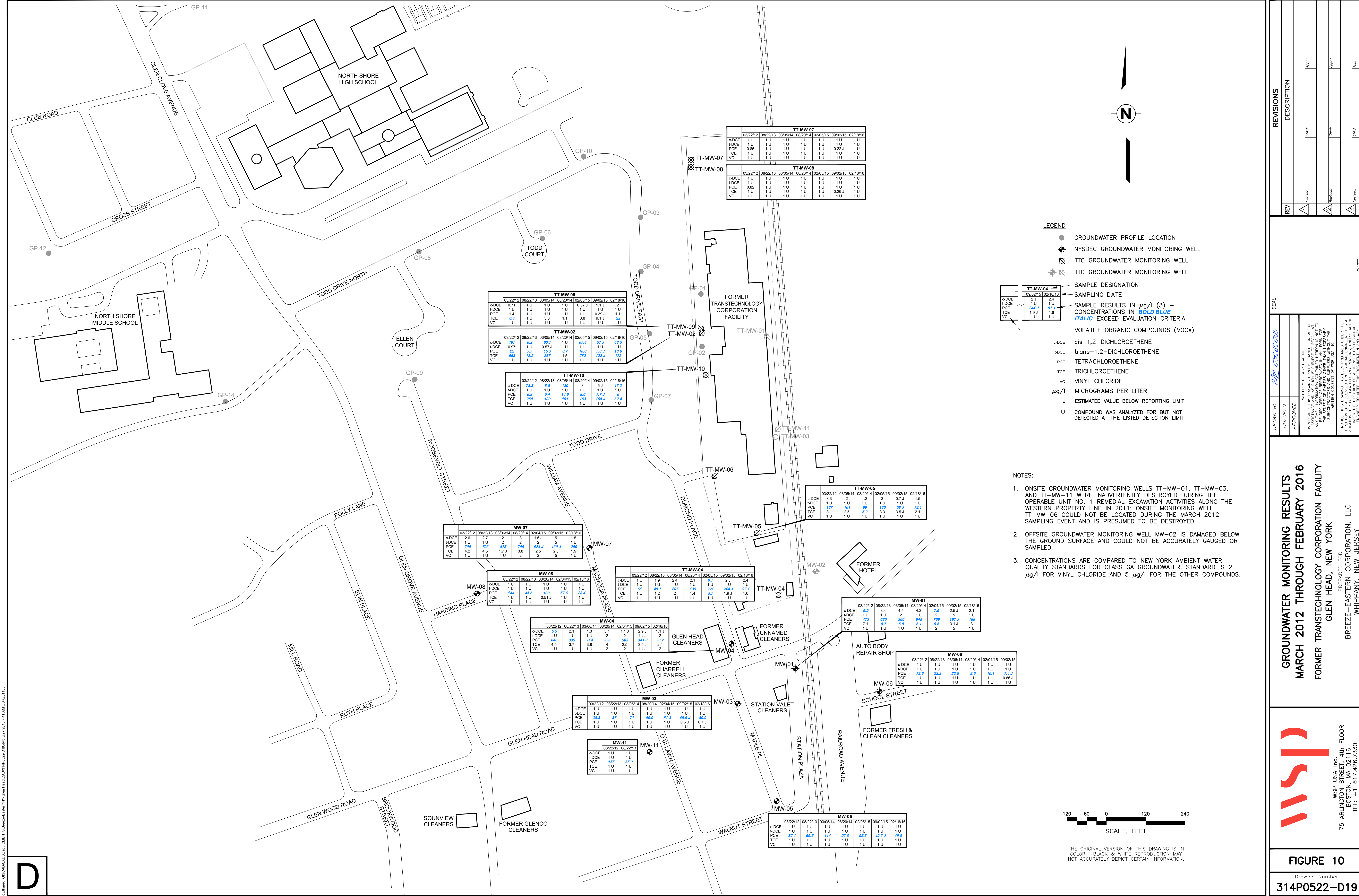
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GROUNDWATER MONITORING RESULTS MARCH 2012 THROUGH FEBRUARY 2016 FORMER TRANSTECHNOLOGY CORPORATION FACILITY GLEN HEAD, NEW YORK

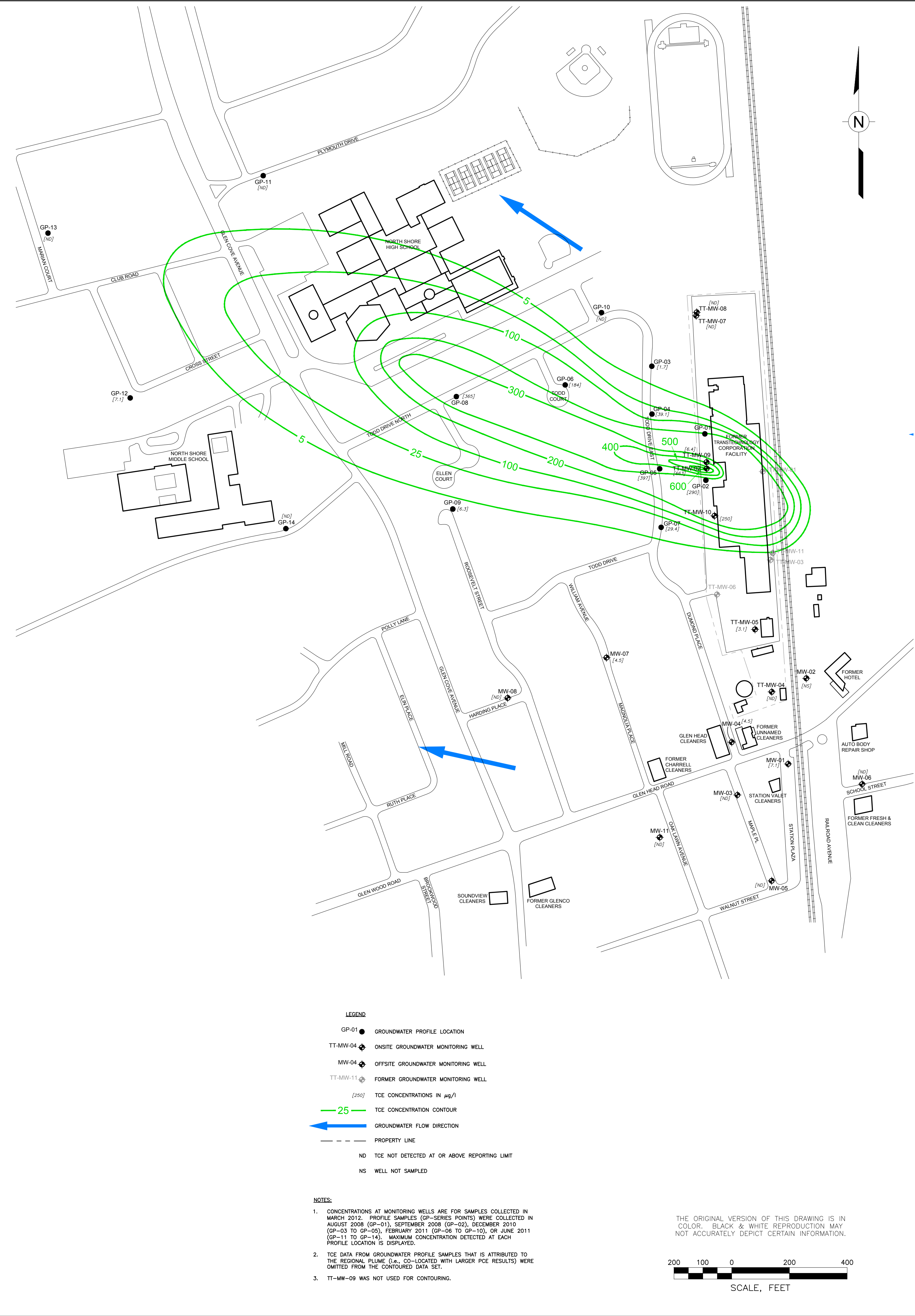
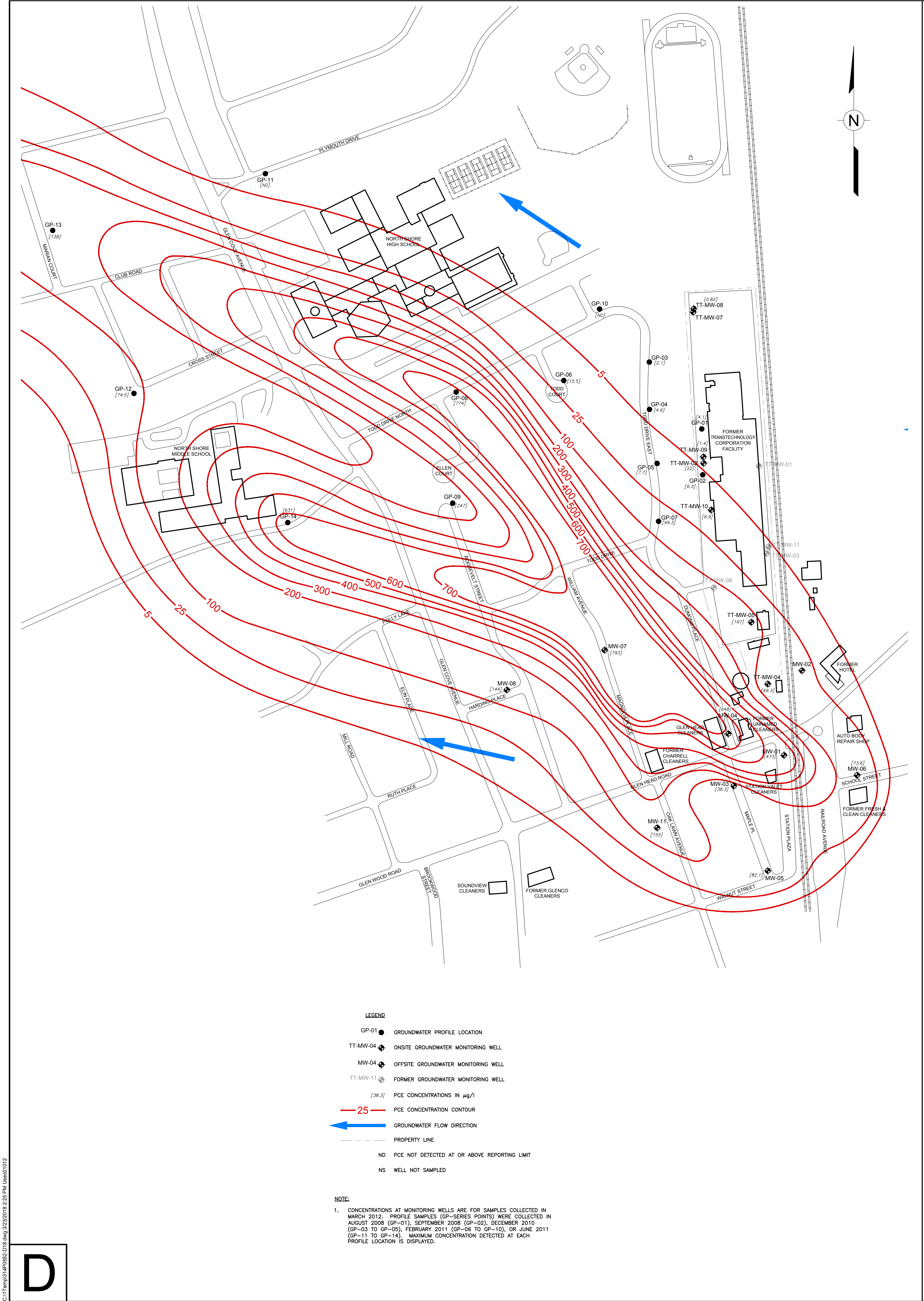


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FIGURE 10

Drawing Number

314P0522-D19



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FIGURE 11

Drawing Number

314P0552-D18

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FORMER TRANSTECHNOLOGY CORPORATION FACILITY
IN GROUNDWATER

PCE AND TCE CONCENTRATIONS

PREPARED FOR
BREEZE-EASTERN CORPORATION, LLC
WHIPPANY, NEW JERSEY

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TABLES



Table 1

**Groundwater Profiling Results
Former TransTechnology Corporation Facility
Glen Head, New York (a)**

Boring ID Sample ID Depth (ft bgs) Date	Evaluation Criteria (b)	GP-01								GP-02			
		GP-01-110 110 8/19/2008	GP-01-120 120 8/20/2008	GP-01-130 130 8/20/2008	GP-01-140 140 8/20/2008	GP-01-150 150 8/20/2008	GP-01-180.30 180.3 9/3/2008	GP-01-200 200		GP-02-110 110 9/5/2008	GP-02-120.25 120.25 9/9/2008	GP-02-130.25 130.25 9/9/2008	GP-02-142.65 142.65 9/9/2008
								9/3/2008	9/4/2008				
VOCs (µg/l)													
cis-1,2-Dichloroethene	5	2 U	23	4.1	2 U	2 U	2 U	2 U	2 U	9	45	2 U	2 U
trans-1,2-Dichloroethene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Tetrachloroethene	5	2 U	4.1	2 U	2 U	2 U	2 U	2 U	2 U	6.3	2 U	2 U	2 U
Trichloroethene	5	25	200	27	13	5.1	2 U	2 U	2 U	290	120	2 U	2 U
Vinyl chloride	2	2 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U

Boring ID Sample ID Depth (ft bgs) Date	Evaluation Criteria (b)	GP-02			GP-03					GP-04			
		GP-02-150.25 150.25 9/9/2008	GP-02-179.25 179.25 9/9/2008	GP-02-199.25 199.25 9/9/2008	GP-03-115 113-117 12/14/2010	GP-03-120 118-122 12/14/2010	GP-03-130 128-132 12/14/2010	GP-03-140 138-142 12/13/2010		GP-03-150 148-152 12/13/2010	GP-04-116 114-118 12/15/2010	GP-04-121 119-123 12/15/2010	
VOCs (µg/l)													
cis-1,2-Dichloroethene	5	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	2.2	2.9	2.8
trans-1,2-Dichloroethene	5	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	2 U	2 U	2 U	1.2	2.1	1.1	1 U	1 U	1.0	1 U	1.0	1.0
Trichloroethene	5	2 U	2 U	2 U	1.7	1 U	1 U	1 U	1 U	1.3	19.4	38.6	38.3
Vinyl chloride	2	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Boring ID Sample ID Depth (ft bgs) Date	Evaluation Criteria (b)	GP-04			GP-05					GP-06			
		GP-04-130 128-132 12/15/2010	GP-04-140 138-142 12/15/2010	GP-04-150 148-152 12/14/2010	GP-05-117 115-119 12/16/2010	GP-05-122 120-124 12/16/2010	GP-05-130 128-132 12/16/2010	GP-05-140 138-142 12/16/2010	GP-05-150 148-152 12/16/2010	GP-06-115 113-117 2/3/2011	GP-06-120 118-122 2/3/2011	GP-06-130 128-132 2/3/2011	GP-06-140 138-142 2/3/2011
VOCs (µg/l)													
cis-1,2-Dichloroethene	5	1 U	4.5	6.5	29.6	69.6	1 U	1 U	1 U	3.9	2.9	2.8	1.5
trans-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	1 U	2.3	4.6	5	7.7	1 U	1 U	1.3	1.6	1.7	2.2	1.6
Trichloroethene	5	2.1	34.8	39.1	296	397	1 U	1 U	1 U	44.7	41.2	16.6	11.5
Vinyl chloride	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Table 1

**Groundwater Profiling Results
Former TransTechnology Corporation Facility
Glen Head, New York (a)**

Boring ID Sample ID Depth (ft bgs) Date	Evaluation Criteria (b)	GP-06		GP-07					GP-08				
		GP-06-150	GP-06-180	GP-07-115	GP-07-120	GP-07-130	GP-07-140	GP-07-150	GP-08-110	GP-08-115	GP-08-120	GP-08-130	GP-08-140
		148-152 2/3/2011	178-182 2/15/2011	113-117 2/7/2011	118-122 2/7/2011	128-132 2/4/2011	138-142 2/4/2011	148-152 2/4/2011	108-112 2/9/2011	113-117 2/9/2011	118-122 2/9/2011	128-132 2/9/2011	138-142 2/8/2011
VOCs (µg/l)													
cis-1,2-Dichloroethene	5	31.1	15.1	3.6	8.7	1 U	1 U	1 U	1 U	1 U	2.2	60.6	5.1
trans-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	3.9	15.5	10.4	26.1	13.5	3.7	49.3	1.9	1.7	4.1	7.7	5.5
Trichloroethene	5	184	4	23	29.4	1 U	1 U	1 U	4.1	6.9	16.5	365	14.8
Vinyl chloride	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Boring ID Sample ID Depth (ft bgs) Date	Evaluation Criteria (b)	GP-08				GP-09							
		GP-08-150	GP-08-160	GP-08-170	GP-08-180	GP-09-115	GP-09-120	GP-09-130		GP-09-140	GP-09-150	GP-09-160	GP-09-170
		148-152 2/8/2011	158-162 2/8/2011	168-172 2/8/2011	178-182 2/8/2011	113-117 2/11/2011	118-122 2/10/2011	128-132 2/10/2011		138-142 2/10/2011	148-152 2/10/2011	158-162 2/10/2011	168-172 2/10/2011
VOCs (µg/l)													
cis-1,2-Dichloroethene	5	1.3	20.1	51.5	45.8	1 U	1 U	4.7	4.4	10.5	9.2	9.8	5.9
trans-1,2-Dichloroethene	5	1 U	1 U	1.3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	5.3	54	774	59.5	1 U	14.4	146	150	140	211	247	244
Trichloroethene	5	3.3	111	41.8	61.8	1 U	1 U	3.4	3.5	5.4	5.9	6.3	4.5
Vinyl chloride	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Boring ID Sample ID Depth (ft bgs) Date	Evaluation Criteria (b)	GP-09	GP-10							GP-11			
		GP-09-180	GP-10-110	GP-10-115	GP-10-120	GP-10-130	GP-10-140	GP-10-150	GP-10-160	GP-10-170	GP-11-130	GP-11-140	GP-11-150
		178-182 2/9/2011	108-112 2/14/2011	115 2/14/2011	118-122 2/14/2011	128-132 2/14/2011	138-142 2/14/2011	148-152 2/14/2011	158-162 2/14/2011	168-172 2/11/2011	128-132 6/17/2011	138-142 6/17/2011	148-152 6/16/2011
VOCs (µg/l)													
cis-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	1 U	1 U	1 U	1 U	1 U	1.0	1.2	1 U	1.3	1 U	1 U	1 U
Trichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3.5	1 U	1 U	1 U	1 U
Vinyl chloride	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Table 1

**Groundwater Profiling Results
Former TransTechnology Corporation Facility
Glen Head, New York (a)**

Boring ID Sample ID Depth (ft bgs) Date	Evaluation Criteria (b)	GP-11			GP-12							
		GP-11-160 158-162 6/16/2011	GP-11-170 168-172 6/16/2011	GP-11-180 178-182 6/16/2011	GP-12-110 108-112 6/15/2011	GP-12-120 118-122 6/15/2011	GP-12-130 128-132 6/15/2011	GP-12-140 138-142 6/15/2011	GP-12-150 148-152 6/15/2011	GP-12-160 158-162 6/15/2011	GP-12-170 168-172 6/15/2011	GP-12-180 178-182 6/14/2011
VOCs (µg/l)												
cis-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1.0	1.3	1.6	1 U	2.8	5	1 U
trans-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	1 U	1 U	1 U	1.7	1 U	4.6	34.5	18.3	74.5	59.7	4.4
Trichloroethene	5	1 U	1 U	1 U	4.9	2.1	7.1	6.6	1 U	3.3	4.6	1 U
Vinyl chloride	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Boring ID Sample ID Depth (ft bgs) Date	Evaluation Criteria (b)	GP-13									
		GP-13-100 98-102 6/14/2011	GP-13-110 108-112 6/14/2011	GP-13-120 118-122 6/14/2011	GP-13-130 128-132 6/14/2011	GP-13-140 138-142 6/13/2011	GP-13-150 148-152 6/13/2011	GP-13-160 158-162 6/13/2011	GP-13-170 168-172 6/13/2011		GP-13-180 178-182 6/13/2011
VOCs (µg/l)											
cis-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	16.3
trans-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1.3	9.5	10.3	138
Trichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	25.4
Vinyl chloride	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Boring ID Sample ID Depth (ft bgs) Date	Evaluation Criteria (b)	GP-14									
		GP-14-100 98-102 6/20/2011	GP-14-110 108-112 6/20/2011	GP-14-120 118-122 6/20/2011	GP-14-130 128-132 6/20/2011	GP-14-140 138-142 6/20/2011	GP-14-150 148-152 6/20/2011	GP-14-160 158-162 6/20/2011	GP-14-170 168-172 6/18/2011		GP-14-180 180-182 6/18/2011
VOCs (µg/l)											
cis-1,2-Dichloroethene	5	1 U	1 U	2.3	4.3	3.1	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	15	86.4	47.7	631 A	454	39	2	1.1	1.2	2.1
Trichloroethene	5	1 U	1 U	1 U	5.9	4.8	1.5	1 U	1 U	1 U	1 U
Vinyl chloride	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

- a/ Concentrations highlighted in bold text exceed evaluation criteria. VOCs = volatile organic compounds; µg/l = micrograms per liter; ft bgs = feet below ground surface; U = compound was not detected, detection limit shown.
- b/ Evaluation criteria are the New York State ambient water quality standards or guidance values for Class GA groundwater provided in the New York State Department of Environmental Conservation Division of Water Technical and Operational Guidance Series (1.1.1), dated June 1998, and subsequent addendums.
- c/ Includes result of blind duplicate sample.
- c/ GP-03-300 is a blind duplicate of GP-03-140; GP-04-400 is blind duplicate of GP-04-121; GP-9-200 is a blind duplicate of GP9-130.

Table 2
Soil Gas Sampling Results
Former TransTechnology Corporation Facility
Glen Head, New York (a)

Sample ID: Date	SG-03 12/17/10	SG-04 12/17/10		SG-05 12/17/10	SG-06 02/16/11	SG-07 02/16/11	SG-08 02/16/11	SG-09 02/16/11	SG-10 02/16/11	SG-11 07/21/11	SG-12 07/21/11		SG-13 07/21/11	SG-14 07/21/11	SG-15 02/28/12
VOCs (µg/m³)															
1,1-Dichloroethene	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	3.9	0.60 U	0.60 U	0.60 U	0.15 U	0.15 U	0.15 U	12	0.15 U	36 J
cis-1,2-Dichloroethene	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	5.4	0.60 U	0.60 U	0.60 U	0.15 U	0.15 U	0.15 U	19	0.15 U	27
Tetrachloroethene	88	47	36	40	10	340	43	1.6	100	8.1	6.6	7.1	180	0.15 U	710
trans-1,2-Dichloroethene	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.15 U	0.15 U	0.15 U	0.76	0.15 U	0.15 U
Trichloroethene	1.6	7.4	7.5	29	2.6	610	0.55 J	0.82 U	2.5	0.25	1.3	1.2	2,700	0.38	2100
Vinyl chloride	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U

Sample ID Date	SG-16 02/28/12	SG-160 02/28/12	SG-17 02/28/12	SG-18 02/28/12	SG-19 02/28/12	SG-20 02/28/12	SG-21 02/28/12	SG-22 02/28/12	SG-23 02/28/12	SG-24 02/28/12	SG-25 02/28/12	SG-26 02/28/12
VOCs (µg/m³)												
1,1-Dichloroethene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
cis-1,2-Dichloroethene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Tetrachloroethene	980 J	510 UJ	740 J	510	580 UJ	1200 J	290	650 UJ	490	600	630 J	30 UJ
trans-1,2-Dichloroethene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Trichloroethene	67	62	180 UJ	3.5	1.5 J	0.15 U	0.6 J	1.1	2.5	7.2	2.6	11
Vinyl chloride	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U

- a/ VOCs = volatile organic compounds; µg/m³ = micrograms per cubic meter; U = compound not detected, detection limit shown; J = analyte detected at or below quantitation limit; UJ = compound was not detected at or above the estimated quantitation limit.
- b/ SG-160 is a blind duplicate of SG-16.

Table 3

Historical Groundwater Elevations
Former TransTechnology Corporation Facility
Glen Head, New York (a)

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet btoc)	Water Elevation (feet amsl)	Change in Elevation (feet)	Notes
Onsite Wells						
TT-MW-02	02/28/12	161.52	106.81	54.65	-	
	03/22/12		106.92	54.54	-0.11	
	07/30/13		108.38	53.08	-1.46	
	08/22/13		108.58	52.88	-0.20	
	01/30/14		109.92	51.54	-1.34	
	03/05/14		110.07	51.39	-0.15	
	07/01/14		109.10	52.36	0.97	
	08/20/14		109.51	51.95	-0.41	
	01/09/15		110.31	51.15	-0.80	
	02/05/15		110.95	50.51	-0.64	
	07/29/15		110.42	51.04	0.53	
	09/02/15		110.81	50.65	-0.39	
	01/21/16		111.47	49.99	-0.66	
	02/18/16		111.53	49.93	-0.06	
TT-MW-04	02/29/12	171.90	115.12	56.78	-	
	03/22/12		115.22	56.68	-0.10	
	07/30/13		116.88	55.02	-1.66	
	08/22/13		117.23	54.67	-0.35	
	01/30/14		117.96	53.94	-0.73	
	03/05/14		118.05	53.85	-0.09	
	07/01/14		117.64	54.26	0.41	
	08/20/14		118.38	53.52	-0.74	
	01/09/15		118.70	53.20	-0.32	
	02/05/15		119.66	52.24	-0.96	
	07/29/15		119.41	52.49	0.25	
	09/02/15		119.96	51.94	-0.55	
	01/21/16		119.65	52.25	0.31	
	02/18/16		119.61	52.29	0.04	
TT-MW-05	02/28/12	167.73	111.88	55.85	-	b
	03/22/12		111.96	55.77	-0.08	
	07/30/13		NM	-	-	
	01/31/14		114.89	52.84	-2.93	
	03/05/14		114.98	52.75	-0.09	
	07/01/14		114.23	53.50	0.75	
	08/20/14		114.81	52.92	-0.58	
	01/09/14		115.42	52.31	-0.61	
	02/05/15		117.01	50.72	-1.59	
	07/29/15		115.79	51.94	1.22	
	09/02/15		116.25	51.48	-0.46	
	01/21/16		116.52	51.21	-0.27	
	02/18/16		116.52	51.21	0.00	
TT-MW-07	02/28/12	158.67	104.68	53.99	-	
	03/22/12		104.66	54.01	0.02	
	07/30/13		106.06	52.61	-1.40	
	08/22/13		106.10	52.57	-0.04	
	01/30/13		107.65	51.02	-1.55	
	03/05/14		107.84	50.83	-0.19	
	07/01/14		106.74	51.93	1.10	
	08/20/14		107.08	51.59	-0.34	
	01/08/15		107.86	50.81	-0.78	
	02/05/15		110.01	48.66	-2.15	
	07/29/15		107.94	50.73	2.07	
	09/02/15		108.26	50.41	-0.32	
	01/21/16		109.15	49.52	-0.89	
	02/18/16		109.25	49.42	-0.10	
TT-MW-08	02/28/12	159.01	104.99	54.02	-	
	03/22/12		105.08	53.93	-0.09	
	07/30/13		106.53	52.48	-1.45	
	08/22/13		106.54	52.47	-0.01	
	01/30/14		108.13	50.88	-1.59	
	03/05/14		108.31	50.70	-0.18	
	07/01/14		107.21	51.80	1.10	
	08/20/14		107.67	51.34	-0.46	
	01/08/15		108.27	50.74	-0.60	
	02/05/15		108.91	50.10	-0.64	
	07/29/15		108.40	50.61	0.51	
	09/02/15		108.75	50.26	-0.35	
	01/21/16		109.61	49.40	-0.86	
	02/18/16		109.70	49.31	-0.09	
TT-MW-09	02/28/12	161.84	107.29	54.55	-	
	03/22/12		107.28	54.56	0.01	
	07/30/13		108.73	53.11	-1.45	
	08/22/13		108.91	52.93	-0.18	
	01/30/14		110.28	51.56	-1.37	
	03/05/14		110.41	51.43	-0.13	
	07/01/14		109.44	52.40	0.97	
	08/20/14		109.87	51.97	-0.43	
	01/08/15		110.86	50.98	-0.99	
	02/05/15		111.12	50.72	-0.26	
	07/29/15		110.78	51.06	0.34	
	09/02/15		111.11	50.73	-0.33	
	01/21/16		111.83	50.01	-0.72	
	02/18/16		111.91	49.93	-0.08	
TT-MW-10	02/28/12	161.73	106.80	54.93	-	b
	03/22/12		106.79	54.94	0.01	
	07/30/13		108.21	53.52	-1.42	
	08/22/13		108.37	53.36	-0.16	
	01/31/14		109.81	51.92	-1.44	
	03/05/14		109.97	51.76	-0.16	
	07/01/14		108.95	52.78	1.02	
	08/20/14		109.45	52.28	-0.50	
	01/08/15		110.23	51.50	-0.78	
	02/05/15		NM	-	-	
	07/29/15		110.40	51.33	-0.17	
	09/02/15		110.82	50.91	-0.42	
	01/21/16		111.41	50.32	-0.59	
	02/18/16		111.47	50.26	-0.06	

Table 3
Historical Groundwater Elevations
Former TransTechnology Corporation Facility
Glen Head, New York (a)

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet btoc)	Water Elevation (feet amsl)	Change in Elevation (feet)	Notes
Offsite Wells						
MW-01	02/29/12	164.26	107.26	57.00	-	
	03/22/12		107.45	56.81	-0.19	
	07/30/13		109.23	55.03	-1.78	
	08/22/13		109.40	54.86	-0.17	
	01/30/14		110.09	54.17	-0.69	
	03/05/14		110.15	54.11	-0.06	
	07/01/14		109.99	54.27	0.16	
	08/20/14		110.80	53.46	-0.81	
	01/08/15		110.94	53.32	-0.14	
	02/04/15		111.01	53.25	-0.07	
	07/29/15		111.93	52.33	-0.92	
	09/02/15		112.46	51.80	-0.53	
	01/21/16		111.78	52.48	0.68	
	02/18/16		111.83	52.43	-0.05	
MW-02	02/29/12	160.63	103.68	56.95	-	c
	03/22/12		103.80	56.83	-0.12	
	07/30/13		NM	-	-	
MW-03	02/29/12	168.95	112.24	56.71	-	
	03/22/12		112.41	56.54	-0.17	
	07/30/13		114.21	54.74	-1.80	
	08/22/13		114.38	54.57	-0.17	
	01/30/14		114.98	53.97	-0.60	
	03/05/14		115.09	53.86	-0.11	
	07/01/14		114.94	54.01	0.15	
	08/20/14		115.81	53.14	-0.87	
	01/08/15		118.73	50.22	-2.92	
	02/04/15		118.97	49.98	-0.24	
	07/29/15		116.90	52.05	2.07	
	09/02/15		117.42	51.53	-0.52	
	01/21/16		116.65	52.30	0.77	
	02/18/16		116.64	52.31	0.01	
MW-05	02/29/12	172.99	116.12	56.87	-	
	03/22/12		116.26	56.73	-0.14	
	07/30/13		118.05	54.94	-1.79	
	08/22/13		118.26	54.73	-0.21	
	01/30/14		119.03	53.96	-0.77	
	03/05/14		119.11	53.88	-0.08	
	07/01/14		118.62	54.37	0.49	
	08/20/14		119.59	53.40	-0.97	
	01/08/15		119.85	53.14	-0.26	
	02/04/15		119.91	53.08	-0.06	
	07/29/15		120.67	52.32	-0.76	
	09/04/15		121.27	51.72	-0.60	
	01/21/16		120.81	52.18	0.46	
	02/18/16		120.81	52.18	0.00	
MW-06	02/29/12	153.55	90.54	63.01	-	
	03/22/12		90.93	62.62	-0.39	
	07/30/13		92.58	60.97	-1.65	
	08/22/13		92.69	60.86	-0.11	
	01/30/14		93.71	59.84	-1.02	
	03/06/14		93.71	59.84	0.00	
	07/01/14		93.29	60.26	0.42	
	08/20/14		94.26	59.29	-0.97	
	01/08/15		94.30	59.25	-0.04	
	02/04/15		94.55	59.00	-0.25	
	07/29/15		93.36	60.19	1.19	
	09/02/15		96.00	57.55	-2.64	
	01/21/16		95.41	58.14	0.59	
	02/18/16		NM	-	-	
MW-07	02/29/12	179.90	125.39	54.51	-	
	03/22/12		125.56	54.34	-0.17	
	07/30/13		127.04	52.86	-1.48	
	08/22/13		127.20	52.70	-0.16	
	01/30/14		128.35	51.55	-1.15	
	03/06/14		128.57	51.33	-0.22	
	07/01/14		127.71	52.19	0.86	
	08/20/14		128.26	51.64	-0.55	
	01/08/15		128.92	50.98	-0.66	
	02/04/15		-	-	-	d
	07/29/15		129.23	50.67	-0.31	
	09/02/15		129.66	50.24	-0.43	
	01/21/16		129.94	49.96	-0.28	
	02/18/16		129.96	49.94	-0.02	
MW-08	02/29/12	174.83	121.10	53.73	-	e
	03/22/12		121.21	53.62	-0.11	
	07/30/13		122.68	52.15	-1.47	
	08/22/13		-	-	-	
	01/30/14		123.90	50.93	-	
	03/06/14		NM	-	-	b
	07/02/14		123.32	51.51	0.58	
	08/20/14		123.89	50.94	-0.57	
	01/08/15		124.51	50.32	-0.62	
	02/04/15		124.45	50.38	0.06	b
	07/29/15		NM	-	-	
	09/02/15		NM	-	-	
	01/21/16		125.46	49.37	-1.01	
	02/18/16		125.47	49.36	-0.01	
MW-11	02/29/12	174.67	118.56	56.11	4.61	
	03/22/12		118.71	55.96	-0.15	
	07/30/13		120.44	54.23	-1.73	
	08/22/13		120.60	54.07	-0.16	
	01/30/14		121.21	53.46	-0.61	
	03/06/14		-	-	-	
	02/29/12					c
	03/22/12					
	07/30/13					
	08/22/13					
	01/30/14					
	03/06/14					

a/ feet amsl = feet above mean sea level; feet btoc = feet below top of casing; NM = not measured;
onsite wells TT-MW-01, TT-MW-03, and TT-MW-11 were damaged or destroyed during the
OU-1 soil remediation activities in 2011 ; well TT-MW-06 could not be located and is
presumed to have been destroyed, see text for additional information.
b/ Well was not located, or otherwise accessible during sampling event due to parked vehicles,
snow, or other obstructions.
c/ Monitoring well could not be located and is presumed destroyed.
d/ Omitted due to anomalously high measurements associated with a suspected equipment malfunction.
e Well was inadvertently not measured during sampling event.

Table 4

Historical Groundwater Sampling Results
Former TransTechnology Corporation Site
Glen Head, New York (a)

Volatile Organic Compounds (µg/l):		cis -1,2- Dichloroethene	trans -1,2- Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
Evaluation Criteria (b):		5	5	5	5	2
Sample ID	Date					
TT-MW-02	03/22/12	197	0.97	22	663	1 U
	08/22/13	6.2	1 U	5.7	12.2	1 U
	03/05/14	63.7	0.57 J	15.3	267	1 U
	08/20/14	1 U	1 U	8.7	1.5	1 U
	02/05/15	67.4	1 U	10.8	282	1 U
	09/02/15	57 J	1 U	7.8 J	122 J	1 U
	02/18/16	48.5	1 U	10.6	172	1 U
TT-MW-04	03/22/12	1 U	1 U	61	1 U	1 U
	08/22/13	1.9	1 U	49.7	1.2	1 U
	03/05/14	2.4	1 U	205	2	1 U
	08/20/14	2.1	1 U	135	1.4	1 U
	02/05/15	9.7	1 U	221	5.7	1 U
	09/02/15	2 J	1 U	244 J	1.9 J	1 U
	02/18/16	2.4	1 U	97.1	1.6	1 U
TT-MW-05 (c)	03/22/12	3.3	1 U	167	3.1	1 U
	03/05/14	2	1 U	101	2.5	1 U
	08/20/14	1.2	1 U	69	5.2	1 U
	02/05/15	3	1 U	130	3.3	1 U
	09/02/15	0.7 J	1 U	58 J	3.5 J	1 U
	02/18/16	1.5	1 U	78.1	2.1	1 U
TT-MW-07	03/22/12	1 U	1 U	0.85	1 U	1 U
	08/22/13	1 U	1 U	1 U	1 U	1 U
	03/05/14	1 U	1 U	1 U	1 U	1 U
	08/20/14	1 U	1 U	1 U	1 U	1 U
	02/05/15	1 U	1 U	1 U	1 U	1 U
	09/02/15	1 U	1 U	0.22 J	1 U	1 U
	02/18/16	1 U	1 U	1 U	1 U	1 U
TT-MW-08	03/22/12	1 U	1 U	0.82	1 U	1 U
	08/22/13	1 U	1 U	1 U	1 U	1 U
	03/05/14	1 U	1 U	1 U	1 U	1 U
	08/20/14	1 U	1 U	1 U	1 U	1 U
	02/05/15	1 U	1 U	1 U	1 U	1 U
	09/02/15	1 U	1 U	1 U	0.26 J	1 U
	02/18/16	1 U	1 U	1 U	1 U	1 U
TT-MW-09	03/22/12	0.71	1 U	1.4	6.4	1 U
	08/22/13	1 U	1 U	1 U	1 U	1 U
	03/05/14	1 U	1 U	1 U	3.8	1 U
	08/20/14	1 U	1 U	1 U	1.1	1 U
	02/05/15	0.57 J	1 U	1 U	3.8	1 U
	09/02/15	1.1 J	1 U	0.39 J	9.1 J	1 U
	02/18/16	2	1 U	1.1	22	1 U
TT-MW-10 (c)	03/22/12	78.8	1 U	6.9	250	1 U
	08/22/13	8.8	1 U	5.4	100	1 U
	03/05/14	120	1 U	14.6	191	1 U
	08/20/14	3	1 U	8.6	153	1 U
	09/02/15	5 J	1 U	7.7 J	165 J	1 U
	02/18/16	17.3	1 U	6	62.4	1 U

Table 4

Historical Groundwater Sampling Results
Former TransTechnology Corporation Site
Glen Head, New York (a)

Volatile Organic Compounds (µg/l):		cis -1,2- Dichloroethene	trans -1,2- Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
Evaluation Criteria (b):		5	5	5	5	2
Sample ID	Date					
TT-MW-11 (c)	12/09/05	11	1 U	10	53	1 U
MW-01	03/22/12	6.9	1 U	473	7.1	1 U
DUP (d)	08/22/13	3.4	1 U	685 a	5.7	1 U
	08/22/13	3.3	1 U	638	5.6	1 U
	03/05/14	4.5	2 U	360	5.8	1 U
DUP (d)	08/20/14	4.2	1 U	645 a	6.1	1 U
	08/20/14	3.6	2 U	659	5.9	2 U
	02/04/15	7.6	2 U	769	9.6	2 U
	09/02/15	2.5 J	5 U	197 J	3.1 J	5 U
	02/18/16	2.1	1 U	189	3	1 U
MW-03	03/22/12	1 U	1 U	38.3	1 U	1 U
	08/22/13	1 U	1 U	37	1 U	1 U
	03/05/14	1 U	1 U	71	1 U	1 U
	08/20/14	1 U	1 U	40.9	1 U	1 U
	02/04/15	1 U	1 U	51.3	1 U	1 U
	09/02/15	1 U	1 U	45.9 J	0.6 J	1 U
	02/18/16	1 U	1 U	80.9	0.7 J	1 U
MW-04	03/22/12	5.5	1 U	648	4.5	1 U
	08/22/13	2.1	1 U	339 a	3.7	1 U
DUP (d)	03/06/14	1.3	1 U	714 a	3.8	1 U
	03/06/14	1.2	1 U	675 a	3.6	1 U
	08/20/14	3.1	2 U	376	4	2 U
DUP (d)	02/04/15	1.1 J	2 U	503	2.5	2 U
	02/04/15	1.2	1 U	481 a	2.7	1 U
	09/02/15	3.2 J	2 U	435 J	4.1 J	2 U
DUP (d)	09/02/15	2.9 J	1 UJ	341 J	3.5 J	1 UJ
	02/18/16	1.1 J	2 U	352	2.4	2 U
DUP (d)	02/18/16	1.1	1 U	350 a	2.7	1 U
MW-05	03/22/12	1 U	1 U	82.1	1 U	1 U
	08/22/13	1 U	1 U	66.5	1 U	1 U
	03/05/14	1 U	1 U	114	1 U	1 U
	08/20/14	1 U	1 U	97.8	1 U	1 U
	02/05/15	1 U	1 U	95.3	1 U	1 U
	09/02/15	1 U	1 U	49.7 J	0.28 J	1 U
	02/18/16	1 U	1 U	45.8	1 U	1 U
MW-06	03/22/12	1 U	1 U	73.6	1 U	1 U
	08/22/13	1 U	1 U	22.3	1 U	1 U
	03/06/14	1 U	1 U	22.8	1 U	1 U
	08/20/14	1 U	1 U	9.5	1 U	1 U
	02/04/15	1 U	1 U	10.1	1 U	1 U
	09/02/15	1 U	1 U	7.4 J	0.86 J	1 U
MW-07	03/22/12	2.6	1 U	790	4.2	1 U
DUP (d)	03/22/12	2.6	1 U	793	4.5	1 U
	08/22/13	2.7	1 U	793 a	4	1 U
	03/06/14	2 U	2 U	475	1.7 J	1 U
	08/20/14	3	2 U	709	3.8	2 U
	02/04/15	1.6 J	2 U	424 J	2.5	2 U
	09/02/15	5 U	5 U	130 J	2 J	5 U
	02/18/16	1.5	1 U	200	1.9	1 U
MW-08 (c)	03/22/12	1 U	1 U	144	1 U	1 U
	08/22/13	1 U	1 U	45.6	1 U	1 U
	08/20/14	1 U	1 U	100	0.51 J	1 U
	02/04/15	1 U	1 U	57.6	1 U	1 U
	02/18/16	1 U	1 U	28.4	1 U	1 U
MW-11 (c)	03/22/12	1 U	1 U	155	1 U	1 U
	08/22/13	1 U	1 U	35.9	1 U	1 U

- a/ All results are reported in micrograms per liter (µg/l). Concentrations highlighted in Bold text and gray shading exceed evaluation criteria; a = result is from Run #2; J = estimated value; U = compound not detected at or above the reporting limit; UJ = the analyte was not detected above the laboratory reporting limit.
- b/ Evaluation criteria are the New York State ambient water quality standards or guidance values for Class GA groundwater provided in the New York State Department of Environmental Conservation Division of Water Technical and Operational Guidance Series (1.1.1), dated June 1998, and subsequent addendums.
- c/ Monitoring well was not sampled during one or more sampling event; TT-MW-05 could not be located in August, 2013; TT-MW-10 could not be located in February, 2015; TT-MW-11 was destroyed; MW-08 was blocked by a vehicle; MW-11 was destroyed and PDB was lost. See text for further explanation.
- d/ All duplicates were originally designated with unique sample identifications in the field for blind laboratory analysis.

GRAPHS



APPENDIX

A LEGAL DESCRIPTION AND SURVEY

Meets and Bounds

ALL that certain plot piece or parcel of land with the buildings and improvements thereon erected, situated lying and being at Glen Head, Town of Oyster Bay, County of Nassau and State of New York, bounded and described as follows:

BEGINNING at a point which is formed by the intersection of the southerly side of Robert Lane and the easterly end of Robert Lane as shown on a certain map entitled, "Map of Todd Estates, Section 2", filed in the Office of the Clerk of the County of Nassau on February 19, 1953 as map Number 5716;

RUNNING THENCE north 7 degrees 18 minutes 17 seconds east, 1054.82 feet;

THENCE south 82 degrees 41 minutes 43 seconds east, 250.45 feet to the westerly side of land of Long Island Railroad;

THENCE south 7 degrees 09 minutes 00 seconds west along the westerly side of land of the Long Island Railroad, 1421.18 feet (actual); 1421.177 feet (deed);

THENCE south 82 degrees 06 minutes 30 seconds west 195.90 feet to the easterly side of Dumond Place;

THENCE north 7 degrees 11 minutes 00 seconds west along the easterly side of Dumond Place, 50.00 feet;

THENCE north 82 degrees 49 minutes 00 seconds east, 100.00 feet;

THENCE north 7 degrees 11 minutes 00 seconds west, 164.64 feet;

THENCE south 86 degrees 03 minutes 00 seconds west 68.17 feet;

THENCE north 4 degrees 29 minutes 00 seconds west, 202.54 feet, to the point or place of BEGINNING.

SAID PREMISES BEING KNOWN AS 1 ROBERT LANE, GLEN HEAD, NEW YORK

APPENDIX

B STANDARD OPERATING PROCEDURES

FIELD STANDARD OPERATING PROCEDURE #3

SAMPLE PACKAGING AND SHIPMENT PROCEDURE

Shipping samples is a basic but important component of field work. Nearly all of the field activities include the collection of environmental samples. Proper packing and preservation of those samples is critical to ensuring the integrity of the company's work product. The user is advised to read the entire standard operating procedure (SOP) and review the site health and safety plan (HASP) before beginning any onsite activities. In accordance with the HASP, proper personal protective equipment (PPE) must be selected and used appropriately.

3.1 ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
DOT	U.S. Department of Transportation
IATA	International Air Transport Association
HASP	health and safety plan
PPE	personal protective equipment
SOP	standard operating procedure

3.2 MATERIALS

- Suitable shipping container (e.g., plastic cooler or lab-supplied styrofoam-insulated cooler)
- Chain-of-custody forms
- Custody seals
- Mailing labels
- Tape (strapping, clear packing, or duct tape)
- Heavy-duty zipper-style plastic bags
- Knife or scissors
- Permanent marker
- PPE
- Large plastic garbage bag
- Wet ice (as necessary)
- Bubble wrap or other packing material
- Universal sorbent materials
- Sample container custody seals (if required)
- Shipping form (with account number)

3.3 PRECONDITIONS AND BACKGROUND

This SOP has been prepared as part of the company's Environmental Quality Management Plan and is designed to provide detailed procedures for common field practices. Compliance with the methods presented in this document is mandatory for all field personnel and will ensure that the tasks are performed in a safe and consistent manner, are in accordance with federal and state guidance, and are technically defensible.

This SOP is written for the sole use of company employees and will be revised periodically to reflect updates to company policies, work practices, and the applicable state and/or federal guidance. Employees must verify that this document is the most recent version of the company SOPs. Employees are also strongly advised to review

relevant state and/or federal guidance, which may stipulate program-specific procedures, in advance of task implementation.

This SOP is designed to provide the user with a general outline for shipping samples and assumes the user is familiar with basic field procedures, such as recording field notes (SOP 1), sample collection and quality assurance procedures (SOP 4), and investigation derived waste management procedures (SOP 5), and has a current certificate for U.S. Department of Transportation (DOT) Hazardous Materials training.

NOTE: Employees shipping samples regulated as hazardous materials or exempt hazardous materials by air must have International Air Transport Association (IATA) training. IATA training is a separate training required in addition to DOT hazardous materials training for such shipments. Most employees do not have IATA training and therefore, anyone who needs to ship by air MUST consult with a company IATA-trained compliance professional. The remainder of Section 3.3 covers shipments regulated by DOT only.

Environmental samples can meet the definition of DOT hazardous materials when shipped by air, ground, or rail from a project site to the laboratory. As such, field staff must work with their assigned company compliance professional to determine whether the sample shipment is subject to any specific requirements (e.g., packaging, marking, labeling, and documentation) under the DOT hazardous materials regulations.

Title 49 Code of Federal Regulations (CFR) Section 171.8 defines a "hazardous material" as a substance which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated. DOT hazardous materials are listed in the hazardous materials table at 49 CFR 172.101.

In most cases, the company is collecting environmental samples in order to determine whether any hazardous chemicals are present in the sampled media. Therefore, we would not have the appropriate information to make a hazardous materials classification for the samples prior to shipment. 49 CFR 172.101(c)(11) allows the use of a tentative classification where the shipper is uncertain of the material's hazard class. When the physical characteristics of the samples are unknown, a non-hazardous material classification may be made. Non-hazardous materials are not subject to the DOT hazardous materials regulations.

There are certain cases where the characteristics and hazard class of the samples are known (e.g., samples of free product, samples preserved with a hazardous material [TerraCore® samplers]). Contact your assigned company compliance professional or an internal DOT contact for guidance on shipment of these materials.

3.4 SAMPLE SHIPMENT PROCEDURES

The two major concerns in shipping samples are incidental breakage during shipment and complying with applicable DOT and courier requirements for hazardous materials shipments.

NOTE: Many couriers, including Federal Express and UPS, have requirements that the company register with them before shipping hazard materials. In most cases, it is the sampling location, not the company office address, which needs to be registered. Therefore, each project will likely have unique requirements. Please contact your assigned company compliance professional to determine whether or not you will be required to register for your shipment.

Protecting the samples from incidental breakage can be achieved using "common sense." Pack all samples in a manner that will prevent them from moving freely about in the cooler or shipping container. Do not allow glass surfaces to contact each other. When possible, repack the sample containers in the same materials that they were originally received in from the laboratory. Cushion each sample container with plastic bubble wrap, styrofoam, or other nonreactive cushioning material. A more detailed procedure for packing environmental samples is presented below.

3.4.1 NON-HAZARDOUS MATERIAL ENVIRONMENTAL SAMPLES

The first step in preparing your samples for shipment is securing an appropriate shipping container. In most cases, the analytical laboratory will supply the appropriate container for bottle shipment, which can be used to return samples once they have been collected. Be sure that the container is large enough to contain the samples plus a sufficient amount of packing materials, and if applicable, enough wet ice to maintain the samples at the preservation temperature (usually 4° Celsius). Use additional shipping containers as needed so that sample containers are protected from breakage due to overcrowding. Do not use lunch-box sized coolers or soft-sided coolers, which do not offer sufficient insulation or protection from damage.

3.4.1.1 TEMPERATURE-PRESERVED SAMPLES CONTAINER PREPARATION

Temperature-preserved samples should be shipped to the laboratory in an insulated container (e.g., cooler). If using a plastic cooler with a drain, securely tape the inside of the drain plug with duct tape or other material to ensure that no water leaks from the cooler during shipment. Place universal sorbent materials (e.g., sorbent pads, Pig-brand absorbent blankets) in the bottom of the shipping container. The amount of sorbent material must be sufficient to absorb any condensation from the wet ice and a reasonable volume of water from melted wet ice (if a bag were to rupture) or a damaged (aqueous) sample container.

The next step is to line the shipping container with a large, heavy-duty plastic garbage bag. Place 2 to 4 inches of bubble wrap or other appropriate packing material inside the heavy-duty plastic bag in the bottom of the shipping container to form a cushion for the sample containers. Place the samples on the packing materials with sufficient space to allow for the addition of more bubble wrap or other packing material between the sample containers. Place large or heavy sample containers on the bottom of the cooler with lighter samples placed on top to minimize the potential for breakage. Place all sample containers in the shipping container right-side up. Do not overfill the cooler with samples; leave sufficient room for the wet ice if the samples are to be preserved during transit. Place wet ice to be used for sample preservation inside two sealed heavy-duty zipper-style plastic bags (1 gallon-sized, or less). Place the bags of ice on top of or between the samples. Place as much ice as possible into the cooler to ensure the samples arrive at the lab at the required preservation temperature, even if the shipment is delayed. Fill any remaining space in the container with bubble wrap or other packing material to limit the airspace and minimize the in-transit melting of ice. Securely close the top of the heavy-duty plastic bag and seal with tape.

3.4.1.2 NON-TEMPERATURE-PRESERVED SAMPLES CONTAINER PREPARATION

Non-temperature-preserved samples should be shipped to the laboratory in a durable package (e.g., hard plastic container or cardboard box). If shipping breakable sample containers (e.g., glass), place bubble wrap or other packing materials on the bottom of the container. Place the samples on the packing materials with sufficient space to allow for the addition of more bubble wrap or other packing material between and on top of the sample containers. Place large or heavy sample containers on the bottom of the container with lighter samples placed on top to minimize the potential for breakage. Place all sample containers within the shipping container right-side up.

3.4.1.3 CONTAINER SHIPMENT

Place the original, white top copy chain-of-custody form into a heavy-duty zipper-style plastic bag, affix the bag to the shipping container's inside lid, and then close the shipping container. Only one chain-of-custody form is required to accompany one of the shipping containers per sample shipment; the other coolers in the shipment do not need to include chain-of-custody forms. At this point, sample shipment preparations are complete if using a laboratory courier.

If sending the sample shipment through a commercial shipping vendor, place two signed and dated chain-of-custody seals on alternate sides of the shipping container lid so that it cannot be opened without breaking the seals. Securely fasten the top of the shipping container shut with clear packing tape; carefully tape over the custody seals to prevent damage during shipping. Once the shipping container is sealed, shake test the shipping

container to make sure that there are no loose sample containers. If loose sample containers are detected, open the shipping container, repack the sample containers, and reseal the shipping container.

Using clear tape, affix a mailing label with the company's return address to the top of the shipping container. Be sure to ship environmental samples to the contracted analytical laboratory using an appropriate delivery schedule. If applicable, check the appropriate box on the shipping airbill for Saturday delivery (you need to verify with the laboratory that someone will be at the lab on a Saturday to receive the sample shipment). Declare the value of samples on the shipping form for insurance purposes, if applicable, and be sure to include the project billable number on the shipping form's internal billing reference section. When shipping samples to a lab, identify a declared value equal to the carrier's default value (\$100); additional fees will be charged based on a higher value declared. Our preferred carrier, FedEx, will only reimburse for the actual value of the cooler and its contents if a sample shipment is lost; they will not reimburse for the cost of having to re-collect the samples. [Please note: if you are shipping something other than samples, such as field equipment, declare the replacement value of the contents.]

Record the tracking numbers from the shipping company forms (i.e., the shipping airbill number) in the field book and on the chain-of-custody form and retain a copy of the shipping airbill. On the expected delivery date, confirm sample receipt by contacting the laboratory or tracking the package using the tracking number; provide this confirmation information to the project manager.

NOTE: Most shipping carriers adhere to transit schedules with final pickup times each day; these schedules are subject to change and vary by service location. If shipping containers are dropped off at a service location after the final pickup time, transit to the laboratory will not be initiated until the following day, and samples may not be properly preserved. Therefore, confirm transit schedules in advance of each sampling event, and ensure samples are dropped off before the final pickup time of the day.

3.4.2 HAZARDOUS MATERIALS SAMPLES

Employees rarely ship hazardous materials due to DOT shipping requirements. If you find that your samples could be considered a DOT hazardous material, first coordinate with the assigned company compliance professional and project manager to make a hazardous material classification and, if necessary, establish the necessary protocols and to receive the appropriate training/certification. **Do not ship hazardous materials samples without first consulting a company compliance professional.**

FIELD STANDARD OPERATING PROCEDURE #4

SAMPLE COLLECTION AND QUALITY ASSURANCE PROCEDURE

The purpose of this procedure is to assure that sample volumes and preservatives are sufficient for analytical services required under U.S. Environmental Protection Agency (EPA) or other agency approved protocols. This operating procedure describes sample identification procedures, sampling order for select analytes, quality control and quality assurance (QA/QC) sampling procedures, and custody documentation for environmental sampling. The user is advised to read the entire standard operating procedure (SOP) and review the site health and safety plan (HASP) before beginning any onsite activities. In accordance with the HASP, proper personal protective equipment (PPE) must be selected and used appropriately.

4.1 ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
COC	chain-of-custody [form]
DI	deionized water
DOT	U.S. Department of Transportation
EDD	electronic data deliverable
EPA	U.S. Environmental Protection Agency
HASP	health and safety plan
ID	Identification [number]
MS/MSD	matrix spike and matrix spike duplicate
MSA	Master Services Agreement
PPE	personal protective equipment
QA	quality assurance
QA/QC	quality assurance/quality control
QAPP	quality assurance project plan
SOP	standard operating procedure
VOCs	volatile organic compounds

4.2 MATERIALS

- Field book
- Indelible (waterproof) markers or pens
- PPE
- Sample containers
- Sample labels
- Clear tape
- Deionized (DI) water
- Cleaned or dedicated sampling equipment

4.3 PRECONDITIONS AND BACKGROUND

This SOP has been prepared as part of the company's Environmental Quality Management Plan and is designed to provide detailed procedures for common field practices. Compliance with the methods presented in this document is mandatory for all field personnel and will ensure that the tasks are performed in a safe and consistent manner, are in accordance with federal and state guidance, and are technically defensible.

This SOP is written for the sole use of company employees and will be revised periodically to reflect updates to company policies, work practices, and the applicable state and/or federal guidance. Employees must verify that

this document is the most recent version of the company SOPs. Employees are also strongly advised to review relevant state and/or federal guidance, which may stipulate program-specific procedures, in advance of task implementation.

This SOP is designed to provide the user with a general outline for collecting environmental and quality assurance samples and assumes the user is familiar with basic field procedures, such as recording field notes (SOP 1), sample shipment procedures (SOP 3), investigation derived waste management procedures (SOP 5), and equipment decontamination (SOP 6). This SOP does not cover investigation planning, nor does it cover the analysis of the analytical results. These topics are more appropriately addressed in a site-specific work plan or a dedicated quality assurance project plan (QAPP).

4.4 SAMPLE IDENTIFICATION PROCEDURES

Information on the sample container labels must include the site/project name, project/task number, unique alpha-numeric sample identification (ID) number, sample collection date, time of collection using the military or 24-hour clock system (i.e., 0000 to 2400 hours), analytical parameters, preservative, and the initials of the sampling personnel. Employees are advised to use pre-printed waterproof mailing labels (e.g., Avery® 5xxx-series Waterproof Address Labels) for all sample identification; templates for the labels are available.

The sample identification (ID) number must, unless otherwise approved by your project manager or specified in your site-specific work plan, comply with the following naming protocol. This protocol was developed to aid in determining the type of sample collected (e.g., soil, groundwater, vapor, etc.), the sample location, and, where appropriate, the sample depth. The protocol was also designed to ensure consistency across the company.

Construct sample IDs in the following format:

SB-10A (4-6)

Where, in this example:

SB = the first two or three characters will define the sample type (see list of approved prefixes below); in this case, a soil boring
10A = the next two or three alpha-numeric digits (separated by a dash from the sample type identifier) indicate the location of the boring on the site; in this case, boring number 10A
(4-6) = the depth the sample was collected, with the first number (including decimals, if necessary) indicating the top of the sample interval (in feet) and the second number indicating the bottom of the sample interval (in feet); not all sample types will include depth information.

Additional label information may be added after the last character of the sample ID number (e.g., sample date, underground storage tank number, area of concern number, “Area” number, client identifier, etc.). Separate any additional information from the required portion of the sample name by dash(es).

Sample Prefix	Permitted Use
AA -	Ambient outdoor air sample
CC -	Concrete core/chip sample
CS -	Confirmation/verification soil sample collected from an excavation
HA -	Soil sample collected with a hand auger
IAB -	Indoor air sample – basement
IAC -	Indoor air sample – crawl space
IAF -	Indoor air sample – first floor
MW -	Soil sample collected from a monitoring well borehole or a groundwater sample collected from a monitoring well
PZ -	Groundwater sample collected from a piezometer
SB -	Soil sample collected from boreholes that will not be converted to monitoring wells
SED -	Sediment sample

Sample Prefix	Permitted Use
SG -	Soil gas sample other than a sub-slab sample (e.g., sample collected from a temporary or permanent polyvinyl chloride sample point or stainless steel screen implant)
SL -	Sludge sample
SS -	Surface soil sample collected using hand tools (e.g., trowel, spoon, etc.) and typically at depths less than 2 feet below ground surface
SSV -	Sub-slab vapor sample
SW -	Surface water sample
TC -	Tree core sample
TP -	Soil sample collected from a test pit
WC -	Waste characterization sample
WP -	Wipe sample

4.5 SAMPLE CONTAINERS, PRESERVATIVES, AND HOLDING TIMES

The first step in sample collection is to verify that the analytical laboratory has provided the correct number and type of sample containers and each contains the appropriate preservatives for the proposed project (i.e., check against the sampling plan requirements outlined in the site-specific QAPP or, for those projects without a site-specific QAPP, the laboratory Task Order). Inspect all containers and lids for flaws (cracks, chips, etc.) before use. Do not use any container with visible defects or discoloration. Report any discrepancies, or non-receipt, of specific types of sample containers to the team leader or project manager immediately. Make arrangements with the laboratory to immediately ship missing or additional sampling containers.

Precautions must be taken to prevent cross-contamination and contamination of the environment when collecting samples. Wear a clean pair of new, disposable gloves each time a different sample is collected and don the gloves immediately prior to sampling. The gloves must not come in contact with the medium being sampled and must be changed any time during sample collection when their cleanliness is compromised. Sample collection must follow all appropriate SOPs, state and federal regulations, or guidance, for the collection of environmental samples; the recommended order of sample collection is:

- Geochemical measurements (e.g., temperature, pH, specific conductance)
- Volatile organic compounds (VOCs)
- Extractable organics, petroleum hydrocarbons, aggregate organics, and oil and grease
- Total metals
- Dissolved metals
- Inorganic non-metallic and physical and aggregate properties
- Microbiological samples
- Radionuclides

Collected samples that require thermal preservation must be immediately (within 15 minutes) placed in a cooler with wet ice and maintained at a preservation temperature of 4° Celsius (°C).

4.6 FIELD QUALITY ASSURANCE/QUALITY CONTROL SAMPLES

Field quality assurance/quality control (QA/QC) samples include equipment blanks, trip blanks, duplicates, and split samples. The project manager or QAPP must specify the type and frequency of QA/QC sample collection. The QA/QC sample identification number must, unless otherwise approved by your project manager or specified in your site-specific work plan, follow the naming protocol as discussed in the sections below. QA/QC samples must be clearly identified on the COC form and in the field book. Failure to properly collect and submit required

QA/QC samples can result in invalidation of an entire sampling event. Collect, preserve, transport and document split samples using the same protocols as the related samples.

4.6.1 EQUIPMENT BLANKS

Equipment blanks are used to document contamination attributable to using non-dedicated equipment (i.e., equipment that must be decontaminated after each use). Collect equipment blanks in the field at a rate of one per type of sampling equipment per day, unless otherwise specified. If the site-specific work plan or QAPP indicates that an equipment blank is to be collected from dedicated sampling equipment, collect the equipment blank in the field before sampling begins. If field decontamination of sampling equipment is required, prepare the equipment blanks after the equipment has been used and field-decontaminated at least once. Prepare equipment blanks by filling or rinsing the pre-cleaned equipment with laboratory-provided analyte-free water and collecting the rinsate in the appropriate sample containers. The samples must be labeled, preserved, and filtered (if required) in the same manner as the environmental samples. Record the type of sampling equipment used to prepare the blank. Have the equipment blanks analyzed for all the analytes for which the environmental samples are being analyzed, unless otherwise specified. Decontamination of the equipment following equipment blank procurement is not required. If laboratory-grade DI water is unavailable, store-grade distilled water can be used to prepare these blanks. If store-grade distilled water is used, be sure to record the source and lot number in the field book. Designate equipment blanks using “EB”, followed by the date, and in the order of equipment blanks collected that day. For example, the first equipment blank collected on July 4, 2015, would be designated EB070415-1.

4.6.2 TRIP BLANKS

Trip blanks are used to document VOC contamination attributable to shipping and field handling procedures. Trip blanks are only required when analyzing samples for VOCs. Trip blank(s) are prepared by the laboratory and sent to the facility along with sample containers. Never open trip blank sample bottles; label them in the field and return them to the laboratory in the same shipping container in which the trip blank sample bottles arrived at the site. Keep the trip blank sample bottles in the same shipping container used to ship and store VOC sample bottles during the sampling event. Unless more stringent project requirements are in place, submit one trip blank in each shipping container of VOC samples. To minimize the number of trip blanks needed per shipment, if possible, ship all of the VOC samples in the same shipping container with the trip blank. If laboratory-provided trip blanks are not available, DI water, or store-grade distilled water and clean, empty VOC sample bottles can be used to prepare additional trip blanks. If store-grade distilled water is used, be sure to record the source and lot number in the field book. Identify trip blanks using “TB”, followed by the date. For example, the trip blank shipped with a cooler of samples on July 4, 2015, would be designated TB070415-1. If a second trip blank is needed on that same day, the designation would be TB070415-2.

4.6.3 TEMPERATURE BLANK

Temperature blanks are used to determine if proper sample thermal preservation has been maintained by measuring the temperature of the sample container upon arrival at the laboratory. A temperature blank should be included in each sample cooler used to ship and store the sample bottles during the sampling event. If laboratory-provided temperature blanks are not available, fill a clean, unpreserved sample bottle with potable, DI, or store-grade distilled water and identify the bottle as a temperature blank.

4.6.4 DUPLICATES

Duplicates are useful for measuring the variability and documenting the precision of the sampling process. Unless more stringent project requirements are in place, collect duplicate samples at a rate of at least 1 per 20 samples collected. Under no circumstances can equipment or trip blanks be used as duplicates. Sample locations where sufficient sample volume is available and where expected contamination is present should be selected for sample duplication.

Collect each duplicate sample at the same time, from the same sample aliquot and in the same order as the corresponding field environmental sample. When collecting aqueous duplicate samples, alternately fill sample bottle sets (i.e., the actual sample bottle and the bottle to be used for the duplicate) with aqueous samples from the same sampling device. If the sampling device does not hold enough volume to fill the sample containers, fill the first container with equal portions of the sample, and pour the remaining sample into the next sample containers. Obtain additional sample volume and pour the first portion into the last sample container, and pour the remaining portions into the first containers. Continue with these steps until all containers have been filled.

Duplicate samples will be assigned arbitrary sample ID and a false collection time so that they are not identified as duplicates by the laboratory (i.e., submit the samples blind to the lab). The blind duplicate sample "location designation" will be left up to the project manager; however, in no case will "Dup" be allowed to appear in the sample name. Have the duplicate samples analyzed for the same analytes as the original sample. Be sure to record the duplicate sample ID, the false time, and the actual time of collection in the field notebook. The duplicate should also be indicated on the company's carbon copy of the chain-of-custody.

4.6.5 MATRIX SPIKE AND MATRIX SPIKE DUPLICATES

Matrix spike and matrix spike duplicate samples, known as MS/MSD samples, are used to determine the bias (accuracy) and precision of a method for a specific sample matrix. Many of the company's projects require the collection of MS/MSD samples; however, laboratory generated MS/MSD samples are sufficient for some projects. As required by your QAPP or site-specific work plan, collect MS/MSD samples at the required ratio; if the sampling ratio is not specified by your QAPP or site-specific work plan, collect MS/MSD samples at a rate of 1 for every 20 samples. Clearly convey the MS/MSD identity to the laboratory by adding "MS" or "MSD" after the sample name (e.g., MW 01MS) or in the comments section of the chain-of-custody. Under no circumstances can equipment or trip blanks be used as MS/MSD samples.

4.6.6 SPLIT SAMPLES

Split samples may be collected as a means of determining compliance or as an added measure of quality control. Unlike duplicate samples that measure the variability of both the sample collection and laboratory procedures, split samples measure only the variability between laboratories. Therefore, the laboratory samples must be subsamples of the same parent sample and every attempt must be made to ensure sample homogeneity. Collect aqueous split samples in the same manner as a duplicate sample.

Collecting split samples of soil, sediment, waste, and sludge is not recommended because the homogenization necessary for a true split sample in these matrices is not possible and the resulting laboratory results would not be comparable.

Split samples should have the same sample location designation (e.g., MW-01, SB-03 (4-6), but are differentiated from each other by inserting the laboratory analyzing or the agency/consultant collecting the sample after the sample location (e.g., MW-01-WSP and MW-01-EPA).

4.7 CUSTODY DOCUMENTATION

Sample custody protocols are used to demonstrate that the samples and sample containers were handled and transferred in such a manner as to prevent tampering. Legal chain of custody (COC) begins when the pre-cleaned sample containers are dispatched to the field from the laboratory and continues through sample analysis and eventual disposal of the sample and sample containers. Maintaining custody requires that samples must be in the actual possession or view of a person who is authorized to handle the samples (e.g., sample collector, laboratory technician), secured by the same person to prevent tampering, or stored in a designated secure area.

It is a good idea to limit, to the extent possible, the number of individuals who physically handle the samples. Samples must be placed in locked storage (e.g., locked vehicle, locked storeroom, etc.) at all times when not in the possession or view of authorized personnel. Do not leave samples in unoccupied motel or hotel rooms or

other areas where access cannot be controlled by the person(s) responsible for custody without first securing samples and shipping or storage containers with tamper-indicating evidence tape or custody seals

The COC form is used to trace sample possession from the time of collection to receipt at the laboratory. Although laboratories commonly supply their own COC form, it is recommended that the company's COC be used to ensure that all necessary data are recorded. Unless more stringent project requirements are in place, submit one COC form per sample shipment. At a minimum, the COC needs to have a unique COC number, accompany all the samples, and include the following information:

- Project number, name, and location
- Sampler's printed name(s) and signature(s)
- Sample identification number
- Date and time (military time) of collection
- Sample matrix
- Total number of containers per sample
- Parameters requested for analysis including number of containers per analyte
- Remarks (e.g., irreducible headspace, field filtered sample, expected concentration range, specific turn-around time requested, etc.)
- Signatures of all persons involved in the chain of possession in chronological order
- Requested turn-around-time
- Name and location of analytical laboratory
- Custody seal numbers
- Shipping courier name and tracking information
- Internal temperature of shipping container upon shipment to laboratory, as needed
- Internal temperature of shipping container upon delivery to laboratory
- Company contact information

Affix tamper-indicating evidence tape or seals to all storage and shipping container closures when transferring or shipping sample container kits or samples to an off-property party. Place the seal so that the closure cannot be opened without breaking the seal. Record the time, calendar date and signatures of responsible personnel affixing and breaking all seals for each sample container and shipping container. Affix new seals every time a seal is broken until continuation of evidentiary custody is no longer required.

FIELD STANDARD OPERATING PROCEDURE #6

DECONTAMINATION

The decontamination procedures outlined in this standard operating procedure (SOP) are designed to ensure that all sampling equipment is free from the analytes that could potentially interfere with the sample results. The user is advised to read the entire SOP and review the site health and safety plan (HASP) before beginning any onsite activities. In accordance with the HASP, proper personal protective equipment (PPE) must be selected and used appropriately.

6.1 ACRONYMS AND ABBREVIATIONS

DI	deionized water
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
HASP	health and safety plan
PPE	personal protective equipment
QAPP	quality assurance project plan
SOP	standard operating procedure

6.2 MATERIALS

- Field book
- PPE
- Polyethylene sheeting and/or garbage bags
- Laboratory-grade non-phosphate detergent¹ (e.g., Luminox[®] or Liquinox[®])
- Cleaning reagents, as needed (e.g., isopropyl alcohol, methanol, hexane, etc.)
- Potable water
- Deionized (DI) water
- Containers (e.g., plastic buckets)
- Nylon brushes
- Aluminum foil
- Spray bottles
- Paper towels
- Pressurized steam cleaner (e.g., steam jenny), as needed
- Decontamination pad, as needed

6.3 PRECONDITIONS AND BACKGROUND

This SOP has been prepared as part of the WSP USA Corp. Environmental Quality Management Plan and is designed to provide detailed procedures for common field practices. Compliance with the methods presented in this document is mandatory for all field personnel and will ensure that the tasks are performed in a safe and consistent manner, are in accordance with federal and state guidance, and are technically defensible.

¹ Not all laboratory-grade detergents are phosphate free. Be sure to verify the detergent's phosphate content before use.

This SOP is written for the sole use of WSP employees and will be revised periodically to reflect updates to WSP policies, work practices, and the applicable state and/or federal guidance. WSP employees must verify that this document is the most recent version of the WSP SOPs. WSP employees are also strongly advised to review relevant state and/or federal guidance, which may stipulate program-specific procedures, in advance of task implementation.

This SOP is designed to provide the user with a general outline for decontamination and assumes the user is familiar with basic field procedures, such as recording field notes (SOP 1), sample shipment procedures (SOP 3), sample collection and quality assurance procedures (SOP 4), and investigation-derived waste management procedures (SOP 5). All decontamination references must be available for consultation in the field, including:

- WSP's SOPs
- Applicable state and federal guidelines or procedures
- Manufacturer's manuals
- Project-specific work plan and HASP
- QAPP

6.4 GENERAL PROCEDURES

The cleaning and decontamination procedures described below are designed to ensure that the equipment used for sample collection is free of analytes that could potentially alter the analytical results. These procedures are primarily targeted at reducing the incidence of cross-contamination (i.e., compounds of interest being transferred on the sampling equipment from one sample location or depth to another) and, when properly implemented, provide a methodology for obtaining high quality, representative results. As with all analytical sampling, the effectiveness of the cleaning procedures must be demonstrated with the collection of equipment blanks. The sampling procedures and equipment blank collection frequency are discussed in SOP 4.

6.4.1 EQUIPMENT AND REAGENT SELECTION

It is important for WSP personnel to evaluate the expected types of contamination before mobilization to a site. State programs (or the U.S. Environmental Protection Agency [EPA], depending on the site) may require more stringent decontamination procedures than those listed in this SOP, specify the types and grades of various cleaning detergents and reagents (e.g., acids and solvents), or allow the use of phosphate-containing detergents, such as Alconox®. Many of these reagents, such as nitric acid or pesticide-grade hexane, are U.S. Department of Transportation (DOT) hazardous materials and must be shipped using a ground delivery service. These compounds may also require specialized PPE (e.g., eye protection for concentrated acids) or have other special handling or disposal procedures that must be considered before arriving onsite. Decontamination equipment (e.g., spray bottles, brushes, etc.) should be constructed of non-reactive, non leachable materials (e.g., metal, glass, Teflon®-coated, polyethylene, etc.) which are compatible with the reagents and solvents being used for decontamination.

In specific cases, it may be necessary to steam clean the field equipment before proceeding with the decontamination steps presented in Section 6.5 (e.g., hollow stem augers). Generally, WSP's subcontractors are responsible for bringing or building a decontamination pad, if necessary, to contain the spray from a steam jenny. Decontamination pads should be constructed on a level, paved surface (if possible) in an area known or believed to be free of surface contamination, and should be of sufficient size to contain the decontamination water. Equipment that is steam cleaned should be placed on racks or saw horses and not on the floor of the decontamination pad. Decontamination water should be removed from the decontamination pad frequently to minimize the potential for leaks or overflow.

Consult and involve WSP's compliance professionals for storage procedures and disposal requirements of solvent rinsate, detergent wastes, and other decontamination materials.

6.4.2 OTHER CONSIDERATIONS

In preparing for decontamination, you should perform the following activities (with all observations and measurements noted in the field book):

- Perform a quick reconnaissance of the site to identify a decontamination (pad) area and evaluate the accessibility to and safety of the location.
- Record a description of the decontamination (pad) area.

Survey the breathing zone around the decontamination area with the appropriate air quality meter(s), as necessary (see HASP), to ensure that the level of PPE is appropriate. When decontaminating equipment, it is important to find a suitable location away from any sources of cross-contamination that could compromise the integrity of the decontamination. As possible, position the decontamination area away from fuel-powered equipment, such as drill rigs or excavators, and upwind of other site activities (e.g., purging, sampling).

6.5 DECONTAMINATION PROCEDURES

The decontamination procedures are based on a nine-step process, which is tailored in the field depending on the samples to be collected. Decontaminate all non-dedicated equipment that contacts the sample directly, including spoons, trowels, pumps, etc., before and between each sample location and sampling interval. Record decontamination procedures in the field book. Disposable, single use items, such as bailers or tubing, do not require decontamination.

The decontamination process includes the following four basic steps:

1. Physical removal of debris
2. Wash with non-phosphate detergent, such as Liquinox[®], and nylon brush
3. Potable water rinse
4. Deionized (DI) water rinse (distilled water can be used as a substitute)

The first step is to remove as much soil or other debris from the sampling device as possible near the sampling area to limit the spread of potentially-contaminated materials into clean areas of the site.

Cleaning and decontamination should occur at a designated area(s) (decontamination pad) on the site. If gross contamination or an oily film or residue is observed on the equipment, use steam jenny or wash by hand using a brush to remove the particulate matter or surface film. Heavy oils or grease may be removed with paper towels soaked with isopropyl alcohol.

The physical removal is followed by a hand wash using non-phosphate detergent (mixed to the appropriate dilution in potable water) followed by a potable water rinse. If not using a decontamination pad, the most common set-up uses 5-gallon plastic buckets for washing and rinsing, although plastic garbage pails or plastic tubs can also be used. Place containers on polyethylene sheeting to limit spillage of the decontamination fluids.

Be sure to scrub the equipment thoroughly with a nylon bristle brush (or similar) and allow enough submersion time for the non-phosphate detergent to effectively clean the surfaces (a simple dunk of the equipment in the detergent solution is insufficient). If decontaminating submersible pumps, flush both the non-phosphate detergent wash fluid and the potable water rinse through the pump body itself (usually done in separate buckets) to ensure that the internal components are thoroughly cleaned. The internal decontamination of motorized pumps can be accomplished by pumping the non phosphate detergent wash fluid and the potable water rinse through the pump. Replace the detergent solution and rinse water when it becomes oily or silty.

Place the DI water for the rinse in a small spray bottle or pour over the equipment after the potable water rinse. **Typically, this level of decontamination (i.e., steps 1 through 4) is sufficient.**

Following Steps 1 through 4, additional decontamination (steps 5 through 9) may be required by the applicable federal or state guidelines, the project-specific work plan or the QAPP. Typically, these decontamination steps are performed when sampling for inorganics using non-motorized equipment. These steps include:

5. 10% nitric acid rinse
6. DI water rinse
7. Pesticide-grade solvent rinse (e.g., hexane or isopropyl alcohol)
8. Air dry (solvent must evaporate)
9. DI water rinse

Isopropyl alcohol is the recommended solvent for organic contaminants because it is readily available (at most drug and department stores) and is not a DOT hazardous material. However, other solvents (e.g., hexane and methanol) may be more effective in removing certain contaminants, such as oils or polychlorinated biphenyls, but any waste generated using these solvents must be managed accordingly.

Handle the solvents and acid with care and store unused chemicals in their original, labeled, protective containers when not in use. It is a good idea to transfer small quantities of each solution into labeled, laboratory-grade spray bottles, which offer a convenient and controllable way to rinse the equipment. The equipment can then be rinsed over a 5-gallon plastic bucket or other suitable container placed on plastic sheeting as with the first part of the cleaning process. Nitric acid rinses must be used only on non-carbon steel sampling devices. Do not spray acid into pumps.

6.6 HANDLING DECONTAMINATED EQUIPMENT

Handle any decontaminated equipment using clean gloves to prevent re-contamination. Place the equipment away (preferably upwind) from the decontamination area once the process has been completed on clean plastic sheeting to allow it to air-dry. Once the equipment is dry, protect it from re-contamination by securely wrapping and sealing with aluminum foil (shiny side out) or clean, disposable plastic bags. Plastic bags may be wrapped directly around wet or dry equipment except when the expected contaminants include volatile and extractable organics; under those circumstances, allow the equipment to completely dry or wrap it in aluminum foil.

All sampling equipment must be decontaminated at the end of the investigation (i.e., prior to departure from the site). Label each piece of equipment with the date of decontamination, the initials of personnel performing the decontamination, and the type of decontamination solution(s) used. Containerize all solvent rinsate, detergent wastes, and other disposable decontamination materials in DOT-compliant containers in accordance with SOP 5 or the project-specific work plan. Dispose of all wastes in conformance with the project-specific work plan and applicable regulations.

FIELD STANDARD OPERATING PROCEDURE #11

GROUNDWATER SAMPLING PROCEDURE

Groundwater sampling procedures outlined in this Standard Operating Procedure (SOP) are designed to ensure that collected samples are representative of current site conditions. These procedures can be applied to permanently or temporarily-installed monitoring wells, direct-push sample points, water supply wells with installed plumbing, extraction wells for remedial groundwater treatment systems, and excavations where groundwater is present. The user is advised to read the entire SOP and review the site health and safety plan (HASP) before beginning any onsite activities. In accordance with the HASP, proper personal protective equipment (PPE) must be selected and used appropriately.

11.1 ACRONYMS AND ABBREVIATIONS

ID	inside diameter
DI	deionized
DNAPL	dense non-aqueous phase liquid
DO	dissolved oxygen
DTW	depth-to-water
HASP	health and safety plan
IDW	investigation-derived waste
L/min	liters per minute
LNAPL	light non-aqueous phase liquid
mg/l	milligrams per liter
mV	millivolts
NAPL	non-aqueous phase liquid
NTU	nephelometric turbidity unit
ORP	oxygen reduction potential
PID	photoionization detector
PPE	personal protective equipment
QAPP	quality assurance project plan
SOP	standard operating procedure
SU	standard units
TD	total depth
TOC	top-of-casing
VOCs	volatile organic compounds

11.2 MATERIALS

- Materials
- Field book
- PPE
- Air quality monitoring equipment (e.g., photoionization detector [PID]), as needed
- Electronic water level indicator or interface probe
- Water quality meter(s) with calibration reagents and standards, as needed
- Field test kits, as needed
- Adjustable wrench or manhole wrench, as needed
- Well key(s), as needed
- Pocket knife or scissors

- Power supply, as needed
- Sample bottles, labels, indelible markers, and clear tape
- Distilled (DI) water
- Container(s) for water storage (e.g., bucket, drum)
- Pump or bailers, tubing, and associated lanyard materials
- Filters, as needed
- Decontamination supplies

11.3 PRECONDITIONS AND BACKGROUND

This SOP has been prepared as part of the company's Environmental Quality Management Plan and is designed to provide detailed procedures for common field practices. Compliance with the methods presented in this document is mandatory for all field personnel and will ensure that the tasks are performed in a safe and consistent manner, are in accordance with federal and state guidance, and are technically defensible.

This SOP is written for the sole use of company employees and will be revised periodically to reflect updates to WSP policies, work practices, and the applicable state and/or federal guidance. Employees must verify that this document is the most recent version of the company SOPs. WSP employees are also strongly advised to review relevant state and/or federal guidance, which may stipulate program-specific procedures, in advance of task implementation.

This SOP is designed to provide the user with a general outline for conducting groundwater sampling and assumes the user is familiar with basic field procedures, such as recording field notes (SOP 1), utility location (SOP 2), sample shipment procedures (SOP 3), sample collection and quality assurance procedures (SOP 4), investigation derived waste (IDW) management procedures (SOP 5), equipment decontamination (SOP 6), and use and calibration of all sampling and monitoring equipment (SOPs 7 and 8). This SOP does not cover investigation planning, nor does it cover the analysis of the analytical results. These topics are more appropriately addressed in a project-specific work plan. Before groundwater sampling, be sure to review the project-specific work plan or quality assurance project plan (QAPP) and any applicable state and federal guidelines or sampling procedures. All sampling and monitoring references must be available for consultation in the field, including:

- Company SOPs
- Applicable state and federal guidelines or sampling procedures
- Manufacturer's manuals
- Project-specific work plan and HASP
- QAPP

11.4 GENERAL PROCEDURES

Although the techniques used to sample groundwater are varied, most sampling events can be broken down into a three-step sequence:

1. **Gauging:** The measurement of the water column height (i.e., total well depth less depth-to-water) within the well.
2. **Purging:** The removal of stagnant water from the well bore to ensure that samples collected are representative of groundwater conditions in the water-bearing zone surrounding the well.
3. **Sample Collection:** After purging, the collection of aliquots of groundwater in method-specific, preserved (as needed) containers.

The procedures and equipment that are used to accomplish these steps are project-specific and should be discussed by the project team before arriving onsite. All types of groundwater sampling, however, regardless of the equipment used, share common handling and management procedures that are designed to ensure the integrity of the samples collected. These procedures include:

- The use of new, disposable, decontaminated, or dedicated sampling equipment
- The use and rotation of the appropriate PPE
- Selection of a suitable sampling location and staging area

Wear a clean pair of new, disposable gloves each time a different sample is collected and don the gloves immediately prior to collection. This limits the possibility of cross-contamination from accidental contact with gloves soiled during collection of the previous sample. The gloves must not come in contact with the medium being sampled and must be changed any time during sample collection when their cleanliness is compromised. In no case should gloved hands be used as a sampling device: always use the appropriate sampler to move the sample from the sampling device to the laboratory-supplied containers.

11.4.1 EQUIPMENT SELECTION

Collect all samples using either new, disposable equipment or properly decontaminated sampling equipment. Groundwater purging and sampling equipment should be selected based on the analytical requirements of the project and the project specific conditions (e.g., well diameter, depth to water, dissolved constituents, etc.) likely to be encountered. The equipment should be constructed of non-reactive, non-leachable materials (e.g., stainless steel, Teflon®, Teflon®-coated steel, polyethylene, polypropylene, etc.) which are compatible with the chemical constituents at the site. Note that project or regulatory guidance may limit the type of equipment for groundwater sampling. When choosing groundwater purging and sampling equipment, give consideration to:

- the diameter and depth of the well
- the depth to groundwater
- the volume of water to be withdrawn
- the sampling and purging technique
- the volume of sample required
- the analytes of interest

Select the decontamination procedures based on the types of sampling to be performed and media encountered; decontamination may require multiple steps or differing cleaning methods (see SOP 6 for decontamination procedures). In no case should disposable, single use materials be used to collect more than one sample.

11.4.2 PRE-SAMPLING CONSIDERATIONS

In preparing for sampling, you should perform the following activities (with all observations and measurements noted in the field book and on the project-specific groundwater monitoring log, if appropriate):

- Perform a quick reconnaissance of the site to identify sampling locations and evaluate the accessibility to the sampling location.
- Record the approximate ambient air temperature, precipitation, wind (direction and speed), tide, and other field conditions. In addition, any site-specific conditions or situations that could potentially affect the samples at the sample locations should be recorded.
- Record sampling locations with respect to approximate distance to and direction from at least one permanent feature.

- Survey the breathing zone around the sampling location with the appropriate air quality meter(s), as necessary (see HASP), to ensure that the level of PPE is appropriate.
- As appropriate, install the pump, tubing, or passive sampler to the depth prescribed in the project-specific work plan or QAPP.
- Containerize and/or manage purge water in accordance with the project-specific work plan.

When sampling groundwater, it is important to find a suitable sampling location away from any sources of cross-contamination that could compromise the integrity of the samples. Consider the following:

- Position the sample collection area away from fuel-powered equipment, such as drill rigs or excavators, and upwind of other site activities (e.g., purging, sampling, decontamination) that could influence the sample. This is particularly important when screening samples in the field for volatile organic compounds with a PID, but should not be limited to the active sample collection.
- Establish a secure sample staging area in an uncontaminated area of the site.

11.5 GAUGING PROCEDURES

All wells should be opened to the atmosphere in advance of sampling to allow any pressure differentials, which could artificially raise or depress the water column in the well, to dissipate. The wells should be inspected to ensure that the protective casing is intact and has not been damaged. Remove the well covers and all standing water around the top of the well casing (for flush mounted-protective covers), as necessary, before opening the inner well cap or plug. Unlock and carefully remove well cap and allow the well to stand undisturbed for a minimum of 15 minutes before conducting any down-hole testing or measurements. If required by the HASP, survey the open well casing and the breathing zone around the wellhead with a PID to ensure that the level of PPE is appropriate.

11.5.1 GROUNDWATER LEVEL AND TOTAL DEPTH MEASUREMENT PROCEDURES

Depth to water (DTW) and total depth (TD) measurements are typically collected prior to sampling and are used to determine the volume water to be purged from the well (if using techniques other than no-purge or low flow sampling). The DTW measurements are also used after the sampling event is completed to establish the groundwater elevation, flow direction, and gradient. Unless otherwise directed, do not place any objects inside the casing of private water wells; accordingly, DTW and TD measurements should not be collected at private water wells. TD measurements are not required for low-flow and no-purge sampling applications and should not be measured before sampling the well.

Water level measurements must be collected within the shortest interval possible from all selected existing wells to be gauged during the event before beginning any purge and sampling procedures at the site. This will ensure a nearly instantaneous snapshot of the water levels before the formations are disturbed by pumping or acted upon by other outside influences, such as tides, precipitation, barometric pressure, river stage, or intermittent pumping of production, irrigation, or supply wells.

Record the following observations and measurements in the field book:

- Measure the casing inside diameter (ID) and record in inches
- Measure the DTW with an electronic water level indicator (or an interface meter, if non-aqueous phase liquid [NAPL] is potentially present – see procedures below) from the top-of-casing (TOC) at the surveyor's mark, if present, and record the depth (to the nearest 0.01 foot) in feet below TOC
- If no mark is present, measure from the north side of the casing and mark the measuring point with a knife, metal file (if the inner casing is metal) or indelible marker for future reference
- Measure the TD from TOC at the surveyor's mark or north side of the casing, as appropriate.

Because of tape buoyancy and weight effects encountered in deep wells with long water columns, it may be difficult to determine the TD of the well with an electronic water level indicator; sediment in the bottom of the well can also make it difficult to determine TD. Care must be taken and proper equipment selection must be used in these situations to ensure accurate measurements. Multiple TD measurements in silt-laden wells can provide a more precise assessment of the bottom depth.

11.5.2 GAUGING WELLS WITH NON-AQUEOUS PHASE LIQUID

If NAPL is potentially present at the site, the DTW and NAPL thickness measurements are collected using an interface meter capable of distinguishing between the NAPL and the groundwater, or a weighted tape coated with the appropriate reactive indicator paste for the suspected NAPL. Measuring NAPL thicknesses must be done with care to avoid agitating the liquids and generating an emulsion. This is particularly the case for light NAPL (LNAPL; those having a density less than water), which are typically viscous oils that cling to the probe. Oil coating the probe can result in thickness measurements that are biased high (i.e., overestimate the thickness of the NAPL).

Conduct the following procedures to ensure an accurate measurement of the NAPL thickness:

- For LNAPL, slowly lower the electronic interface probe in the well casing until the electronic tone indicates the probe is at the top of the LNAPL layer; measure the depth below the TOC to the nearest 0.01 foot.
- To gauge the NAPL thickness, advance the probe slowly through the layer until the electronic tone indicates top of the water column and then slowly bring the probe back up to the bottom of the LNAPL. Repeat this process several times to ensure an accurate measurement of the bottom of the LNAPL layer (which can include bubbles and an emulsion layer).
- For dense NAPL (DNAPL), advance the probe through the water column until the tone indicates the top of the DNAPL layer; record the depth below TOC.
- To gauge the DNAPL thickness, advance the probe through the layer to the bottom of the well.

11.6 GROUNDWATER PURGING PROCEDURES

Purging is a process whereby potentially stagnant water is removed allowing the collection of samples that are representative of groundwater conditions in the water-bearing zone. The water in a well bore that has not been purged may be different than the surrounding formation due to a number of factors, such as exposure to ambient air. There are a number of purging methods and several no-purge methods that may be used, depending on specific conditions encountered (e.g., DTW, hydraulic conductivity of the formation, etc.) and the sampling requirements. Several purge/no purge options are described below.

- **Multiple Volume Purge:** Traditional well purging technique that relies on the withdrawal of the volume of the well bore and the surrounding filter pack (if present); typically three to five well volumes are removed using pumps or bailers. This methodology relies on equipment that is easy to obtain and use and is generally accepted in most states as an appropriate purging method.
- **Temporary Well Purge:** A variation of the multiple volume purge technique that typically uses inertia lift pumps, peristaltic pumps, or bailers to remove water from a temporary well or discrete groundwater sampler. This is a less stringent technique that is typically done to minimize the turbidity of the samples, which can be high due to the lack of a well filter pack.
- **Private Water Well or In-Place Plumbing Purge:** A variation on the multiple volume purge technique whereby a tap or faucet is opened on a fixed water supply pipe and is allowed to remain open until the potentially stagnant water within the well casing and other components of the system (e.g., fixed piping, pressure tanks, etc.) has been removed and groundwater representative of the water-bearing zone is discharged at the tap.
- **Low-Flow (Minimal Drawdown/Low Stress) Purge (and Sampling):** A modified purging technique that establishes an isolated, discrete, horizontal flow zone directly adjacent to the pump intake; this method requires the pump to be placed within a screened interval or open borehole. Pumping rates are typically 0.1 to

0.5 liters per minute (L/min) or less to minimize the stress on the surrounding formation and reduce the geochemical alteration of the groundwater caused by pumping.

- **No-Purge/Passive Sampling Techniques:** These techniques use specialized equipment, such as permeable diffusion bags or trap samplers, to sample the undisturbed water column within a screened interval or open borehole. This methodology assumes that the water in the well is representative of the surrounding formation. Depending on the sampling device used, this approach is well suited for some VOCs, metals, and hydrophobic compounds.

11.6.1 CALCULATING ONE PURGE VOLUME

For multiple volume purging techniques, a minimum of three well volumes of water must be removed before sample collection. The actual amount of water removed may be greater than the three volumes, depending on geochemical parameter stabilization (the field measurement of these parameters is discussed below).

Calculate the volume of water in a well or boring using the following equation:

$$\text{Volume (gallons)} = (\text{TD} - \text{DTW}) * \text{ID}^2 * 0.041$$

Alternately, the volume of water in a well or boring may also be calculated by multiplying the water column height by the gallons per foot of water for the appropriate well or boring diameter:

ID	Gallons per foot of water	Gallons per three water columns
1-inch	0.04	0.12
2-inch	0.16	0.48
3-inch	0.37	1.11
4-inch	0.65	1.98

Calculate the total volume of the pump, associated tubing and container for in situ measurements (flow-through cell), using the following equation:

$$\text{Volume (in gallons)} = P + ((0.0041) * D^2 * L) + fc$$

where:

P = volume of pump (gallons)

D = tubing diameter (inches)

L = length of tubing (feet)

fc = volume of flow-through cell (gallons)

11.6.2 MULTIPLE VOLUME PURGE PROCEDURES

Begin purging at a rate that will not cause excessive turbulence and drawdown in the well; commonly less than 1 gallon per minute for a typical 2-inch diameter monitoring well. The objective is to remove the stagnant water in the casing and surrounding filter pack or open borehole allowing water from the surrounding water-bearing zone

to enter the well for sampling with as little disturbance as possible. Excessive pump rates or well dewatering can result in higher turbidity, potential volatilization, and/or geochemical alteration of dissolved parameters. If drawdown is observed on initiation of pumping, reduce the pump speed and attempt to match the drawdown of the well. Once drawdown is stabilized, measure the flow rate with a calibrated container and stopwatch.

Collect stabilization parameters at a minimum frequency of once for every well volume of water removed during the purge process. Record the measurements in the field book along with any other pertinent details, such as the visual quality of the water (e.g., color, odor, and presence of suspended particulates) and the measured withdrawal rate, as possible. After the minimum purge volume has been removed, review the geochemical measurements to ensure that readings have stabilized. Stabilization occurs when at least three consecutive measurements are within the following tolerances:

Traditional Purge Stabilization Parameters	
pH	± 0.1 standard units (SU)
Specific Conductance	± 3%
Temperature	± 3%
Dissolved Oxygen (DO)	± 0.2 milligrams per liter (mg/l) or 10% (flow-through cell only)
Turbidity	± 10% for values greater than 10 nephelometric turbidity unit (NTU)
Oxygen Reduction Potential (ORP)	± 10 millivolts (mV; flow-through cell only)

If the parameters have not stabilized within five well volumes and your water meter is operating properly, consult your project manager to decide whether or not to collect a sample or to continue purging.

For wells with extremely slow recharge, purging may ultimately dewater the well before the minimum purge can be completed. If the well or borehole is purged dry before removing three well volumes, allow the well or boring to recharge to a level of approximately 90% of the static pre-purge water elevation and proceed immediately to sample collection. If recovery exceeds 2 hours, sample as soon as sufficient sample volume is available, in accordance with applicable regulations.

11.6.3 LOW-FLOW PURGE PROCEDURES

Low flow purging and sampling is used to obtain representative groundwater samples without removing all of the water within the well. The protocol uses low pumping rates (i.e., less than 0.5 L/min) to establish an isolated zone around the inlet of the pump where flow is horizontal (i.e., from the water bearing zone) rather than from the stagnant water in the well casing above and below the pump. Selection of an appropriate pump is critical to establishing the flow zone. A pump must be selected that is suited for low pumping rates and is appropriate for the analytical samples; bailers are not appropriate.

Slowly lower the pump and tubing into the water column to avoid agitating the water column; use of a lanyard is recommended. Once the specified sampling depth is reached, secure the pump and tubing at the wellhead; the depth must be noted in the field book. Avoid contacting the bottom of the well by using pre-cut tubing at the appropriate length or by lowering the pump simultaneously with an electronic water level indicator. Once the pump has been inserted and secured, allow the water levels to return to static conditions before initiating the purge.

The discharge tubing must be connected to an in-line flow-through cell equipped with a multi-parameter real-time water quality meter. The flow-through cell minimizes the exposure of the groundwater to ambient air which has a substantial effect on dissolved oxygen and ORP measurements.

Start the pump and maintain a steady flow rate that results in a stabilized water level (less than 0.3 feet of drawdown). If needed, reduce the pumping rate to the minimum capabilities of the pump. Record each adjustment made to the pumping rate and the water level measured immediately after each adjustment. Purging should not exceed 0.5 L/min.

During purging, monitor and record geochemical parameters at 30 seconds to 5 minute intervals (depending on the hydraulic conductivity of the aquifer, diameter of the well, and pumping rate). Stabilization occurs once the following criteria have been met over three successive measurements made at least three minutes apart:

Low-Flow Purge Stabilization Parameters	
Water Level Drawdown	<0.3 feet
pH	± 0.1 SU
Specific Conductance	± 3%
Temperature	± 3%
DO	± 0.2 mg/l or 10% (flow-through cell only)
Turbidity	± 10% for values greater than 10 NTU
ORP	± 10 mV (flow-through cell only)

Record any other notable observations in the field book (e.g., groundwater color).

11.6.4 NO-PURGE PASSIVE SAMPLING TECHNIQUES

A number of alternate sampling devices are available, including equilibrated grab samplers, passive diffusion samplers, and other in situ sampling devices. These devices may be particularly useful for sampling low permeability geologic materials, assuming the device is made of materials compatible with the analytical parameters, meets data quality objectives, and has been properly evaluated.

No-purge grab or trap samplers are placed in the well before sampling and typically remain closed (i.e., no water is allowed into the sampler during insertion) until the sampler is activated. This allows the sampler device to equilibrate with the surrounding groundwater (to prevent adsorption to the sampler materials) and for the groundwater to recover and re-establish the natural flow after the disturbance caused by the sampler insertion into the well. Typical equilibration times depend on the well recovery rates and the type of sampler used. Samples are either transferred to containers at the well head or the sampler itself is shipped to the laboratory for analysis. Examples of equilibrated grab samplers include Hydrosleeve®, Snap Sampler™, and Kemmerer Sampler.

Equilibration time for diffusion samplers are generally dictated by the diffusion rate through the permeable membrane and, thus, are less sensitive to changes induced within the well during deployment. Most diffusion bag samplers have a minimum equilibration time of 14 days prior to sample collection. The samplers may be deployed for an extended period (e.g., three months or longer), although the continuous exchange between the sampler and the well water means that the sampler will likely reflect only the conditions in the few days preceding the sample collection.

11.6.5 TEMPORARY WELL PURGE PROCEDURES

Procedures used to purge temporary groundwater monitoring wells differ from permanent wells because temporary wells are installed for immediate sample acquisition. Wells of this type may include open bedrock boreholes, standard polyvinyl chloride well screen and riser placed in open boreholes, or drilling rod-based sampling devices (e.g., Wellpoint®, Geoprobe® Screen Point or Hydropunch® samplers). Purging temporary wells of this type may not be necessary because stagnant water is typically not present. However, if water is used in the drilling process, purging would be necessary. Purging can minimize the turbidity in the sample, which can be

significant due to the disturbance caused by the sampler installation and to rinse the sampling system with groundwater. The exception is for groundwater profiling applications (e.g., using a Waterloo Profiler®) where a more rigorous purge is used (using the multiple volume purge techniques described above) to limit the potential for cross contamination between sample intervals.

11.6.6 PRIVATE WATER WELL OR IN-PLACE PLUMBING PURGE PROCEDURES

The configuration and construction of private water wells varies widely, and access points for obtaining groundwater samples may be limited. WSP personnel should coordinate with the property owner/representative to access functioning ports and valves to avoid causing any inadvertent damage.

Collect the groundwater sample as close to the well as possible (e.g., from a sample port at the well head) to ensure the sample is representative. Ideally, the sample should be collected upstream of the piping and treatment equipment (e.g., particulate filter, water softener, carbon filters, ultra-violet lights), heating unit, or storage tanks. The following potential sampling locations are presented in order of preference:

- Sampling port or spigot near the well head or piping system prior to entry into the storage tank
- Sampling port or spigot at storage tank
- Sampling port or spigot downstream of the pressure tank or holding tank but upstream of any water treatment equipment
- Tap or faucet

If purging from a tap or faucet, try to remove any aerators, filters, or other devices from the tap before purging and work with the property owner/representative to bypass any water treatment systems. Document where the sample was collected and any steps that were taken to minimize the potential alteration of the water sample in the field book.

Purge the system by opening the tap or spigot and allowing the water to run for several minutes. Observe and record the purge rate for the system. The minimum purge volume must be more than the combined volume of the pump, tanks, piping, etc. After the minimum purge volume has been removed, review the geochemical measurements to ensure that readings have stabilized using the same procedures as those used for the multiple volume purge detailed above. If the minimum volume is unknown, purge the system for a minimum of 15 minutes, until the parameter readings have stabilized, and no suspended particles (e.g., iron or rust) are visible. Record the final purge volume in the field book and any water quality observations.

11.7 GROUNDWATER SAMPLE COLLECTION PROCEDURES

Collect groundwater samples as soon as possible after the geochemical parameters indicate representative groundwater is present. As practically possible, reduce the pump flow rate, but maintain a flow rate high enough to deliver a smooth stream of water without splashing or undue agitation. Collect samples directly from the tubing as it exits the well bore; do not sample on the downstream side of flow through cells or any other instrumentation. If using a bailer for sample collection, lower and raise the bailer slowly and smoothly to minimize the disturbance to the water within the well.

Collect groundwater samples in order of volatilization sensitivity with organic compounds sampled first followed by inorganic compounds:

- VOCs
- Extractable organics, petroleum hydrocarbons, aggregate organics, and oil and grease
- Total metals
- Dissolved metals (see filtering procedures below)

- Inorganic non-metallic and physical and aggregate properties
- Microbiological samples
- Radionuclides

Collect quality assurance/quality control samples in accordance with SOP 4 and the project-specific work plan or QAPP.

As necessary, conduct field tests or screening in accordance with the project-specific work plan and manufacturer's specifications for field testing equipment. Field samples must be directly transferred from the sampling equipment to the container that has been specifically prepared for that given parameter; intermediate containers should be avoided.

Record the depth interval, if applicable, which the sample was collected in the field book. Note the volume, phases, and color of the groundwater in the field book.

11.7.1 GROUNDWATER FILTRATION PROCEDURES

Filtered groundwater samples are sometimes used for field kit analyses and should only be collected for laboratory analysis after approval from the appropriate regulatory agency and/or project manager. If groundwater sample filtration is necessary, the following procedures should be followed:

- Use a variable speed peristaltic pump with the in-line filter fitted on the outlet end; pressurized bailers can also be used
- Insert the pump inlet tubing into the intermediate container holding the surface water sample
- Turn on the pump and reduce the flow rate, but maintain a flow rate high enough to deliver a smooth stream of water without splashing or undue agitation, hold the filter upright with the inlet and outlet in the vertical position and pump groundwater through the filter until all atmospheric oxygen has been removed and the minimum volume of water has been flushed through the filter, in accordance with the manufacturer's specifications
- Collect the filtered samples directly into the sample container from the pump-filter assembly
- If sediment is visible in the sample container after filtration, filter break-through has occurred and the sampling and filtering process should be repeated
- Discard the tubing and filter appropriately
- If a submersible pump is used to collect the groundwater sample, attached the in-line filter to the outlet end and follow the last four steps described above

11.7.2 NON-AQUEOUS PHASE LIQUID SAMPLING PROCEDURES

Non-aqueous phase liquid is typically sampled to identify the compound, usually through an analytical "fingerprint" analysis. The usefulness of this type of sampling is limited as many NAPLs weather in the subsurface making definitive identification problematic. If samples are to be collected, the sampling options and techniques should be discussed with the assigned WSP compliance professional and project manager to ensure that the NAPL is not considered to be a hazardous material for the purpose of shipping to the laboratory (SOP 3). Samples of NAPL should be collected using the same procedures as above and placed in the appropriate laboratory-supplied containers, packed on ice, and shipped to the analytical laboratory using procedures outlined in SOP 3.

11.7.3 SAMPLE LABELING AND PREPARATION FOR SHIPMENT

Once collected, prepare the groundwater samples for offsite laboratory analysis:

1. Clean the outside of the sample container, if necessary
2. Affix a sample tag or label to each sample container and complete all required information (sample number, date, time, sampler's initials, analysis, preservatives, place of collection)
3. Place clear tape over the tag or label (if non-waterproof labels are used)
4. Preserve samples immediately after collection by placing them into an insulated cooler filled with bagged wet ice to maintain a temperature of approximately 4°Celsius
5. Record the sample designation, date, time, and the sampler's initials in the field book and on a sample tracking form, if appropriate
6. Complete the chain-of-custody forms with appropriate sampling information, including:
 - location
 - sample name
 - sample collection date and time
 - number of sample containers
 - analytical method
7. Secure the sample packing and shipping in accordance with proper procedures

Do not ship hazardous waste samples without first consulting a WSP compliance professional.

11.8 CLOSING NOTES

Once sampling is completed, secure, restore and/or mark all sample locations with spray paint, stakes, or other appropriate marker for future reference or survey in accordance with the project-specific project work plan. Decontaminate all equipment prior to departure and properly manage all PPE and IDW in conformance with applicable regulations.

APPENDIX

C LABORATORY DATA REPORTS

Data Validation Report

**WSP Environment and Energy
Former TTC – Glen Head, NY**

SDG# MC1256



ECT.CON INC.

Environmental and Computer
Technology Consultants

3531 Fox Chase Drive
Imperial, PA 15126
(724) 695-8042
FAX (724) 695-2698
e-mail: ectconinc@comcast.net



Data Validation Report

SDG#	MC1256
Validation Report Date	July 17, 2011
Validation Guidance	USEPA CLP National Functional Guidelines for Data Review
Client Name	WSP Environment and Energy
Project Name	Former TTC – Glen Head, NY
Laboratory	Accutest
Method(s) Utilized	SW 846 8260B
Analytical Fraction	Volatile Organic Compounds (VOCs)

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
6/14/2011	TB061811	MC1256-1	X	Aqueous
6/18/2011	EB061811	MC1256-2	X	Aqueous
6/18/2011	GP-14-190	MC1256-3	X	Aqueous
6/18/2011	GP-14-180	MC1256-4	X	Aqueous
6/18/2011	GP-14-170	MC1256-5	X	Aqueous
6/20/2011	GP-14-1160	MC1256-6	X	Aqueous
6/20/2011	GP-14-1150	MC1256-7	X	Aqueous
6/20/2011	GP-14-140	MC1256-8	X	Aqueous
6/20/2011	GP-14-130	MC1256-9	X	Aqueous
6/20/2011	GP-14-120	MC1256-10	X	Aqueous
6/20/2011	GP-14-110	MC1256-11	X	Aqueous
6/20/2011	GP-14-100	MC1256-12	X	Aqueous
6/20/2011	EB062011	MC1256-13	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. Laboratory calculations have been verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the Former TTC – Glen Head, NY site consists of 10 aqueous field samples, two equipment blanks, and one trip blank. These samples were analyzed for the parameters as provided in the Table 1. The findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct.

The VOC findings are based upon the assessment of the following:

- * • Data Completeness
 - * • Holding Times
 - * • Calibration (Initial and Continuing)
 - * • Blanks
 - * • System Monitoring Compounds (Surrogate Spikes)
 - * • Matrix Spike/Matrix Spike Duplicates
 - * • Laboratory Control Sample Results
 - * • Internal Standards
 - * • Target Compound Identification
 - * • Compound Quantification and Reported Contract Quantitation Limits
 - * • System Performance
- * Criteria were met for this evaluation item.

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

All technical parameters were met. No qualifiers were assigned to the data.

NOTES

VOLATILE ORGANIC COMPOUNDS

Compound Quantitation

Samples GP-14-140 and GP-14-130 were re-analyzed at a 10X dilution factor due to the presence of tetrachloroethene above the instrument's linear calibration range. The 10X result was transcribed over the 1X result and used for data validation purposes for tetrachloroethene only. This accounts for the elevated reporting limits for this compound. No qualifiers were assigned on this basis.

Field Duplicates

Calculated RPD for positive results only.

Sample ID	Duplicate ID	Parameter	RPD
GP-14-170	GP-14-190		
1.1	1.2	Tetrachloroethene	8.7

ND – Nondetected results, -- RPD not calculated.



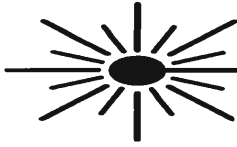
Data Reviewer

7/17/11

Date

Glossary of Data Qualifiers

U	Not Detected.	The associated number indicates approximate sample concentration necessary to be detected.
UJ	Not Detected.	Quantitation limit may be inaccurate or imprecise.
J	Analyte Present.	Reported value may not be accurate or precise.
N	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts.
R	Unusable Result.	Analyte may or may not be present in the sample.
UR	Unusable Result.	Analyte may or may not be present in the sample.



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Technology Consultants

***Annotated Form 1's
(Spreadsheet)***

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Report of Analysis

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Client Sample ID:	TB061811	Date Sampled:	06/14/11
Lab Sample ID:	MC1256-1	Date Received:	06/21/11
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54237.D	1	06/24/11	AMY	n/a	n/a	MSL1803
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	98%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Client Sample ID:	EB061811	Date Sampled:	06/18/11
Lab Sample ID:	MC1256-2	Date Received:	06/21/11
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54238.D	1	06/24/11	AMY	n/a	n/a	MSL1803
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Client Sample ID: GP-14-190

Lab Sample ID: MC1256-3

Matrix: AQ - Ground Water

Method: SW846 8260B

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Date Sampled: 06/18/11

Date Received: 06/21/11

Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54244.D	1	06/24/11	AMY	n/a	n/a	MSL1803
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	1.2	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

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Client Sample ID:	GP-14-180	Date Sampled:	06/18/11
Lab Sample ID:	MC1256-4	Date Received:	06/21/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54245.D	1	06/24/11	AMY	n/a	n/a	MSL1803
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	2.1	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	90%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Client Sample ID:	GP-14-170	Date Sampled:	06/18/11
Lab Sample ID:	MC1256-5	Date Received:	06/21/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54246.D	1	06/24/11	AMY	n/a	n/a	MSL1803
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	1.1	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Client Sample ID:	GP-14-160	Date Sampled:	06/20/11
Lab Sample ID:	MC1256-6	Date Received:	06/21/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54247.D	1	06/24/11	AMY	n/a	n/a	MSL1803
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	2.0	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-130%
2037-26-5	Toluene-D8	96%		70-130%
460-00-4	4-Bromofluorobenzene	90%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Client Sample ID:	GP-14-150	Date Sampled:	06/20/11
Lab Sample ID:	MC1256-7	Date Received:	06/21/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54248.D	1	06/24/11	AMY	n/a	n/a	MSL1803
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	39.0	1.0	ug/l	
79-01-6	Trichloroethene	1.5	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	98%		70-130%
460-00-4	4-Bromofluorobenzene	94%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Client Sample ID:	GP-14-140	Date Sampled:	06/20/11
Lab Sample ID:	MC1256-8	Date Received:	06/21/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54249.D	1	06/24/11	AMY	n/a	n/a	MSL1803
Run #2	L54280.D	10	06/25/11	AMY	n/a	n/a	MSL1804

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	3.1	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	454 ^a	10	ug/l	
79-01-6	Trichloroethene	4.8	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%	95%	70-130%
2037-26-5	Toluene-D8	98%	97%	70-130%
460-00-4	4-Bromofluorobenzene	91%	99%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Client Sample ID:	GP-14-130	Date Sampled:	06/20/11
Lab Sample ID:	MC1256-9	Date Received:	06/21/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54250.D	1	06/24/11	AMY	n/a	n/a	MSL1803
Run #2	L54281.D	10	06/25/11	AMY	n/a	n/a	MSL1804

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	4.3	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	631 ^a	10	ug/l	
79-01-6	Trichloroethene	5.9	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%	88%	70-130%
2037-26-5	Toluene-D8	100%	95%	70-130%
460-00-4	4-Bromofluorobenzene	96%	93%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:13 13-Jul-2011

Report of Analysis

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Client Sample ID:	GP-14-120	Date Sampled:	06/20/11
Lab Sample ID:	MC1256-10	Date Received:	06/21/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54251.D	1	06/24/11	AMY	n/a	n/a	MSL1803
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	2.3	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	47.7	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%
2037-26-5	Toluene-D8	98%		70-130%
460-00-4	4-Bromofluorobenzene	93%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:13 13-Jul-2011

Report of Analysis

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Client Sample ID:	GP-14-110	Date Sampled:	06/20/11
Lab Sample ID:	MC1256-11	Date Received:	06/21/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54252.D	1	06/24/11	AMY	n/a	n/a	MSL1803
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	86.4	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:13 13-Jul-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	GP-14-100	Date Sampled:	06/20/11
Lab Sample ID:	MC1256-12	Date Received:	06/21/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54253.D	1	06/24/11	AMY	n/a	n/a	MSL1803
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	15.0	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	94%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:13 13-Jul-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	EB062011	Date Sampled:	06/20/11
Lab Sample ID:	MC1256-13	Date Received:	06/21/11
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54241.D	1	06/24/11	AMY	n/a	n/a	MSL1803
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-130%
2037-26-5	Toluene-D8	96%		70-130%
460-00-4	4-Bromofluorobenzene	92%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



ECT.CON INC.

Environmental and Computer
Technology Consultants

Support Documentation

Laboratory Case Narrative



Sample Summary

WSP Environmental & Energy

Job No: MC1256

Former Trans Technology 1 Robert Lane Glen Head, NY
Project No: 13224.00/00003

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
MC1256-1	06/14/11	00:00 DC	06/21/11	AQ Trip Blank Water	TB061811
MC1256-2	06/18/11	12:30 DC	06/21/11	AQ Equipment Blank	EB061811
MC1256-3	06/18/11	12:00 DC	06/21/11	AQ Ground Water	GP-14-190
MC1256-4	06/18/11	15:20 DC	06/21/11	AQ Ground Water	GP-14-180
MC1256-5	06/18/11	17:00 DC	06/21/11	AQ Ground Water	GP-14-170
MC1256-6	06/20/11	09:10 DC	06/21/11	AQ Ground Water	GP-14-160
MC1256-7	06/20/11	09:55 DC	06/21/11	AQ Ground Water	GP-14-150
MC1256-8	06/20/11	10:45 DC	06/21/11	AQ Ground Water	GP-14-140
MC1256-9	06/20/11	11:35 DC	06/21/11	AQ Ground Water	GP-14-130
MC1256-10	06/20/11	12:15 DC	06/21/11	AQ Ground Water	GP-14-120
MC1256-11	06/20/11	13:05 DC	06/21/11	AQ Ground Water	GP-14-110
MC1256-12	06/20/11	13:50 DC	06/21/11	AQ Ground Water	GP-14-100
MC1256-13	06/20/11	15:30 DC	06/21/11	AQ Equipment Blank	EB062011

SAMPLE DELIVERY GROUP CASE NARRATIVE**Client:** WSP Environmental & Energy**Job No** MC1256**Site:** Former Trans Technology I Robert Lane Glen Head, NY**Report Date** 7/12/2011 11:52:23 AM

12 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on between 06/14/2011 and 06/20/2011 and were received at Accutest on 06/21/2011 properly preserved, at 1.7 Deg. C and intact. These Samples received an Accutest job number of MC1256. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix	AQ	Batch ID:	MSL1803

- ▣ All samples were analyzed within the recommended method holding time.
- ▣ All method blanks for this batch meet method specific criteria.
- ▣ Sample(s) MC1340-2MS, MC1340-2MSD were used as the QC samples indicated.

Matrix	AQ	Batch ID:	MSL1804

- ▣ All samples were analyzed within the recommended method holding time.
- ▣ All method blanks for this batch meet method specific criteria.
- ▣ Sample(s) MC1344-IMS, MC1344-IMSD were used as the QC samples indicated.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC1256).

Chain of Custody

CHAIN OF CUSTODY RECORD

MC1256 Page 1 of 1

Project Number: 13224/11		Site and Location: FORMER TTC - GLEN HEAD, NY		Matrices: S = Soil Aq = Water A = Air Bu = Bulk W = Waste B = Biotite OW = Only Waste U = Other		N° 02229	
Contact Name: DAVE BOUCHARD		Contact Email: dave.bouchard@wspgroup.com		Sampler's Name: DAVID CARSTENS		Sampler's Signature: [Signature]	
Sample Identification:		Depth	Date	Time	Matrix	Number of Containers	Remarks
TB061811 -1		---	06/14/11	---	AQ Z	2	DELIVERABLE: COMB R + FERTS EDD DC
EB061811 -2		---	06/18/11	1230	AQ 3	3	NY DEC EDD
GP-14-190 -3		190	1	1200	AQ 3	3	
GP-14-180 -4		180	1	1520	AQ 3	3	
GP-14-170 -5		170	1	1700	AQ 3	3	
GP-14-160 -6		160	06/20/11	0910	AQ 3	3	
GP-14-150 -7		150	1	0955	AQ 3	3	
GP-14-140 -8		140	1	1045	AQ 3	3	
GP-14-130 -9		130	1	1135	AQ 3	3	
GP-14-120 -10		120	1	1215	AQ 3	3	
GP-14-110 -11		110	1	1305	AQ 3	3	
GP-14-100 -12		100	1	1350	AQ 3	3	
EB062011 -13		---	1	1530	AQ 3	3	
							1.7°
Relinquished by (Signature): [Signature]		Date Time: 06/20/2011 1700		Received by (Signature): [Signature]		Laboratory Name: ACCUTEST	
Relinquished by (Signature): FedEx		Date Time: 6/21/11 9:45		Received by (Signature): [Signature]		Laboratory Location: MA	
Turn-Around Time: STANDARD				Tracking Number: 8753 7521 6067		Custody Seal Numbers:	
						Method of Shipment: FEDEX	
☐ Reston Office: 11190 Sunrise Valley Dr., #300, Reston, VA 20191 / Tel: 703-709-6500 ☐ Pittsburgh Office: 750 Holiday Dr., #410, Pittsburgh, PA 15220 / Tel: 412-604-1040 ☐ San Jose Office: 2025 Gateway Place, #435, San Jose, CA 95110 / Tel: 408-453-6100 ☐ New Jersey Office: 334 Elizabeth Ave., Somerset, NJ 08873 / Tel: 732-564-0888				☐ Denver Office: 4600 South Ulster, #930, Denver, CO 80237 / Tel: 303-850-9200 ☐ Minneapolis Office: 123 North 3rd St., #808, Minneapolis, MN 55401 / Tel: 612-343-0510 ☐ Buxborough Office: 1740 Massachusetts Ave., Buxborough, MA 01719 / Tel: 978 635-9600 ☒ Cazenovia Office: 5 Sullivan St., Cazenovia, NY 13035 / Tel: 315-655-3900			

MC1256: Chain of Custody

Page 1 of 2



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC1256

Client: WSP

Immediate Client Services Action Required: No

Date / Time Received: 6/21/2011

Delivery Method:

Client Service Action Required at Login: No

Project: FORMER TTC GLEN HEAD NY

No. Coolers: 1

Airbill #'s: N/A

Cooler Security

Y or N

1. Custody Seals Present:	☒	☐	3. COC Present:	☒	☐
2. Custody Seals Intact:	☒	☐	4. Smpl Dates/Time OK	☒	☐

Cooler Temperature

Y or N

1. Temp criteria achieved:	☒	☐
2. Cooler temp verification:	Infrared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservation

Y or N

N/A

1. Trip Blank present / cooler:	☒	☐	☐
2. Trip Blank listed on COC:	☒	☐	☐
3. Samples preserved properly:	☒	☐	☐
4. VOCs headspace free:	☒	☐	☐

Sample Integrity - Documentation

Y or N

1. Sample labels present on bottles:	☒	☐
2. Container labeling complete:	☒	☐
3. Sample container label / COC agree:	☒	☐

Sample Integrity - Condition

Y or N

1. Sample recvd within HT:	☒	☐
2. All containers accounted for:	☒	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions

Y or N N/A

1. Analysis requested is clear:	☒	☐	
2. Bottles received for unspecified tests	☐	☒	
3. Sufficient volume recvd for analysis:	☒	☐	
4. Compositing instructions clear:	☐	☐	☒
5. Filtering instructions clear:	☐	☐	☒

Comments

Accutest Laboratories
V 508 481 6200

495 Technology Center West, Bldg One
F 508 481 7753

Marlborough, MA
www.accutest.com

MC1256: Chain of Custody
Page 2 of 2

Worksheets

SDG NUMBER	MC1256
VALIDATION REPORT DATE	7/17/2011
VALIDATION GUIDANCE	NFG
CLIENT NAME	WSP Environmental and Energy
PROJECT NAME	Former Trans Technology, 1 Robert Lane, Glen Head, NY
LABORATORY	Accutest
METHOD(S) UTILIZED	8260B
ANALYTICAL FRACTION(S)	VOCs
COOLER TEMPERATURES	Ok
FIELD DUPLICATES	GP-14-170 AND GP-14-190

SDG	SAMPLE DATE	SAMPLE ID	LABORATORY ID	MATRIX	8260C
1	6/14/2011	TB061811	MC1256-1	Aqueous	X
2	6/18/2011	EB061811	MC1256-2	Aqueous	X
3	6/18/2011	GP-14-190	MC1256-3	Aqueous	X
4	6/18/2011	GP-14-180	MC1256-4	Aqueous	X
5	6/18/2011	GP-14-170	MC1256-5	Aqueous	X
6	6/20/2011	GP-14-1160	MC1256-6	Aqueous	X
7	6/20/2011	GP-14-1150	MC1256-7	Aqueous	X
8	6/20/2011	GP-14-140	MC1256-8	Aqueous	X
9	6/20/2011	GP-14-130	MC1256-9	Aqueous	X
10	6/20/2011	GP-14-120	MC1256-10	Aqueous	X
11	6/20/2011	GP-14-110	MC1256-11	Aqueous	X
12	6/20/2011	GP-14-100	MC1256-12	Aqueous	X
13	6/20/2011	EB062011	MC1256-13	Aqueous	X

HOLDING TIMES						
SAMPLE DATE	SAMPLE ID	LAB ID	MATRIX	PARAMETER	DATE ANALYZED	DF
6/14/2011	TB061811	MC1256-1	Aqueous	X	6/24/2011	1X
6/18/2011	EB061811	MC1256-2	Aqueous	X	6/24/2011	1X
6/18/2011	GP-14-190	MC1256-3	Aqueous	X	6/24/2011	1X
6/18/2011	GP-14-180	MC1256-4	Aqueous	X	6/24/2011	1X
6/18/2011	GP-14-170	MC1256-5	Aqueous	X	6/24/2011	1X
6/20/2011	GP-14-1160	MC1256-6	Aqueous	X	6/24/2011	1X
6/20/2011	GP-14-1150	MC1256-7	Aqueous	X	6/24/2011	1X
6/20/2011	GP-14-140	MC1256-8	Aqueous	X	6/24/2011	1X
			PCE		6/25/2011	10X
6/20/2011	GP-14-130	MC1256-9	Aqueous	X	6/24/2011	1X
			PCE		6/25/2011	10X
6/20/2011	GP-14-120	MC1256-10	Aqueous	X	6/24/2011	1X
6/20/2011	GP-14-110	MC1256-11	Aqueous	X	6/24/2011	1X
6/20/2011	GP-14-100	MC1256-12	Aqueous	X	6/24/2011	1X
6/20/2011	EB062011	MC1256-13	Aqueous	X	6/24/2011	1X

14 days from collection to analysis
Sample Date 6/14/2011 Analyze by 6/28/2011
Sample Date 6/18/2011 Analyze by 7/2/2011
Sample Date 6/20/2011 Analyze by 7/4/2011

TARGET COMPOUNDS AND QUANTITATION LIMITS	
Was a target compound list provided by the client?	Yes, 5 compounds only
Did Sample Form 1s match the target compound list	yes
Were required quantitation limits provided by the client?	No
Did all compounds meet the required quantitation limits?	NA

SYSTEM MONITORING COMPOUNDS				
SAMPLE	DF	SURROGATE	RECOVERY	ACTION
All OK				
Were surrogate RTs within windows established by the ICAL? Yes Were there any transcription errors between the raw data and Form 2? No Were laboratory acceptance limits used as the basis for validation? Yes Did the laboratory provide CLP Form II or equivalent? Yes				

GP-14-140	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 2
DBFM	46.04	50	92.1	92
Tol-d8	48.89	50	97.8	98
BFB	45.4	50	90.8	91

Recovery = (Amount Found/Amount Spiked)*100

MS/MSD RECOVERY and RELATIVE PERCENT DIFFERENCE						
Non-client MS/MSD						
COMPOUND	MS %R	MSD %R	RPD	NATIVE	SPIKE	ACTION
All Parameters	ok	ok	ok			

LABORATORY CONTROL SAMPLES

SAMPLE	COMPOUND	LCS %R	LCSD %R	RPD	Samples	ACTION
MSL1803-BS	All Parameters	ok	ok			
MSL1804-BS	All Parameters	ok	ok			

Were there any transcription errors between the raw data and Form 3? No
 Were laboratory acceptance limits used as the basis for validation? 70-130%
 Did the laboratory provide CLP Form III or equivalent? Yes
 Were chromatograms and quan reports present for all LCS/LCDs? Yes

MSL1803-BS	PCE	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 3
	LCS	45.2	50	90.4	90%

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

BLANKS

BLANK	COMPOUND	RESULT	5X OR 10X	ACTION LEVEL	ACTION
MSL1803-MB	All Parameters	ND		#VALUE!	
MSL1804-MB	All Parameters	ND		#VALUE!	
TB061811	All Parameters	ND		#VALUE!	
EB061811	All Parameters	ND		#VALUE!	
EB062011	All Parameters	ND		#VALUE!	

Were Form Is provided for all blanks? Yes
 Were chromatograms and quan reports present for all blanks? Yes
 Did the laboratory provide CLP Form IVs or equivalent? No

CALIBRATION

Initial
 Are chromatograms and quan reports present for all ICAL standards? Yes
 Are CLP For VIs or equivalent present and complete? Yes
 Any transcription or calculation errors? No
 What linearity criteria was used? 30% RSD
 Are RRFs greater than 0.05? Yes
Continuing
 Are chromatograms and quan reports present for all CCV standards? Yes
 Are CLP For VIIs or equivalent present and complete? Yes
 Any transcription or calculation errors? No
 What %D criteria was used? 30%D
 Were samples analyzed within 12 hours of the tune? Yes
 Are RRFs greater than 0.05? Yes

*Shading indicates a value outside the 12 hour criteria.

	ICAL	CCV	CCV	CCV	CCV	CCV
Instrument	GCMSL					
Date	5/22/2011	6/24/2011	6/25/2011			
Tune	8:30	13:00	216			
CCV		13:30	216			
Blank		14:59	343			
COMPOUNDS			PCE only			
	All OK	All OK				
			8, 9			
SAMPLES						

INITIAL CALIBRATION RRF

Date
Instrument
Compound
Reported RRF
Calculated RRF

5/22/2011
GCMSL
tetrachloroethene
0.65
0.64985

Compound

Area (A1) 16552
Conc (C1) 25

Internal Std

Area (A2) 50941
Conc (C2) 50

INITIAL CALIBRATION AVERAGE RRF

Rptd Avg RRF 0.676
Calcd Avg RRF 0.6764444
RRF1 0.739
RRF2 0.646
RRF3 0.629
RRF4 0.609
RRF5 0.728
RRF6 0.766
RRF7 0.65
RRF8 0.668
RRF9 0.653
SUM 6.088

$$RRF = (A1/A2) * (C2/C1)$$

INITIAL CALIBRATION %RSD

Reported %RSD 8
Calculated %RSD 8.036

STD DEV 0.0544

$$\%RSD = (Std Dev / Avg RRF) * 100$$

CONTINUING CALIBRATION %D

Date
Time
Instrument
Compound
Reported RRF
Calculated RRF

6/24/2011
13:30
GCMSL
tetrachloroethene
0.681
0.681

Compound

Area (A1) 43778
Conc (C1) 50

Reported %Difference 0.8
Calculated %Difference -0.80

Internal Std

Area (A2) 64248
Conc (C2) 50

ICAL RRF 0.676
CCV RRF 0.6814

$$\%Difference = ((ICAL - CCV)/ICAL) * 100$$

TUNE			
Raw data and mass assignments correct?	Yes	Instrument	GCMSL
Mass listing normalized to specified m/x?	Yes	Date	6/24/1944
Were all tune reports present?	Yes	Time	13:00

m/z	Area	Calculated %	Reported %	Abundance Criteria
50	2787	16.8%	16.8	15-40% of mass 95
75	8092	48.8%	48.8	30-60% of mass 95
95	16576	100.0%	100	base peak, 100%
96	987	6.0%	6	5-9% of mass 95
173	0	0.0%	0	<2% of mass 174
174	13430	81.0%	81	50%-120% of mass 95
175	1063	7.9%	7.9	5-9% of mass 174
176	12975	96.6%	96.6	95%-101% of mass 174
177	890	6.9%	6.9	5-9% of mass 176

INTERNAL STANDARD CHECK

CCV Date	6/24/2011	Shading indicates a percent recovery outside the -50% to 100% criteria.				
CCV Time	13:30	Shading indicates a retention time outside the +/- 0.5 minute criteria.				
Instrument	GCMSL					
	PFB	RT	14-DFB	RT	CB-d5	RT
UPPER	77816	8.19	111698	9.03	64248	12.26
	155632	8.69	223396	9.53	128496	12.76
LOWER	38908	7.69	55849	8.53	32124	11.76
GP-14-140	69417	8.190	99202	9.030	56703	12.260
	89%		89%		88%	

RELATIVE RETENTION TIMES

SAMPLE GP-14-140			
Compound	Compound RT	IS RT	RRT
PCE	11.62	12.26	0.948
cis-12-DCE	7.51	8.19	0.917
TCE	9.45	9.03	1.047

CCV Date and Time		6/24/11 @ 1330 GCMSL			
Compound	Compound RT	IS RT	RRT	RANGE	
PCE	11.62	12.26	0.948	0.888	1.008
cis-12-DCE	7.51	8.19	0.917	0.857	0.977
TCE	9.45	9.02	1.048	0.988	1.108

Shading indicates a relative retention time outside the +/- 0.06 RRT unit criteria.

FIELD DUPLICATES

None Present						
COMPOUND	SAMPLE	QUALIFIER	DUPLICATE	QUALIFIER	RPD	RPTD
	GP-14-170		GP-14-190			
PCE	1.1		1.2		-8.7	
NOTES	Samples are not qualified on this basis.					

SAMPLE CALCULATION

GP-14-140, tetrachloroethene, 454 µg/L

Compound area	38340	Compound area		Compound area	
IS area	62389	IS area		IS area	
IS conc	50	IS conc		IS conc	
Compound RRF	0.676	Compound RRF		Compound RRF	
Volume	1	Volume		Volume	
DF	10	DF		DF	
Concentration ppbv	454.54	Concentration	#DIV/0!	Concentration	#DIV/0!

Concentration = (Compound area/ IS area) * (IS conc/Compound RRF) * (DF/ Volume)

Are there any transcription errors?	No
Are FormIs present for all field and quality control samples?	Yes
Are chromatograms and quan reports present for all samples?	Yes
Are RLs adjusted to reflect sample dilutions, percent solids, etc.?	Yes
For soils, any precent solids <50%?	NA
For soils, any precent solids <10%?	NA

Volatile Surrogate Recovery Summary

Page 1 of 1

Job Number: MC1256

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Method: SW846 8260B

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC1256-1	L54237.D	95.0	100.0	98.0
MC1256-2	L54238.D	92.0	101.0	95.0
MC1256-3	L54244.D	92.0	97.0	91.0
MC1256-4	L54245.D	93.0	97.0	90.0
MC1256-5	L54246.D	93.0	97.0	91.0
MC1256-6	L54247.D	91.0	96.0	90.0
MC1256-7	L54248.D	93.0	98.0	94.0
MC1256-8	L54280.D	95.0	97.0	99.0
MC1256-8	L54249.D	92.0	98.0	91.0
MC1256-9	L54281.D	88.0	95.0	93.0
MC1256-9	L54250.D	96.0	100.0	96.0
MC1256-10	L54251.D	95.0	98.0	93.0
MC1256-11	L54252.D	98.0	101.0	95.0
MC1256-12	L54253.D	96.0	99.0	94.0
MC1256-13	L54241.D	91.0	96.0	92.0
MC1340-2MS	L54255.D	93.0	96.0	94.0
MC1340-2MSD	L54256.D	94.0	95.0	95.0
MC1344-1MS	L54282.D	88.0	95.0	89.0
MC1344-1MSD	L54283.D	88.0	95.0	91.0
MSL1803-BS	L54234.D	91.0	98.0	95.0
MSL1803-MB	L54236.D	93.0	101.0	97.0
MSL1804-BS	L54260.D	89.0	92.0	92.0
MSL1804-MB	L54262.D	91.0	97.0	91.0

Surrogate Compounds	Recovery Limits

S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

5.6.1



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54249.D Vial: 20
Acq On : 24 Jun 2011 9:26 pm Operator: amym
Sample : mcl256-8 Inst : MAMSL
Misc : ms23308,msl1803,,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 25 11:32:39 2011 Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Sun May 22 15:35:26 2011
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.90	65	23731	500.00	ug/L	0.03
4) pentafluorobenzene	8.19	168	69417	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.03	114	99202	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	56703	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	51865	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	30730	46.04	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	92.08%
60) toluene-d8 (s)	10.80	98	117551	48.89	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	97.78%
82) bromofluorobenzene (s)	13.49	95	42500	45.40	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	90.80%

Target Compounds

					Qvalue
36) cis-1,2-dichloroethene	7.51	96	2480	3.14 ug/L	85
51) trichloroethene	9.45	95	3524	4.76 ug/L	96
67) tetrachloroethene	11.62	166	451901	589.09 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
L54249.D L052211W.M Sat Jun 25 12:22:53 2011 RPT1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54280.D
 Acq On : 25 Jun 2011 12:34 pm
 Sample : mc1256-8,1:10
 Misc : ms23308,ms11804,,,,5,10
 MS Integration Params: RTEINT.P
 Quant Time: Jun 25 16:02:24 2011

Vial: 51
 Operator: amym
 Inst : MAMSL
 Multiplr: 1.00

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Sun May 22 15:35:26 2011
 Response via : Initial Calibration
 DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.85	65	33164	500.00	ug/L	-0.01
4) pentafluorobenzene	8.19	168	80984	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.03	114	115198	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	62389	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	55423	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	37105	47.65	ug/L	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	95.30%	
60) toluene-d8 (s)	10.80	98	134890	48.31	ug/L	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	96.62%	
82) bromofluorobenzene (s)	13.49	95	49574	49.56	ug/L	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	99.12%	

Target Compounds

67) tetrachloroethene	11.63	166	38340	45.42	ug/L	Qvalue 91

GP-14-140
 10X
 PCF 454

6.1.9



(#) = qualifier out of range (m) = manual integration (+) = signals summed
 L54280.D L052211W.M Sun Jun 26 13:02:30 2011 RPT1

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC1256

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Non-Client

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC1340-2MS	L54255.D	5	06/25/11	AMY	n/a	n/a	MSL1803
MC1340-2MSD	L54256.D	5	06/25/11	AMY	n/a	n/a	MSL1803
MC1340-2	L54242.D	1	06/24/11	AMY	n/a	n/a	MSL1803

The QC reported here applies to the following samples:

Method: SW846 8260B

MC1256-1, MC1256-2, MC1256-3, MC1256-4, MC1256-5, MC1256-6, MC1256-7, MC1256-8, MC1256-9, MC1256-10, MC1256-11, MC1256-12, MC1256-13

CAS No.	Compound	MC1340-2 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethene	ND	250	259	104	235	94	10	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	239	96	223	89	7	70-130/30
127-18-4	Tetrachloroethene	ND	250	235	94	221	88	6	70-130/30
79-01-6	Trichloroethene	ND	250	263	105	238	95	10	70-130/30
75-01-4	Vinyl chloride	ND	250	248	99	243	97	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC1340-2	Limits
1868-53-7	Dibromofluoromethane	93%	94%	92%	70-130%
2037-26-5	Toluene-D8	96%	95%	95%	70-130%
460-00-4	4-Bromofluorobenzene	94%	95%	92%	70-130%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC1256

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Non-Client

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC1344-1MS	L54282.D	5	06/25/11	AMY	n/a	n/a	MSL1804
MC1344-1MSD	L54283.D	5	06/25/11	AMY	n/a	n/a	MSL1804
MC1344-1	L54267.D	1	06/25/11	AMY	n/a	n/a	MSL1804

The QC reported here applies to the following samples:

Method: SW846 8260B

MC1256-8, MC1256-9

CAS No.	Compound	MC1344-1 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethene	ND	250	241	96	224	90	7	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC1344-1	Limits
1868-53-7	Dibromofluoromethane	88%	88%	89%	70-130%
2037-26-5	Toluene-D8	95%	95%	96%	70-130%
460-00-4	4-Bromofluorobenzene	89%	91%	91%	70-130%

5.3.2



Blank Spike Summary

Page 1 of 1

Job Number: MC1256

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1803-BS	L54234.D	1	06/24/11	AMY	n/a	n/a	MSL1803

The QC reported here applies to the following samples:

Method: SW846 8260B

MC1256-1, MC1256-2, MC1256-3, MC1256-4, MC1256-5, MC1256-6, MC1256-7, MC1256-8, MC1256-9, MC1256-10, MC1256-11, MC1256-12, MC1256-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethene	50	47.3	95	70-130
156-60-5	trans-1,2-Dichloroethene	50	45.1	90	70-130
127-18-4	Tetrachloroethene	50	45.2	90	70-130
79-01-6	Trichloroethene	50	48.6	97	70-130
75-01-4	Vinyl chloride	50	44.0	88	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	91%	70-130%
2037-26-5	Toluene-D8	98%	70-130%
460-00-4	4-Bromofluorobenzene	95%	70-130%

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54234.D
 Acq On : 24 Jun 2011 2:00 pm
 Sample : bs
 Misc : ms23302,msl1803,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Jun 25 11:31:57 2011

Vial: 5
 Operator: amym
 Inst : MAMSL
 Multiplr: 1.00

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Sun May 22 15:35:26 2011
 Response via : Initial Calibration
 DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.84	65	27469	500.00	ug/L	-0.02
4) pentafluorobenzene	8.19	168	78136	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.02	114	112011	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	64752	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	61380	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	34235	45.56	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	91.12%		
60) toluene-d8 (s)	10.80	98	133530	49.18	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	98.36%		
82) bromofluorobenzene (s)	13.48	95	52595	47.48	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	94.96%		

Target Compounds

						Qvalue
2) tertiary butyl alcohol	5.92	59	42836	554.35	ug/L	96
3) Ethanol	4.80	45	53086	3526.89	ug/L	98
5) dichlorodifluoromethane	3.73	85	40442	57.05	ug/L	96
6) chloromethane	3.95	50	31673	41.29	ug/L	92
7) vinyl chloride	4.16	62	37666	43.95	ug/L	94
8) bromomethane	4.62	96	14544	24.97	ug/L	98
9) chloroethane	4.75	64	23042	43.27	ug/L	94
10) ethyl ether	5.58	59	30288	45.13	ug/L	81
11) acetonitrile	5.25	41	20288	72.42	ug/L	92
12) trichlorofluoromethane	5.34	101	54499	39.30	ug/L	97
13) freon-113	6.08	101	31851	48.67	ug/L	92
14) acrolein	5.33	56	16897	448.76	ug/L	94
15) 1,1-dichloroethene	5.89	96	35705	42.44	ug/L	92
16) acetone	5.44	43	18522	49.45	ug/L	81
17) Methyl Acetate	6.05	43	61578	43.42	ug/L #	88
18) methylene chloride	6.04	84	41206	41.78	ug/L	91
19) methyl tert butyl ether	6.80	73	110123	52.72	ug/L	94
20) acrylonitrile	5.93	53	15908	43.32	ug/L	80
21) allyl chloride	6.12	41	38531	45.95	ug/L	78
22) trans-1,2-dichloroethene	6.69	96	35997	45.09	ug/L	94
23) iodomethane	5.96	142	20543	31.16	ug/L	69
24) carbon disulfide	6.28	76	110794	45.12	ug/L	99
25) propionitrile	6.93	54	6104	55.59	ug/L	100
26) vinyl acetate	7.03	43	37578	67.82	ug/L	99
27) chloroprene	7.30	53	50425	56.45	ug/L	96
28) di-isopropyl ether	7.36	45	113954	56.16	ug/L	91
29) methacrylonitrile	7.44	41	25164	55.48	ug/L	78
30) 2-butanone	7.34	72	5328	50.30	ug/L #	33
31) Hexane	7.35	41	45079	49.66	ug/L #	96
32) 1,1-dichloroethane	6.94	63	67291	51.02	ug/L	94
33) tert-butyl ethyl ether	7.75	59	101629	81.89	ug/L	96
34) isobutyl alcohol	7.74	43	11176	252.52	ug/L	94
35) 2,2-dichloropropane	7.78	77	16946	43.78	ug/L	91
36) cis-1,2-dichloroethene	7.51	96	42042	47.31	ug/L	96
37) ethyl acetate	7.74	43	10531	72.44	ug/L	69

(#) = qualifier out of range (m) = manual integration

L54234.D L052211W.M

Sat Jun 25 12:07:29 2011

RPT1

Page 1

6.3.1


Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54234.D

Vial: 5

Acq On : 24 Jun 2011 2:00 pm

Operator: amym

Sample : bs

Inst : MAMSL

Misc : ms23302,msl1803,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jun 25 11:31:57 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	7.66	128	17357	47.09	ug/L	86
39) chloroform	7.70	83	72511	46.41	ug/L	100
41) Tetrahydrofuran	8.03	42	11336	56.38	ug/L #	58
42) 1,1,1-trichloroethane	8.44	97	53302	47.15	ug/L	95
44) Cyclohexane	8.73	56	50213	59.93	ug/L #	82
45) carbon tetrachloride	8.79	117	39502	46.27	ug/L	100
46) 1,1-dichloropropene	8.62	75	48813	45.66	ug/L	94
47) benzene	8.81	78	158694	49.56	ug/L	99
48) 1,2-dichloroethane	8.33	62	52555	48.92	ug/L	95
49) tert-amyl methyl ether	8.97	73	106027	81.11	ug/L	96
50) heptane	9.34	43	34169	51.39	ug/L	82
51) trichloroethene	9.45	95	40660	48.65	ug/L	98
52) 1,2-dichloropropane	9.41	63	39540	53.06	ug/L	96
53) dibromomethane	9.38	93	27320	52.77	ug/L	97
54) bromodichloromethane	9.49	83	56395	55.43	ug/L	98
55) Methylcyclohexane	9.98	83	49001	49.13	ug/L #	86
57) methyl methacrylate	9.60	69	30004	58.23	ug/L	89
58) 1,4-dioxane	9.59	88	2637	287.53	ug/L	80
59) cis-1,3-dichloropropene	10.12	75	57080	51.00	ug/L	95
61) 4-methyl-2-pentanone	10.23	43	38012	54.17	ug/L	97
62) toluene	10.87	92	100558	48.28	ug/L	91
63) trans-1,3-dichloropropene	10.54	75	52156	57.90	ug/L	87
64) 1,1,2-trichloroethane	10.70	83	33614	53.57	ug/L	97
65) ethyl methacrylate	10.93	69	52993	61.44	ug/L #	69
67) tetrachloroethene	11.62	166	39626	45.23	ug/L	99
68) 1,3-dichloropropane	10.94	76	65512	49.76	ug/L	98
69) dibromochloromethane	11.21	129	43282	49.70	ug/L	95
70) 1,2-dibromoethane	11.46	107	41497	47.69	ug/L	95
71) 2-hexanone	11.11	43	26498	50.03	ug/L	93
72) chlorobenzene	12.30	112	109495	45.00	ug/L	97
73) 1,1,1,2-tetrachloroethane	12.22	131	37249	51.37	ug/L	90
74) ethylbenzene	12.47	91	184844	44.35	ug/L	99
75) m,p-xylene	12.66	106	141400	87.20	ug/L	89
76) o-xylene	13.06	106	70287	45.46	ug/L	85
77) styrene	12.99	104	118597	45.07	ug/L	82
78) bromoform	12.80	173	35759	57.35	ug/L	88
79) trans-1,4-dichloro-2-buten	13.24	53	9473	94.88	ug/L #	76
81) isopropylbenzene	13.43	105	163776	49.40	ug/L	93
83) bromobenzene	13.71	156	48156	45.99	ug/L	87
84) 1,1,2,2-tetrachloroethane	13.09	83	57848	50.45	ug/L	99
85) 1,2,3-trichloropropane	13.23	75	59584	63.75	ug/L	98
86) n-propylbenzene	13.88	91	197568	44.88	ug/L	99
87) 2-chlorotoluene	13.99	91	124505	44.02	ug/L	99
88) 4-chlorotoluene	14.07	91	132470	46.19	ug/L	94
89) 1,3,5-trimethylbenzene	14.15	105	140747	44.69	ug/L	95
90) tert-butylbenzene	14.46	91	77766	44.87	ug/L	94
91) 1,2,4-trimethylbenzene	14.56	105	145095	44.81	ug/L	95
92) sec-butylbenzene	14.69	105	166617	45.41	ug/L	99
93) 1,3-dichlorobenzene	14.78	146	82246	46.81	ug/L	96

(#)=qualifier out of range (m)=manual integration

L54234.D L052211W.M

Sat Jun 25 12:07:30 2011

RPT1

Page 2

Blank Spike Summary

Page 1 of 1

Job Number: MC1256

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1804-BS	L54260.D	1	06/25/11	AMY	n/a	n/a	MSL1804

The QC reported here applies to the following samples:

Method: SW846 8260B

MC1256-8, MC1256-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
127-18-4	Tetrachloroethene	50	47.2	94	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	89%	70-130%
2037-26-5	Toluene-D8	92%	70-130%
460-00-4	4-Bromofluorobenzene	92%	70-130%

5.2.2



Method Blank Summary

Page 1 of 1

Job Number: MC1256

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1803-MB	L54236.D	1	06/24/11	AMY	n/a	n/a	MSL1803

The QC reported here applies to the following samples:

Method: SW846 8260B

MC1256-1, MC1256-2, MC1256-3, MC1256-4, MC1256-5, MC1256-6, MC1256-7, MC1256-8, MC1256-9, MC1256-10, MC1256-11, MC1256-12, MC1256-13

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	97%	70-130%

Method Blank Summary

Page 1 of 1

Job Number: MC1256

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1804-MB	L54262.D	1	06/25/11	AMY	n/a	n/a	MSL1804

The QC reported here applies to the following samples:

Method: SW846 8260B

MC1256-8, MC1256-9

CAS No.	Compound	Result	RL	Units	Q
127-18-4	Tetrachloroethene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	91% 70-130%
2037-26-5	Toluene-D8	97% 70-130%
460-00-4	4-Bromofluorobenzene	91% 70-130%

5.1.2



Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC1256

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample: MSL1764-BFB

Injection Date: 05/22/11

Lab File ID: L52992.D

Injection Time: 08:30

Instrument ID: GCMSL

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	3967	18.1	Pass
75	30.0 - 60.0% of mass 95	10972	50.0	Pass
95	Base peak, 100% relative abundance	21949	100.0	Pass
96	5.0 - 9.0% of mass 95	1346	6.13	Pass
173	Less than 2.0% of mass 174	207	0.94 (1.06) ^a	Pass
174	50.0 - 150.0% of mass 95	19600	89.3	Pass
175	5.0 - 9.0% of mass 174	1274	5.80 (6.50) ^a	Pass
176	95.0 - 101.0% of mass 174	19453	88.6 (99.3) ^a	Pass
177	5.0 - 9.0% of mass 176	1259	5.74 (6.47) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSL1764-IC1764	L52995.D	05/22/11	10:13	01:43	Initial cal 0.5
MSL1765-IC1765	L52995A.D	05/22/11	10:13	01:43	Initial cal 0.5
MSL1765-IC1765	L52996A.D	05/22/11	10:42	02:12	Initial cal 1
MSL1764-IC1764	L52996.D	05/22/11	10:42	02:12	Initial cal 1
MSL1765-IC1765	L52997A.D	05/22/11	11:10	02:40	Initial cal 2
MSL1764-IC1764	L52997.D	05/22/11	11:10	02:40	Initial cal 2
MSL1765-IC1765	L52998A.D	05/22/11	11:39	03:09	Initial cal 5
MSL1764-IC1764	L52998.D	05/22/11	11:39	03:09	Initial cal 5
MSL1765-IC1765	L52999A.D	05/22/11	12:08	03:38	Initial cal 10
MSL1764-IC1764	L52999.D	05/22/11	12:08	03:38	Initial cal 10
MSL1765-IC1765	L53000A.D	05/22/11	12:36	04:06	Initial cal 25
MSL1764-IC1764	L53000.D	05/22/11	12:36	04:06	Initial cal 25
MSL1765-IC1765	L53001A.D	05/22/11	13:05	04:35	Initial cal 400
MSL1764-IC1764	L53001.D	05/22/11	13:05	04:35	Initial cal 400
MSL1765-IC1765	L53002A.D	05/22/11	13:34	05:04	Initial cal 200
MSL1764-IC1764	L53002.D	05/22/11	13:34	05:04	Initial cal 200
MSL1765-ICC1765	L53003A.D	05/22/11	14:02	05:32	Initial cal 100
MSL1764-ICC1764	L53003.D	05/22/11	14:02	05:32	Initial cal 100
MSL1765-IC1765	L53004A.D	05/22/11	14:31	06:01	Initial cal 50
MSL1764-IC1764	L53004.D	05/22/11	14:31	06:01	Initial cal 50
MSL1764-ICV1764	L53005.D	05/22/11	15:56	07:26	Initial cal verification 50
MSL1765-ICV1765	L53005A.D	05/22/11	15:56	07:26	Initial cal verification 50

Initial Calibration Summary

Page 1 of 6

Job Number: MC1256

Sample: MSL1764-ICC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L53003.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Response Factor Report MAMSL

Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Sun May 22 15:35:26 2011
Response via : Initial Calibration

Calibration Files

0.5 =L52995.D 2 =L52997.D 5 =L52998.D 50 =L53004.D
100 =L53003.D 200 =L53002.D 400 =L53001.D 25 =L53000.D
1 =L52996.D 10 =L52999.D = =

Compound	0.5	2	5	50	100	200	400	25	1	10	Avg	%RSD
1) tert butyl alcohol-d9 -----ISTD-----												
2) tertiary butyl alcohol												
	0.638	0.905	1.364	1.406	1.430	1.543	1.245		1.148	1.210	25.12	
----- Linear regression -----									Coefficient =	0.9988		
Response Ratio =	-0.14706 + 1.53919 *A											
3) Ethanol												
	0.277	0.253	0.242	0.267	0.299	0.323	0.275		0.256	0.274	9.59	
4) I pentafluorobenzene -----ISTD-----												
5) dichlorodifluoromethane												
	0.500	0.458	0.403	0.373	0.498	0.569	0.405		0.423	0.454	14.39	
6) chloromethane												
	0.495	0.482	0.488	0.509	0.633	0.771	0.475		0.482	0.542	19.54	
----- Quadratic regression -----									Coefficient =	0.9998		
Response Ratio =	-0.00987 + 0.47167 *A + 0.03766 *A^2											
7) vinyl chloride												
	0.620	0.544	0.540	0.533	0.621	0.439	0.548	0.559	0.532	0.548	9.80	
8) bromomethane												
	0.288	0.233	0.400	0.395	0.433	0.411	0.251	0.374	0.235	0.335	24.54	
----- Linear regression -----									Coefficient =	0.9987		
Response Ratio =	-0.02237 + 0.41750 *A											
9) chloroethane												
	0.417	0.344	0.306	0.294	0.316	0.360	0.312	0.417	0.301	0.341	14.08	
10) ethyl ether												
	0.436	0.395	0.424	0.425	0.455	0.481	0.425	0.412	0.413	0.429	5.89	
11) acetonitrile												
	0.444	0.210	0.129	0.198	0.225	0.334			0.423	0.281	43.06	
----- Quadratic regression -----									Coefficient =	0.9941		
Response Ratio =	0.05425 + 0.12465 *A + 0.01185 *A^2											
12) trichlorofluoromethane												
	1.003	0.898	0.810	0.770	0.994	1.133	0.823	0.613	0.818	0.874	17.54	
----- Linear regression -----									Coefficient =	0.9921		
Response Ratio =	-0.18220 + 1.11921 *A											
13) freon-113												
	0.501	0.406	0.398	0.544	0.650	0.442			0.442	0.483	18.59	
----- Quadratic regression -----									Coefficient =	0.9990		
Response Ratio =	-0.00854 + 0.39627 *A + 0.03210 *A^2											
14) acrolein												

Initial Calibration Summary

Page 2 of 6

Job Number: MC1256

Sample:

MSL1764-ICC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID:

L53003.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

		0.023	0.025	0.024	0.024	0.026	0.024		0.023	0.024	3.54	
15)	1,1-dichloroethene	0.703	0.570	0.473	0.451	0.539	0.595	0.500	0.507	0.509	14.20	
16)	acetone	0.459	0.228	0.214	0.228	0.219	0.296		0.341	0.284	32.06	
	----- Linear regression -----							Coefficient = 0.9992				
	Response Ratio =	0.02255 + 0.21687 *A										
17)	Methyl Acetate	1.050	0.889	0.891	0.897	0.946	0.925	0.828		0.834	0.908	7.76
18)	methylene chloride	0.649	0.574	0.576	0.590	0.635	0.729	0.601	0.737	0.589	0.631	9.99
19)	methyl tert butyl ether	0.959	0.857	1.132	1.191	1.195	0.719	1.000	0.998	0.909	0.996	15.91
	----- Quadratic regression -----							Coefficient = 0.9944				
	Response Ratio =	-0.14017 + 1.57983 *A + -0.10457 *A^2										
20)	acrylonitrile	0.208	0.204	0.253	0.245	0.252	0.254	0.251		0.214	0.235	9.50
21)	allyl chloride	0.578	0.482	0.498	0.521	0.531	0.600	0.562		0.522	0.537	7.50
22)	trans-1,2-dichloroethene	0.555	0.452	0.495	0.489	0.530	0.595	0.484	0.524	0.474	0.511	8.70
23)	iodomethane	0.250	0.462	0.417	0.360	0.273	0.383		0.293	0.348	22.66	
	----- Quadratic regression -----							Coefficient = 0.9993				
	Response Ratio =	-0.01833 + 0.46617 *A + -0.02394 *A^2										
24)	carbon disulfide	1.797	1.540	1.346	1.514	1.593	1.770	1.479	1.614	1.489	1.571	9.09
25)	propionitrile	0.027	0.069	0.070	0.075	0.076	0.064		0.048	0.061	29.06	
	----- Linear regression -----							Coefficient = 0.9998				
	Response Ratio =	-0.00768 + 0.07717 *A										
26)	vinyl acetate	0.111	0.318	0.350	0.399	0.399	0.189		0.148	0.274	44.46	
	----- Linear regression -----							Coefficient = 0.9991				
	Response Ratio =	-0.07353 + 0.40875 *A										
27)	chloroprene	0.553	0.520	0.553	0.549	0.637	0.656	0.555		0.550	0.572	8.39
28)	di-isopropyl ether	1.316	1.163	1.283	1.307	1.394	1.476	1.259	1.284	1.204	1.298	7.23
29)	methacrylonitrile	0.263	0.292	0.288	0.292	0.323	0.288		0.285	0.290	6.04	
30)	2-butanone	0.042	0.065	0.067	0.072	0.076	0.065		0.064	0.065	16.80	
	----- Linear regression -----							Coefficient = 0.9989				
	Response Ratio =	-0.00899 + 0.07671 *A										
31)	Hexane	0.615	0.546	0.533	0.519	0.638	0.701	0.554		0.543	0.581	10.97
32)	1,1-dichloroethane	0.908	0.764	0.824	0.844	0.899	0.993	0.811	0.770	0.782	0.844	9.04
33)	tert-butyl ethyl ether	0.215	0.222	0.589	0.695	0.803	0.942	0.354		0.261	0.510	55.91
	----- Linear regression -----							Coefficient = 0.9933				
	Response Ratio =	-0.24517 + 0.94380 *A										

5.7.1

5

Initial Calibration Summary

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Job Number: MC1256

Sample: MSL1764-ICC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L53003.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

34)	isobutyl alcohol	0.001	0.026	0.031	0.034	0.038	0.014	0.007	0.022	66.68		
	----- Linear regression -----	Coefficient = 0.9975										
	Response Ratio =	-0.05322 + 0.03886 *A										
35)	2,2-dichloropropane	0.253	0.363	0.356	0.417	0.092	0.003	0.247	67.14			
	----- Linear regression -----	Coefficient = 0.9965										
	Response Ratio =	-0.15926 + 0.42962 *A										
36)	cis-1,2-dichloroethene	0.606	0.506	0.538	0.556	0.588	0.649	0.552	0.606	0.517	0.569	8.22
37)	ethyl acetate	0.096	0.157	0.098	0.176	0.070	0.033	0.105	50.92			
	----- Quadratic regression -----	Coefficient = 0.9832										
	Response Ratio =	0.02598 + 0.05395 *A + 0.01459 *A^2										
38)	bromochloromethane	0.245	0.236	0.223	0.233	0.253	0.282	0.234	0.192	0.225	0.236	10.32
39)	chloroform	1.055	0.943	0.926	0.952	1.011	1.127	0.926	1.144	0.914	1.000	8.95
40)	dibromofluoromethane (s)	0.437	0.460	0.457	0.511	0.564	0.459	0.477	0.481	9.01		
41)	Tetrahydrofuran	0.104	0.132	0.133	0.140	0.146	0.127	0.120	0.129	10.69		
42)	1,1,1-trichloroethane	0.399	0.374	0.653	0.684	0.779	0.880	0.523	0.251	0.442	0.554	37.54
	----- Linear regression -----	Coefficient = 0.9954										
	Response Ratio =	-0.14258 + 0.87453 *A										
43) I	1,4-difluorobenzene	-----ISTD-----										
44)	Cyclohexane	0.396	0.361	0.351	0.469	0.557	0.382	0.379	0.414	17.92		
	----- Quadratic regression -----	Coefficient = 0.9991										
	Response Ratio =	-0.00850 + 0.34960 *A + 0.02626 *A^2										
45)	carbon tetrachloride	0.274	0.249	0.349	0.369	0.375	0.300	0.292	0.271	0.310	15.48	
	----- Quadratic regression -----	Coefficient = 0.9987										
	Response Ratio =	-0.04015 + 0.43996 *A + -0.01672 *A^2										
46)	1,1-dichloropropene	0.543	0.459	0.425	0.436	0.493	0.568	0.435	0.511	0.426	0.477	11.28
47)	benzene	1.494	1.497	1.300	1.326	1.392	1.466	1.576	1.359	1.565	1.319	7.22
48)	1,2-dichloroethane	0.544	0.457	0.460	0.457	0.473	0.508	0.471	0.484	0.460	0.480	6.12
49)	tert-amyl methyl ether	0.347	0.210	0.446	0.517	0.586	0.681	0.317	0.282	0.423	38.37	
	----- Linear regression -----	Coefficient = 0.9941										
	Response Ratio =	-0.15737 + 0.68050 *A										
50)	heptane	0.281	0.261	0.261	0.344	0.385	0.286	0.268	0.298	16.04		
	----- Linear regression -----	Coefficient = 0.9930										
	Response Ratio =	-0.09268 + 0.38694 *A										
51)	trichloroethene	0.404	0.347	0.356	0.366	0.402	0.440	0.364	0.320	0.358	0.373	9.65

5.7.1



Initial Calibration Summary

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Job Number: MC1256

Sample:

MSL1764-ICC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID:

L53003.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

52)	1,2-dichloropropane	0.335	0.314	0.314	0.336	0.351	0.384	0.319	0.308	0.333	7.60
53)	dibromomethane	0.262	0.234	0.208	0.211	0.217	0.245	0.238	0.234	0.231	7.92
54)	bromodichloromethane	0.459	0.389	0.463	0.487	0.497	0.535	0.442	0.410	0.406	10.57
55)	Methylcyclohexane	0.429	0.403	0.397	0.524	0.583	0.424		0.398	0.451	16.19
	----- Linear regression -----					Coefficient =		0.9935			
	Response Ratio =	-0.13844 + 0.58614 *A									
56)	2-chloroethyl vinyl ether	0.004	0.011	0.017	0.033	0.001				0.013	98.81
	----- Linear regression -----					Coefficient =		0.9553			
	Response Ratio =	-0.03915 + 0.03589 *A									
57)	methyl methacrylate	0.106	0.210	0.232	0.253	0.274	0.160		0.132	0.195	32.53
	----- Linear regression -----					Coefficient =		0.9983			
	Response Ratio =	-0.05496 + 0.27722 *A									
58)	1,4-dioxane	0.004	0.004	0.005	0.005	0.003				0.004	21.02
	----- Linear regression -----					Coefficient =		0.9997			
	Response Ratio =	-0.00772 + 0.00544 *A									
59)	cis-1,3-dichloropropene	0.221	0.221	0.449	0.500	0.541	0.555	0.355	0.188	0.274	40.09
	----- Linear regression -----					Coefficient =		0.9992			
	Response Ratio =	-0.06102 + 0.55939 *A									
60)	toluene-d8 (s)	1.035	1.152	1.181	1.343	1.468	1.107		1.197	1.212	12.14
61)	4-methyl-2-pentanone	0.227	0.310	0.316	0.326	0.355	0.281		0.233	0.293	16.39
	----- Linear regression -----					Coefficient =		0.9985			
	Response Ratio =	-0.04535 + 0.35511 *A									
62)	toluene	0.996	0.856	0.852	0.905	0.957	1.035	0.870	1.027	0.870	8.05
63)	trans-1,3-dichloropropene	0.097	0.121	0.326	0.379	0.426	0.484	0.215	0.033	0.161	64.14
	----- Linear regression -----					Coefficient =		0.9952			
	Response Ratio =	-0.09310 + 0.48253 *A									
64)	1,1,2-trichloroethane	0.264	0.258	0.274	0.286	0.298	0.323	0.275	0.277	0.266	7.12
65)	ethyl methacrylate	0.144	0.329	0.381	0.434	0.464	0.237		0.180	0.310	40.44
	----- Linear regression -----					Coefficient =		0.9983			
	Response Ratio =	-0.10681 + 0.47191 *A									
66)	I chlorobenzene-d5	-----ISTD-----									
67)	tetrachloroethene	0.739	0.646	0.629	0.609	0.728	0.766	0.650	0.668	0.653	8.00
68)	1,3-dichloropropane	1.054	0.961	0.975	0.953	1.042	1.135	1.003	1.015	1.011	5.53
69)	dibromochloromethane	0.476	0.439	0.609	0.621	0.718	0.768	0.552	0.431	0.502	21.13

5.7.1





Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L53000.D

Vial: 6

Acq On : 22 May 2011 12:36 pm

Operator: amym

Sample : ic1764-25

Inst : MAMSL

Misc : ms23036,ms11764,,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: May 22 13:53:14 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 13:52:34 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.89	65	22209	500.00	ug/L	0.02
4) pentafluorobenzene	8.19	168	68737	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.02	114	97998	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	50941	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	50143	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	15768	20.34	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	40.68%#
60) toluene-d8 (s)	10.80	98	54249	18.85	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	37.70%#
82) bromofluorobenzene (s)	13.49	95	21608	21.72	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	43.44%#

Target Compounds

						Qvalue
2) tertiary butyl alcohol	5.93	59	13824	203.14	ug/L	# 56
3) Ethanol	4.83	45	30569	2279.48	ug/L	94
5) dichlorodifluoromethane	3.71	85	13913	17.79	ug/L	99
6) chloromethane	3.94	50	16328	15.41	ug/L	100
7) vinyl chloride	4.15	62	18818	31.20	ug/L	96
8) bromomethane	4.59	96	8639	15.30	ug/L	90
9) chloroethane	4.74	64	10732	21.71	ug/L	99
10) ethyl ether	5.57	59	14604	22.08	ug/L	86
11) acetonitrile	5.24	41	11489	35.64	ug/L	78
12) trichlorofluoromethane	5.34	101	28288	18.16	ug/L	95
13) freon-113	6.07	101	15201	17.00	ug/L	84
14) acrolein	5.31	56	4106	116.48	ug/L	85
15) 1,1-dichloroethene	5.89	96	17169	20.99	ug/L	89
16) acetone	5.44	43	10187	34.12	ug/L	99
17) Methyl Acetate	6.04	43	28450	21.78	ug/L	92
18) methylene chloride	6.03	84	20652	20.27	ug/L	91
19) methyl tert butyl ether	6.79	73	34355	34.74	ug/L	95
20) acrylonitrile	5.91	53	8620	24.76	ug/L	97
21) allyl chloride	6.12	41	19324	23.46	ug/L	82
22) trans-1,2-dichloroethene	6.69	96	16640	20.36	ug/L	92
23) iodomethane	5.93	142	13167	34.97	ug/L	94
24) carbon disulfide	6.27	76	50843	20.89	ug/L	100
25) propionitrile	6.93	54	2191	19.87	ug/L	100
26) vinyl acetate	7.03	43	6511	11.84	ug/L	92
27) chloroprene	7.29	53	19063	21.13	ug/L	89
28) di-isopropyl ether	7.36	45	43254	21.31	ug/L	91
29) methacrylonitrile	7.44	41	9901	22.29	ug/L	80
30) 2-butanone	7.34	72	2228	21.13	ug/L	# 10
31) Hexane	7.34	41	19032	19.88	ug/L	91
32) 1,1-dichloroethane	6.94	63	27890	20.43	ug/L	96
33) tert-butyl ethyl ether	7.74	59	12151	9.44	ug/L	91
34) isobutyl alcohol	7.74	43	2355	47.46	ug/L	79
35) 2,2-dichloropropane	7.78	77	3173	5.53	ug/L	93
36) cis-1,2-dichloroethene	7.50	96	18984	21.29	ug/L	86
37) ethyl acetate	7.74	43	2389	9.32	ug/L	71

(#)= qualifier out of range (m) = manual integration

L53000.D L052211W.M

Mon May 23 15:12:23 2011

RPT1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L53000.D

Vial: 6

Acq On : 22 May 2011 12:36 pm

Operator: amym

Sample : ic1764-25

Inst : MAMSL

Misc : ms23036,ms11764,,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: May 22 13:53:14 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 13:52:34 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	7.65	128	8038	20.70	ug/L	88
39) chloroform	7.69	83	31835	20.54	ug/L	99
41) Tetrahydrofuran	8.03	42	4362	21.44	ug/L	68
42) 1,1,1-trichloroethane	8.43	97	17987	14.87	ug/L	93
44) Cyclohexane	8.73	56	18728	17.15	ug/L	86
45) carbon tetrachloride	8.79	117	14292	24.30	ug/L	99
46) 1,1-dichloropropene	8.62	75	21292	19.12	ug/L	95
47) benzene	8.81	78	66610	21.57	ug/L	99
48) 1,2-dichloroethane	8.33	62	23091	23.19	ug/L	94
49) tert-amyl methyl ether	8.98	73	15518	11.63	ug/L	92
50) heptane	9.34	43	14018	18.57	ug/L	90
51) trichloroethene	9.45	95	17839	20.70	ug/L	94
52) 1,2-dichloropropane	9.40	63	15646	20.79	ug/L	97
53) dibromomethane	9.38	93	11685	24.35	ug/L	91
54) bromodichloromethane	9.49	83	21635	20.62	ug/L	100
55) Methylcyclohexane	9.98	83	20777	18.19	ug/L	91
56) 2-chloroethyl vinyl ether	9.95	63	39m	0.60	ug/L	
57) methyl methacrylate	9.61	69	7844	14.59	ug/L	97
58) 1,4-dioxane	9.59	88	724m	70.16	ug/L	
59) cis-1,3-dichloropropene	10.12	75	17410	15.99	ug/L	95
61) 4-methyl-2-pentanone	10.24	43	13784	19.79	ug/L	96
62) toluene	10.87	92	42619	21.01	ug/L	96
63) trans-1,3-dichloropropene	10.54	75	10549	11.13	ug/L	78
64) 1,1,2-trichloroethane	10.70	83	13483	21.33	ug/L	92
65) ethyl methacrylate	10.93	69	11613	12.71	ug/L	# 1
67) tetrachloroethene	11.63	166	16552	21.04	ug/L	93
68) 1,3-dichloropropane	10.94	76	25535	21.80	ug/L	97
69) dibromochloromethane	11.21	129	14059	17.83	ug/L	96
70) 1,2-dibromoethane	11.46	107	15367	19.51	ug/L	98
71) 2-hexanone	11.11	43	9207	18.96	ug/L	87
72) chlorobenzene	12.30	112	45731	21.60	ug/L	94
73) 1,1,1,2-tetrachloroethane	12.23	131	11061	16.99	ug/L	90
74) ethylbenzene	12.48	91	79550	21.46	ug/L	98
75) m,p-xylene	12.66	106	62902	42.60	ug/L	97
76) o-xylene	13.07	106	30675	20.06	ug/L	89
77) styrene	12.99	104	49959	20.31	ug/L	79
78) bromoform	12.80	173	9106	15.10	ug/L	97
79) trans-1,4-dichloro-2-buten	13.24	53	761m	7.33	ug/L	
81) isopropylbenzene	13.44	105	65629	22.46	ug/L	91
83) bromobenzene	13.71	156	20830	22.51	ug/L	90
84) 1,1,2,2-tetrachloroethane	13.09	83	23690	23.76	ug/L	100
85) 1,2,3-trichloropropane	13.23	75	18104	20.84	ug/L	100
86) n-propylbenzene	13.89	91	88050	22.35	ug/L	99
87) 2-chlorotoluene	14.00	91	55343	23.07	ug/L	95
88) 4-chlorotoluene	14.08	91	56289	23.01	ug/L	92
89) 1,3,5-trimethylbenzene	14.16	105	63402	22.61	ug/L	93
90) tert-butylbenzene	14.46	91	34500	21.38	ug/L	92
91) 1,2,4-trimethylbenzene	14.57	105	63496	22.24	ug/L	94
92) sec-butylbenzene	14.69	105	74887	21.99	ug/L	98

(#) = qualifier out of range (m) = manual integration

L53000.D L052211W.M

Mon May 23 15:12:23 2011

RPT1

Page 2

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC1256

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample: MSL1803-BFB

Injection Date: 06/24/11

Lab File ID: L54232.D

Injection Time: 13:00

Instrument ID: GCMSL

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	2787	16.8	Pass
75	30.0 - 60.0% of mass 95	8092	48.8	Pass
95	Base peak, 100% relative abundance	16576	100.0	Pass
96	5.0 - 9.0% of mass 95	987	5.95	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	13430	81.0	Pass
175	5.0 - 9.0% of mass 174	1063	6.41 (7.92) ^a	Pass
176	95.0 - 101.0% of mass 174	12975	78.3 (96.6) ^a	Pass
177	5.0 - 9.0% of mass 176	890	5.37 (6.86) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSL1803-CC1765	L54233.D	06/24/11	13:30	00:30	Continuing cal 50
MSL1803-BS	L54234.D	06/24/11	14:00	01:00	Blank Spike
MSL1803-MB	L54236.D	06/24/11	14:59	01:59	Method Blank
MC1256-1	L54237.D	06/24/11	15:31	02:31	TB061811
MC1256-2	L54238.D	06/24/11	16:01	03:01	EB061811
ZZZZZZ	L54239.D	06/24/11	16:31	03:31	(unrelated sample)
ZZZZZZ	L54240.D	06/24/11	17:00	04:00	(unrelated sample)
MC1256-13	L54241.D	06/24/11	17:30	04:30	EB062011
MC1340-2	L54242.D	06/24/11	18:00	05:00	(used for QC only; not part of job MC1256)
ZZZZZZ	L54243.D	06/24/11	18:30	05:30	(unrelated sample)
MC1256-3	L54244.D	06/24/11	18:59	05:59	GP-14-190
MC1256-4	L54245.D	06/24/11	19:29	06:29	GP-14-180
MC1256-5	L54246.D	06/24/11	19:59	06:59	GP-14-170
MC1256-6	L54247.D	06/24/11	20:28	07:28	GP-14-160
MC1256-7	L54248.D	06/24/11	20:57	07:57	GP-14-150
MC1256-8	L54249.D	06/24/11	21:26	08:26	GP-14-140
MC1256-9	L54250.D	06/24/11	21:56	08:56	GP-14-130
MC1256-10	L54251.D	06/24/11	22:25	09:25	GP-14-120
MC1256-11	L54252.D	06/24/11	22:54	09:54	GP-14-110
MC1256-12	L54253.D	06/24/11	23:23	10:23	GP-14-100
ZZZZZZ	L54254.D	06/24/11	23:52	10:52	(unrelated sample)
MC1340-2MS	L54255.D	06/25/11	00:21	11:21	Matrix Spike
MC1340-2MSD	L54256.D	06/25/11	00:49	11:49	Matrix Spike Duplicate

SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\L54232.D

Vial: 3

Acq On : 24 Jun 2011 1:00 pm

Operator: amym

Sample : bfb

Inst : MAMSL

Misc : ms23302,msl1803,,,5,1

Multiplr: 1.00

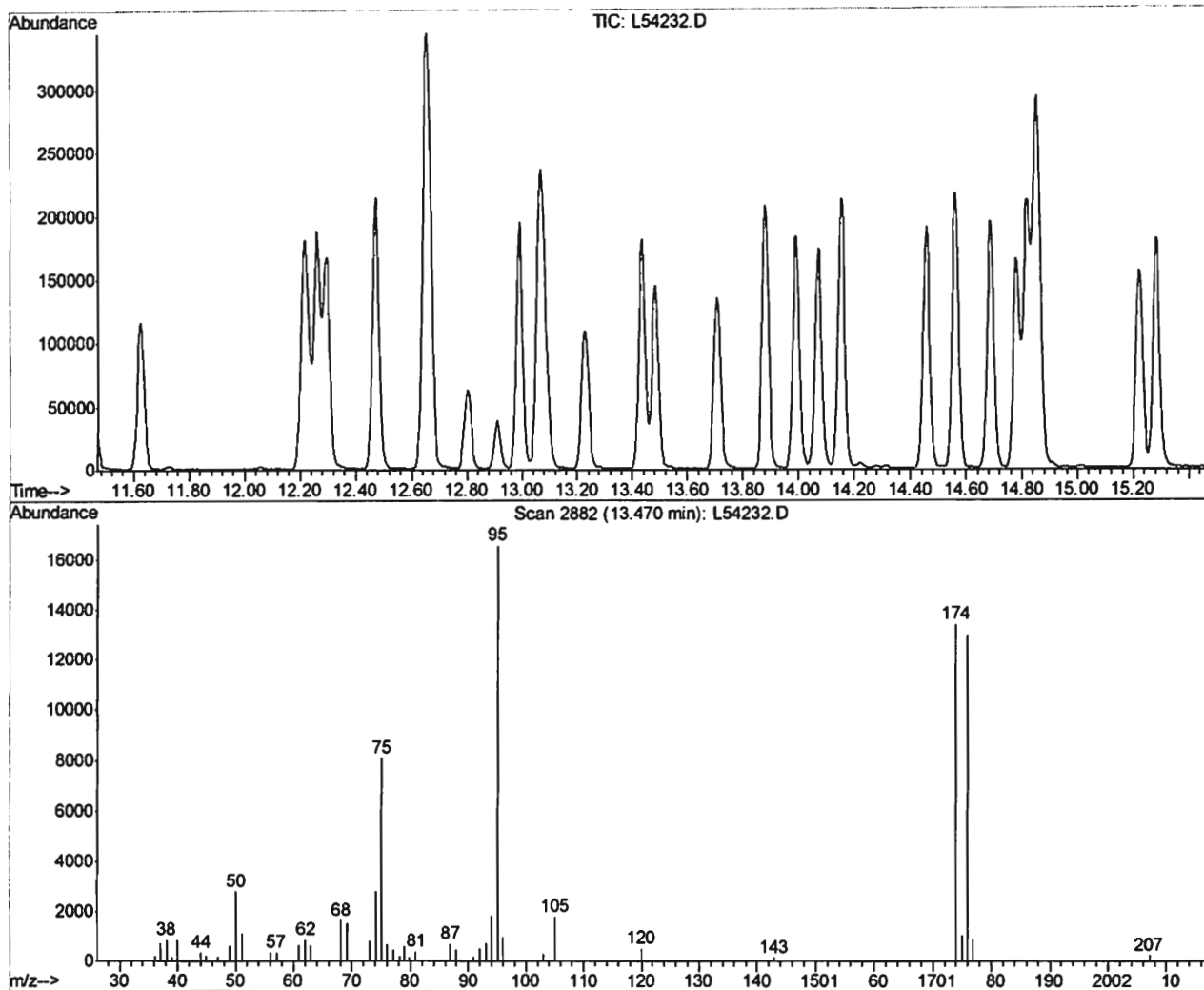
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

6.5.2

6



Spectrum Information: Scan 2882

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
Mass	Mass	Limit%	Limit%	Abn%	Abn	Pass/Fail
50	95	15	40	16.8	2787	PASS
75	95	30	60	48.8	8092	PASS
95	95	100	100	100.0	16576	PASS
96	95	5	9	6.0	987	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	81.0	13430	PASS
175	174	5	9	7.9	1063	PASS
176	174	95	101	96.6	12975	PASS
177	176	5	9	6.9	890	PASS

Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: MC1256
Account: WSPNYC WSP Environmental & Energy
Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Check Std: MSL1803-CC1765	Injection Date: 06/24/11
Lab File ID: L54233.D	Injection Time: 13:30
Instrument ID: GCMSL	Method: SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	77816	8.19	111698	9.02	64248	12.26	60071	14.82	28481	5.84
Upper Limit ^a	155632	8.69	223396	9.52	128496	12.76	120142	15.32	56962	6.34
Lower Limit ^b	38908	7.69	55849	8.52	32124	11.76	30036	14.32	14241	5.34

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL1803-BS	78136	8.19	112011	9.02	64752	12.26	61380	14.82	27469	5.84
MSL1803-MB	75371	8.20	107250	9.03	59782	12.26	55214	14.82	28121	5.86
MC1256-1	74752	8.20	107766	9.03	60294	12.27	54356	14.82	29023	5.86
MC1256-2	74777	8.20	104906	9.03	57793	12.26	54234	14.82	28038	5.86
ZZZZZZ	75512	8.20	108244	9.03	60527	12.26	56619	14.82	29183	5.85
ZZZZZZ	74099	8.20	104472	9.03	58689	12.26	54175	14.82	27958	5.86
MC1256-13	72459	8.20	102851	9.03	58617	12.26	54673	14.82	28930	5.86
MC1340-2	71735	8.20	102215	9.03	57731	12.26	53166	14.82	27664	5.86
ZZZZZZ	71588	8.20	101131	9.03	57354	12.26	53331	14.82	28926	5.86
MC1256-3	70462	8.20	99146	9.03	55497	12.26	52326	14.82	23947	5.87
MC1256-4	69963	8.20	100560	9.03	56499	12.26	53639	14.82	25055	5.87
MC1256-5	71213	8.20	101120	9.03	57238	12.26	52830	14.82	25134	5.86
MC1256-6	69146	8.20	97862	9.03	54871	12.26	51778	14.82	24077	5.86
MC1256-7	67435	8.20	96631	9.03	54404	12.26	50008	14.82	22459	5.87
MC1256-8	69417	8.19	99202	9.03	56703	12.26	51865	14.82	23731	5.90
MC1256-9	64791	8.19	93477	9.03	52102	12.26	48248	14.82	22309	5.86
MC1256-10	67210	8.20	96661	9.03	55051	12.26	50452	14.82	22282	5.87
MC1256-11	64702	8.20	92072	9.03	51819	12.26	48016	14.82	20939	5.87
MC1256-12	66286	8.20	94595	9.03	54826	12.27	49582	14.82	23119	5.87
ZZZZZZ	69771	8.19	98381	9.02	56696	12.26	55170	14.82	27454	5.92
MC1340-2MS	66471	8.19	97640	9.02	57233	12.26	53165	14.82	21745	5.84
MC1340-2MSD	69262	8.19	101879	9.02	58716	12.26	54339	14.82	20316	5.84

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Continuing Calibration Summary

Page 1 of 4

Job Number: MC1256

Sample: MSL1803-CC1765

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L54233.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\L54233.D

Vial: 4

Acq On : 24 Jun 2011 1:30 pm

Operator: amym

Sample : cc1765-50

Inst : MAMSL

Misc : ms23302,msl1803,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min

Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	113	-0.03	5.84
	----- True	Calc.	% Drift	-----			
2	tertiary butyl alcohol	500.000	577.681	-15.5	135	0.00	5.92
	----- AvgRF	CCRF	% Dev	-----			
3	Ethanol	0.274	0.202	26.3#	95	0.00	4.80
4 I	pentafluorobenzene	1.000	1.000	0.0	111	0.00	8.19
5 M	dichlorodifluoromethane	0.454	0.571	-25.8#	157	0.02	3.72
	----- True	Calc.	% Drift	-----			
6 P	chloromethane	50.000	45.305	9.4	102	0.02	3.95
	----- AvgRF	CCRF	% Dev	-----			
7 c	vinyl chloride	0.548	0.537	2.0	110	0.03	4.16
	----- True	Calc.	% Drift	-----			
8 M	bromomethane	50.000	25.175	49.6#	52	0.00	4.61
	----- AvgRF	CCRF	% Dev	-----			
9 M	chloroethane	0.341	0.328	3.8	119	0.00	4.75
10 M	ethyl ether	0.429	0.416	3.0	109	0.00	5.58
	----- True	Calc.	% Drift	-----			
11 M	acetonitrile	50.000	73.860	-47.7#	140	0.00	5.25
12 M	trichlorofluoromethane	50.000	42.398	15.2	105	0.00	5.34
13 M	freon-113	50.000	53.315	-6.6	123	-0.01	6.08
	----- AvgRF	CCRF	% Dev	-----			
14 M	acrolein	0.024	0.047	-95.8#	213#	0.00	5.33
15 c	1,1-dichloroethene	0.538	0.494	8.2	116	0.00	5.89
	----- True	Calc.	% Drift	-----			
16 M	acetone	50.000	54.775	-9.5	127	0.00	5.44
	----- AvgRF	CCRF	% Dev	-----			
17 M	Methyl Acetate	0.908	0.855	5.8	107	0.00	6.05
18 M	methylene chloride	0.631	0.588	6.8	113	0.00	6.04
	----- True	Calc.	% Drift	-----			
19 M	methyl tert butyl ether	50.000	57.333	-14.7	150	0.00	6.80

Continuing Calibration Summary

Page 2 of 4

Job Number: MC1256

Sample: MSL1803-CC1765

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L54233.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

		AvgRF	CCRF	% Dev			
20 M	acrylonitrile	0.235	0.217	7.7	95	0.00	5.93
21 M	allyl chloride	0.537	0.558	-3.9	124	0.00	6.12
22 M	trans-1,2-dichloroethene	0.511	0.498	2.5	112	0.00	6.69
		True	Calc.	% Drift			
23 M	iodomethane	50.000	31.276	37.4#	63	0.00	5.95
		AvgRF	CCRF	% Dev			
24 M	carbon disulfide	1.571	1.567	0.3	129	0.00	6.28
		True	Calc.	% Drift			
25 M	propionitrile	50.000	61.119	-22.2#	139	-0.01	6.93
26 M	vinyl acetate	50.000	72.336	-44.7#	181	0.00	7.03
		AvgRF	CCRF	% Dev			
27 M	chloroprene	0.572	0.708	-23.8#	142	0.00	7.30
28 M	di-isopropyl ether	1.298	1.594	-22.8#	138	0.00	7.36
29 M	methacrylonitrile	0.290	0.353	-21.7#	134	0.00	7.44
		True	Calc.	% Drift			
30 M	2-butanone	50.000	57.113	-14.2	135	0.00	7.34
		AvgRF	CCRF	% Dev			
31 M	Hexane	0.581	0.632	-8.8	132	0.00	7.35
32 P	1,1-dichloroethane	0.844	0.944	-11.8	127	0.00	6.94
		True	Calc.	% Drift			
33 M	tert-butyl ethyl ether	50.000	88.204	-76.4#	268	0.00	7.75
34 M	isobutyl alcohol	250.000	270.754	-8.3	134	-0.02	7.74
35 M	2,2-dichloropropane	50.000	50.513	-1.0	120	0.00	7.78
		AvgRF	CCRF	% Dev			
36 M	cis-1,2-dichloroethene	0.569	0.587	-3.2	121	0.00	7.51
		True	Calc.	% Drift			
37 M	ethyl acetate	50.000	83.996	-68.0#	183	-0.02	7.74
		AvgRF	CCRF	% Dev			
38 M	bromochloromethane	0.236	0.241	-2.1	120	0.00	7.66
39 c	chloroform	1.000	1.019	-1.9	122	0.00	7.70
40 S	dibromofluoromethane (s)	0.481	0.443	7.9	107	0.00	7.81
41 M	Tetrahydrofuran	0.129	0.159	-23.3#	134	-0.01	8.02
		True	Calc.	% Drift			
42 M	1,1,1-trichloroethane	50.000	51.759	-3.5	130	0.00	8.44
		AvgRF	CCRF	% Dev			
43 I	1,4-difluorobenzene	1.000	1.000	0.0	111	0.00	9.02
		True	Calc.	% Drift			
44 M	Cyclohexane	50.000	65.670	-31.3#	152	0.00	8.73
45 M	carbon tetrachloride	50.000	51.019	-2.0	124	0.00	8.79
		AvgRF	CCRF	% Dev			
46 M	1,1-dichloropropene	0.477	0.495	-3.8	129	0.00	8.62
47 M	benzene	1.429	1.565	-9.5	131	0.00	8.81
48 M	1,2-dichloroethane	0.480	0.522	-8.8	125	0.00	8.33

5.7.5



Continuing Calibration Summary

Page 3 of 4

Job Number: MC1256
 Account: WSPNYC WSP Environmental & Energy
 Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample: MSL1803-CC1765
 Lab FileID: L54233.D

		True	Calc.	% Drift			
49 M	tert-amyl methyl ether	50.000	86.257	-72.5#	252	0.00	8.97
50 M	heptane	50.000	54.548	-9.1	139	0.00	9.34
		AvgRF	CCRF	% Dev			
51 M	trichloroethene	0.373	0.400	-7.2	124	0.00	9.45
52 c	1,2-dichloropropane	0.333	0.388	-16.5	137	0.00	9.40
53 M	dibromomethane	0.231	0.266	-15.2	141	0.00	9.38
54 M	bromodichloromethane	0.454	0.542	-19.4	129	0.00	9.49
		True	Calc.	% Drift			
55 M	Methylcyclohexane	50.000	52.965	-5.9	132	0.00	9.98
56 M	2-chloroethyl vinyl ether			NA			
57 M	methyl methacrylate	50.000	62.067	-24.1#	152	0.00	9.60
58 M	1,4-dioxane	250.000	306.830	-22.7#	141	0.00	9.59
59 M	cis-1,3-dichloropropene	50.000	55.062	-10.1	137	0.00	10.12
		AvgRF	CCRF	% Dev			
60 S	toluene-d8 (s)	1.212	1.189	1.9	114	0.00	10.80
		True	Calc.	% Drift			
61 M	4-methyl-2-pentanone	50.000	58.141	-16.3	131	0.00	10.23
		AvgRF	CCRF	% Dev			
62 c	toluene	0.930	0.973	-4.6	126	0.00	10.87
		True	Calc.	% Drift			
63 M	trans-1,3-dichloropropene	50.000	63.177	-26.4#	175	0.00	10.54
		AvgRF	CCRF	% Dev			
64 M	1,1,2-trichloroethane	0.280	0.324	-15.7	131	0.00	10.70
		True	Calc.	% Drift			
65 M	ethyl methacrylate	50.000	64.877	-29.8#	170	0.00	10.93
		AvgRF	CCRF	% Dev			
66 I	chlorobenzene-d5	1.000	1.000	0.0	119	0.00	12.26
67 M	tetrachloroethene	0.676	0.681	-0.7	128	0.00	11.62
68 M	1,3-dichloropropane	1.017	1.102	-8.4	134	0.00	10.94
		True	Calc.	% Drift			
69 M	dibromochloromethane	50.000	53.658	-7.3	142	0.00	11.21
70 M	1,2-dibromoethane	50.000	51.638	-3.3	132	0.00	11.46
71 M	2-hexanone	50.000	53.566	-7.1	129	0.02	11.10
		AvgRF	CCRF	% Dev			
72 P	chlorobenzene	1.879	1.853	1.4	127	0.00	12.30
		True	Calc.	% Drift			
73 M	1,1,1,2-tetrachloroethane	50.000	55.055	-10.1	147	0.00	12.22
		AvgRF	CCRF	% Dev			
74 c	ethylbenzene	3.218	3.144	2.3	124	0.00	12.47
75 M	m,p-xylene	1.252	1.201	4.1	119	0.00	12.66
76 M	o-xylene	1.194	1.181	1.1	119	0.00	13.06
77 M	styrene	2.032	1.985	2.3	120	0.00	12.99
		True	Calc.	% Drift			

5.7.5



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54233.D
 Acq On : 24 Jun 2011 1:30 pm
 Sample : cc1765-50
 Misc : ms23302,msl1803,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Jun 25 11:31:52 2011

Vial: 4
 Operator: amym
 Inst : MAMSL
 Multiplr: 1.00

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Sun May 22 15:35:26 2011
 Response via : Initial Calibration
 DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.84	65	28481	500.00	ug/L	-0.03
4) pentafluorobenzene	8.19	168	77816	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.02	114	111698	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	64248	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	60071	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	34497	46.10	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	92.20%
60) toluene-d8 (s)	10.80	98	132836	49.06	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	98.12%
82) bromofluorobenzene (s)	13.48	95	51826	47.80	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	95.60%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	5.92	59	46460	577.68	ug/L	98
3) Ethanol	4.80	45	57473	3682.68	ug/L	99
5) dichlorodifluoromethane	3.72	85	44411	62.90	ug/L	96
6) chloromethane	3.95	50	34895	45.30	ug/L	97
7) vinyl chloride	4.16	62	41772	48.95	ug/L	99
8) bromomethane	4.61	96	14617	25.18	ug/L	99
9) chloroethane	4.75	64	25516	48.11	ug/L	94
10) ethyl ether	5.58	59	32368	48.42	ug/L	83
11) acetonitrile	5.25	41	20563	73.86	ug/L	89
12) trichlorofluoromethane	5.34	101	59673	42.40	ug/L	99
13) freon-113	6.08	101	35056	53.31	ug/L	95
14) acrolein	5.33	56	18365	489.76	ug/L	94
15) 1,1-dichloroethene	5.89	96	38479	45.92	ug/L	97
16) acetone	5.44	43	20242	54.77	ug/L	89
17) Methyl Acetate	6.05	43	66552	47.12	ug/L	# 91
18) methylene chloride	6.04	84	45759	46.58	ug/L	91
19) methyl tert butyl ether	6.80	73	119358	57.33	ug/L	93
20) acrylonitrile	5.93	53	16898	46.21	ug/L	83
21) allyl chloride	6.12	41	43395	51.96	ug/L	79
22) trans-1,2-dichloroethene	6.69	96	38717	48.70	ug/L	91
23) iodomethane	5.95	142	20536	31.28	ug/L	86
24) carbon disulfide	6.28	76	121922	49.86	ug/L	100
25) propionitrile	6.93	54	6743	61.12	ug/L	100
26) vinyl acetate	7.03	43	40294	72.34	ug/L	99
27) chloroprene	7.30	53	55116	61.96	ug/L	92
28) di-isopropyl ether	7.36	45	124023	61.37	ug/L	85
29) methacrylonitrile	7.44	41	27492	60.86	ug/L	77
30) 2-butanone	7.34	72	6119	57.11	ug/L	# 55
31) Hexane	7.35	41	49207	54.43	ug/L	99
32) 1,1-dichloroethane	6.94	63	73456	55.93	ug/L	93
33) tert-butyl ethyl ether	7.75	59	110480	88.20	ug/L	95
34) isobutyl alcohol	7.74	43	12233	270.75	ug/L	98
35) 2,2-dichloropropane	7.78	77	21381	50.51	ug/L	90
36) cis-1,2-dichloroethene	7.51	96	45677	51.61	ug/L	95
37) ethyl acetate	7.74	43	12279	84.00	ug/L	74

(#) = qualifier out of range (m) = manual integration

L54233.D L052211W.M Sat Jun 25 11:58:19 2011 RPT1

Page 1



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54233.D
 Acq On : 24 Jun 2011 1:30 pm
 Sample : cc1765-50
 Misc : ms23302,msl1803,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Jun 25 11:31:52 2011

Vial: 4
 Operator: amym
 Inst : MAMSL
 Multiplr: 1.00

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Sun May 22 15:35:26 2011
 Response via : Initial Calibration
 DataAcq Meth : L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	7.66	128	18778	51.15	ug/L #	82
39) chloroform	7.70	83	79331	50.98	ug/L	99
41) Tetrahydrofuran	8.02	42	12400	61.93	ug/L #	61
42) 1,1,1-trichloroethane	8.44	97	59351	51.76	ug/L	98
44) Cyclohexane	8.73	56	55398	65.67	ug/L #	83
45) carbon tetrachloride	8.79	117	43715	51.02	ug/L	96
46) 1,1-dichloropropene	8.62	75	55325	51.90	ug/L	95
47) benzene	8.81	78	174784	54.74	ug/L	99
48) 1,2-dichloroethane	8.33	62	58351	54.46	ug/L	95
49) tert-amyl methyl ether	8.97	73	113552	86.26	ug/L	96
50) heptane	9.34	43	36800	54.55	ug/L	81
51) trichloroethene	9.45	95	44684	53.61	ug/L	94
52) 1,2-dichloropropane	9.40	63	43354	58.35	ug/L	98
53) dibromomethane	9.38	93	29663	57.46	ug/L	98
54) bromodichloromethane	9.49	83	60541	59.67	ug/L	97
55) Methylcyclohexane	9.98	83	53890	52.97	ug/L	90
57) methyl methacrylate	9.60	69	32299	62.07	ug/L	89
58) 1,4-dioxane	9.59	88	2864	306.83	ug/L	87
59) cis-1,3-dichloropropene	10.12	75	61993	55.06	ug/L	94
61) 4-methyl-2-pentanone	10.23	43	41057	58.14	ug/L	96
62) toluene	10.87	92	108657	52.31	ug/L	92
63) trans-1,3-dichloropropene	10.54	75	57703	63.18	ug/L	88
64) 1,1,2-trichloroethane	10.70	83	36195	57.84	ug/L	96
65) ethyl methacrylate	10.93	69	56465	64.88	ug/L	72
67) tetrachloroethene	11.62	166	43778	50.37	ug/L	99
68) 1,3-dichloropropane	10.94	76	70784	54.19	ug/L	100
69) dibromochloromethane	11.21	129	46846	53.66	ug/L	93
70) 1,2-dibromoethane	11.46	107	45072	51.64	ug/L	99
71) 2-hexanone	11.10	43	28462	53.57	ug/L	97
72) chlorobenzene	12.30	112	119026	49.30	ug/L	98
73) 1,1,1,2-tetrachloroethane	12.22	131	39961	55.06	ug/L	93
74) ethylbenzene	12.47	91	201973	48.85	ug/L	98
75) m,p-xylene	12.66	106	154276	95.89	ug/L	93
76) o-xylene	13.06	106	75904	49.47	ug/L	90
77) styrene	12.99	104	127540	48.85	ug/L	86
78) bromoform	12.80	173	38674	61.53	ug/L	91
79) trans-1,4-dichloro-2-buten	13.24	53	9699	97.11	ug/L #	58
81) isopropylbenzene	13.43	105	179429	55.30	ug/L	94
83) bromobenzene	13.71	156	51736	50.49	ug/L	93
84) 1,1,2,2-tetrachloroethane	13.09	83	63066	56.19	ug/L	97
85) 1,2,3-trichloropropane	13.23	75	63783	69.73	ug/L	99
86) n-propylbenzene	13.88	91	215676	50.06	ug/L	99
87) 2-chlorotoluene	13.99	91	134690	48.66	ug/L	95
88) 4-chlorotoluene	14.07	91	143657	51.18	ug/L	91
89) 1,3,5-trimethylbenzene	14.15	105	152238	49.39	ug/L	97
90) tert-butylbenzene	14.46	91	85360	50.33	ug/L	92
91) 1,2,4-trimethylbenzene	14.56	105	160217	50.56	ug/L	95
92) sec-butylbenzene	14.69	105	181101	50.43	ug/L	96
93) 1,3-dichlorobenzene	14.78	146	89555	52.08	ug/L	97

(#) = qualifier out of range (m) = manual integration

L54233.D L052211W.M

Sat Jun 25 11:58:19 2011

RPT1

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Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC1256

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample: MSL1804-BFB

Injection Date: 06/25/11

Lab File ID: L54259.D

Injection Time: 02:16

Instrument ID: GCMSL

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	2721	15.2	Pass
75	30.0 - 60.0% of mass 95	9078	50.7	Pass
95	Base peak, 100% relative abundance	17896	100.0	Pass
96	5.0 - 9.0% of mass 95	1046	5.84	Pass
173	Less than 2.0% of mass 174	164	0.92 (0.93) ^a	Pass
174	50.0 - 150.0% of mass 95	17576	98.2	Pass
175	5.0 - 9.0% of mass 174	1097	6.13 (6.24) ^a	Pass
176	95.0 - 101.0% of mass 174	16824	94.0 (95.7) ^a	Pass
177	5.0 - 9.0% of mass 176	1302	7.28 (7.74) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSL1804-CC1764	L54259.D	06/25/11	02:16	00:00	Continuing cal 50
MSL1804-BS	L54260.D	06/25/11	02:45	00:29	Blank Spike
MSL1804-MB	L54262.D	06/25/11	03:43	01:27	Method Blank
ZZZZZZ	L54263.D	06/25/11	04:13	01:57	(unrelated sample)
ZZZZZZ	L54265.D	06/25/11	05:14	02:58	(unrelated sample)
ZZZZZZ	L54266.D	06/25/11	05:44	03:28	(unrelated sample)
MC1344-1	L54267.D	06/25/11	06:13	03:57	(used for QC only; not part of job MC1256)
ZZZZZZ	L54268.D	06/25/11	06:42	04:26	(unrelated sample)
ZZZZZZ	L54273.D	06/25/11	09:06	06:50	(unrelated sample)
ZZZZZZ	L54274.D	06/25/11	09:35	07:19	(unrelated sample)
ZZZZZZ	L54275.D	06/25/11	10:07	07:51	(unrelated sample)
ZZZZZZ	L54277.D	06/25/11	11:05	08:49	(unrelated sample)
ZZZZZZ	L54278.D	06/25/11	11:34	09:18	(unrelated sample)
ZZZZZZ	L54279.D	06/25/11	12:03	09:47	(unrelated sample)
MC1256-8	L54280.D	06/25/11	12:34	10:18	GP-14-140
MC1256-9	L54281.D	06/25/11	13:04	10:48	GP-14-130
MC1344-1MS	L54282.D	06/25/11	13:34	11:18	Matrix Spike
MC1344-1MSD	L54283.D	06/25/11	14:03	11:47	Matrix Spike Duplicate

Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: MC1256
Account: WSPNYC WSP Environmental & Energy
Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Check Std:	MSL1804-CC1764	Injection Date:	06/25/11
Lab File ID:	L54259.D	Injection Time:	02:16
Instrument ID:	GCMSL	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	70398	8.19	101217	9.02	58969	12.26	54508	14.82	20994	5.85
Upper Limit ^a	140796	8.69	202434	9.52	117938	12.76	109016	15.32	41988	6.35
Lower Limit ^b	35199	7.69	50609	8.52	29485	11.76	27254	14.32	10497	5.35

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL1804-BS	72645	8.19	104951	9.02	59973	12.26	55595	14.82	22234	5.84
MSL1804-MB	69500	8.20	97883	9.03	55986	12.27	50946	14.82	22538	5.87
ZZZZZZ	73505	8.19	105658	9.03	58600	12.26	56442	14.82	26264	5.85
ZZZZZZ	72918	8.19	104215	9.03	58099	12.26	56075	14.82	24470	5.86
ZZZZZZ	72726	8.19	102391	9.03	57461	12.26	54976	14.82	24908	5.85
MC1344-1	70366	8.20	99229	9.03	55354	12.26	54611	14.82	21483	5.86
ZZZZZZ	71734	8.19	98315	9.02	59312	12.26	55084	14.82	25522	5.84
ZZZZZZ	71458	8.19	100331	9.02	57917	12.26	55910	14.82	22860	5.85
ZZZZZZ	68822	8.19	100240	9.02	56466	12.26	55787	14.82	21538	5.84
ZZZZZZ	70284	8.19	94369	9.02	59307	12.26	61823	14.82	25158	5.84
ZZZZZZ	86145	8.19	121792	9.02	71075	12.26	69801	14.82	25302	5.85
ZZZZZZ	92505	8.19	132386	9.02	73262	12.26	64232	14.82	29845	5.85
ZZZZZZ	91488	8.19	132842	9.02	74752	12.26	69307	14.82	30561	5.85
MC1256-8	80984	8.19	115198	9.03	62389	12.26	55423	14.82	33164	5.85
MC1256-9	95180	8.20	135592	9.03	73561	12.26	68959	14.82	36424	5.85
MC1344-1MS	82653	8.19	118838	9.02	68570	12.26	66500	14.82	29294	5.84
MC1344-1MSD	81631	8.19	117623	9.02	68354	12.26	65749	14.82	29150	5.84

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Continuing Calibration Summary

Page 1 of 4

Job Number: MC1256

Sample: MSL1804-CC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L54259.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\L54259.D

Vial: 30

Acq On : 25 Jun 2011 2:16 am

Operator: amym

Sample : ccl764-50

Inst : MAMSL

Misc : ms23308,msl1804,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min

Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	83	-0.02	5.85
	----- True Calc. % Drift -----						
2	tertiary butyl alcohol	500.000	599.750	-20.0	104	0.00	5.92
	----- AvgRF CCRF % Dev -----						
3	Ethanol	0.274	0.234	14.6	81	0.00	4.81
4 I	pentafluorobenzene	1.000	1.000	0.0	100	0.00	8.19
5 M	dichlorodifluoromethane	0.454	0.547	-20.5#	136	0.02	3.73
	----- True Calc. % Drift -----						
6 P	chloromethane	50.000	47.148	5.7	96	0.02	3.95
	----- AvgRF CCRF % Dev -----						
7 c	vinyl chloride	0.548	0.563	-2.7	105	0.03	4.16
	----- True Calc. % Drift -----						
8 M	bromomethane	50.000	26.800	46.4#	51	0.00	4.61
	----- AvgRF CCRF % Dev -----						
9 M	chloroethane	0.341	0.332	2.6	109	0.01	4.75
10 M	ethyl ether	0.429	0.418	2.6	99	0.00	5.58
	----- True Calc. % Drift -----						
11 M	acetonitrile	50.000	77.009	-54.0#	131	0.00	5.25
12 M	trichlorofluoromethane	50.000	42.758	14.5	96	0.00	5.34
13 M	freon-113	50.000	52.631	-5.3	110	-0.01	6.08
	----- AvgRF CCRF % Dev -----						
14 M	acrolein	0.024	0.048	-100.0#	197	0.00	5.33
15 c	1,1-dichloroethene	0.538	0.482	10.4	102	0.00	5.89
	----- True Calc. % Drift -----						
16 M	acetone	50.000	51.764	-3.5	109	0.00	5.44
	----- AvgRF CCRF % Dev -----						
17 M	Methyl Acetate	0.908	0.788	13.2	89	0.00	6.05
18 M	methylene chloride	0.631	0.559	11.4	97	0.00	6.04
	----- True Calc. % Drift -----						
19 M	methyl tert butyl ether	50.000	52.423	-4.8	124	0.00	6.80

Continuing Calibration Summary

Page 2 of 4

Job Number: MC1256

Sample:

MSL1804-CC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID:

L54259.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

		AvgRF	CCRF	% Dev			
20 M	acrylonitrile	0.235	0.202	14.0	80	0.00	5.93
21 M	allyl chloride	0.537	0.457	14.9	92	0.00	6.12
22 M	trans-1,2-dichloroethene	0.511	0.454	11.2	92	0.00	6.69
		True	Calc.	% Drift			
23 M	iodomethane	50.000	33.931	32.1#	62	0.00	5.95
		AvgRF	CCRF	% Dev			
24 M	carbon disulfide	1.571	1.461	7.0	109	0.00	6.28
		True	Calc.	% Drift			
25 M	propionitrile	50.000	52.254	-4.5	106	0.00	6.93
26 M	vinyl acetate	50.000	59.347	-18.7	130	0.00	7.03
		AvgRF	CCRF	% Dev			
27 M	chloroprene	0.572	0.662	-15.7	120	0.00	7.30
28 M	di-isopropyl ether	1.298	1.463	-12.7	115	0.00	7.36
29 M	methacrylonitrile	0.290	0.312	-7.6	107	0.00	7.44
		True	Calc.	% Drift			
30 M	2-butanone	50.000	50.088	-0.2	105	0.00	7.34
		AvgRF	CCRF	% Dev			
31 M	Hexane	0.581	0.578	0.5	109	0.00	7.35
32 P	1,1-dichloroethane	0.844	0.875	-3.7	107	0.00	6.94
		True	Calc.	% Drift			
33 M	tert-butyl ethyl ether	50.000	80.829	-61.7#	218	0.00	7.75
34 M	isobutyl alcohol	250.000	237.820	4.9	101	-0.02	7.74
35 M	2,2-dichloropropane	50.000	34.695	30.6#	55	0.00	7.78
		AvgRF	CCRF	% Dev			
36 M	cis-1,2-dichloroethene	0.569	0.538	5.4	100	0.00	7.51
		True	Calc.	% Drift			
37 M	ethyl acetate	50.000	75.954	-51.9#	149	-0.02	7.74
		AvgRF	CCRF	% Dev			
38 M	bromochloromethane	0.236	0.242	-2.5	109	0.00	7.66
39 c	chloroform	1.000	0.955	4.5	104	0.00	7.70
40 S	dibromofluoromethane (s)	0.481	0.428	11.0	94	0.00	7.81
41 M	Tetrahydrofuran	0.129	0.135	-4.7	103	-0.01	8.03
		True	Calc.	% Drift			
42 M	1,1,1-trichloroethane	50.000	47.305	5.4	105	0.00	8.44
		AvgRF	CCRF	% Dev			
43 I	1,4-difluorobenzene	1.000	1.000	0.0	100	0.00	9.02
		True	Calc.	% Drift			
44 M	Cyclohexane	50.000	60.946	-21.9#	127	0.00	8.73
45 M	carbon tetrachloride	50.000	51.078	-2.2	113	0.00	8.79
		AvgRF	CCRF	% Dev			
46 M	1,1-dichloropropene	0.477	0.441	7.5	104	0.00	8.62
47 M	benzene	1.429	1.439	-0.7	109	0.00	8.81
48 M	1,2-dichloroethane	0.480	0.488	-1.7	106	0.00	8.33

5.7.6



Continuing Calibration Summary

Page 3 of 4

Job Number: MC1256
 Account: WSPNYC WSP Environmental & Energy
 Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample: MSL1804-CC1764
 Lab FileID: L54259.D

		True	Calc.	% Drift			
49 M	tert-amyl methyl ether	50.000	78.955	-57.9#	206	0.00	8.97
50 M	heptane	50.000	45.038	9.9	98	0.00	9.34
		AvgRF	CCRF	% Dev			
51 M	trichloroethene	0.373	0.370	0.8	104	0.00	9.45
52 c	1,2-dichloropropane	0.333	0.354	-6.3	113	0.00	9.41
53 M	dibromomethane	0.231	0.244	-5.6	117	0.00	9.38
54 M	bromodichloromethane	0.454	0.513	-13.0	111	0.00	9.49
		True	Calc.	% Drift			
55 M	Methylcyclohexane	50.000	49.674	0.7	110	0.00	9.98
56 M	2-chloroethyl vinyl ether	50.000	60.379	-20.8#	115	0.03	9.96
57 M	methyl methacrylate	50.000	55.891	-11.8	122	0.00	9.60
58 M	1,4-dioxane	250.000	263.465	-5.4	105	0.00	9.59
59 M	cis-1,3-dichloropropene	50.000	48.717	2.6	108	0.00	10.12
		AvgRF	CCRF	% Dev			
60 S	toluene-d8 (s)	1.212	1.129	6.8	98	0.00	10.80
		True	Calc.	% Drift			
61 M	4-methyl-2-pentanone	50.000	52.325	-4.7	105	0.00	10.23
		AvgRF	CCRF	% Dev			
62 c	toluene	0.930	0.891	4.2	105	0.00	10.87
		True	Calc.	% Drift			
63 M	trans-1,3-dichloropropene	50.000	55.768	-11.5	137	0.00	10.54
		AvgRF	CCRF	% Dev			
64 M	1,1,2-trichloroethane	0.280	0.304	-8.6	111	0.00	10.70
		True	Calc.	% Drift			
65 M	ethyl methacrylate	50.000	59.885	-19.8	140	0.00	10.93
		AvgRF	CCRF	% Dev			
66 I	chlorobenzene-d5	1.000	1.000	0.0	109	0.00	12.26
67 M	tetrachloroethene	0.676	0.605	10.5	105	0.00	11.62
68 M	1,3-dichloropropane	1.017	1.016	0.1	113	0.00	10.94
		True	Calc.	% Drift			
69 M	dibromochloromethane	50.000	50.095	-0.2	120	0.00	11.21
70 M	1,2-dibromoethane	50.000	46.825	6.3	108	0.00	11.46
71 M	2-hexanone	50.000	45.278	9.4	97	0.03	11.11
		AvgRF	CCRF	% Dev			
72 P	chlorobenzene	1.879	1.669	11.2	105	0.00	12.30
		True	Calc.	% Drift			
73 M	1,1,1,2-tetrachloroethane	50.000	51.065	-2.1	124	0.00	12.22
		AvgRF	CCRF	% Dev			
74 c	ethylbenzene	3.218	2.787	13.4	101	0.00	12.47
75 M	m,p-xylene	1.252	1.069	14.6	97	0.00	12.66
76 M	o-xylene	1.194	1.068	10.6	99	0.00	13.06
77 M	styrene	2.032	1.797	11.6	100	0.00	12.99
		True	Calc.	% Drift			

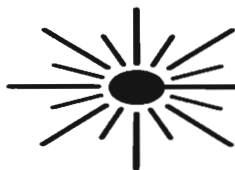
5.7.6



Data Validation Report

**WSP Environment and Energy
Former TTC – Glen Head, NY**

SDG# MC1051



ECT.CON INC.

Environmental and Computer
Technology Consultants

3531 Fox Chase Drive
Imperial, PA 15126
(724) 695-8042
FAX (724) 695-2698
e-mail: ectconinc@comcast.net



Data Validation Report

SDG#	MC1051
Validation Report Date	July 17, 2011
Validation Guidance	USEPA CLP National Functional Guidelines for Data Review
Client Name	WSP Environment and Energy
Project Name	Former TTC – Glen Head, NY
Laboratory	Accutest
Method(s) Utilized	SW 846 8260B
Analytical Fraction	Volatile Organic Compounds (VOCs)

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
6/13/2011	GP-13-180	MC1051-1	X	Aqueous
6/13/2011	GP-13-175	MC1051-2	X	Aqueous
6/13/2011	GP-13-170	MC1051-3	X	Aqueous
6/13/2011	GP-13-160	MC1051-4	X	Aqueous
6/13/2011	GP-13-150	MC1051-5	X	Aqueous
6/13/2011	GP-13-140	MC1051-6	X	Aqueous
6/13/2011	TB061311	MC1051-7	X	Aqueous
6/14/2011	GP-13-130	MC1051-8	X	Aqueous
6/14/2011	GP-13-120	MC1051-9	X	Aqueous
6/14/2011	GP-13-110	MC1051-10	X	Aqueous
6/14/2011	GP-13-100	MC1051-11	X	Aqueous
6/14/2011	EB061411	MC1051-12	X	Aqueous
6/14/2011	GP-12-180	MC1051-13	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. Laboratory calculations have been verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the Former TTC – Glen Head, NY site consists of 11 aqueous field samples, one equipment blank, and one trip blank. These samples were analyzed for the parameters as provided in the Table 1. The findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct.

The VOC findings are based upon the assessment of the following:

- * • Data Completeness
 - * • Holding Times
 - * • Calibration (Initial and Continuing)
 - * • Blanks
 - * • System Monitoring Compounds (Surrogate Spikes)
 - * • Matrix Spike/Matrix Spike Duplicates
 - * • Laboratory Control Sample Results
 - * • Internal Standards
 - * • Target Compound Identification
 - * • Compound Quantification and Reported Contract Quantitation Limits
 - * • System Performance
- * Criteria were met for this evaluation item.

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

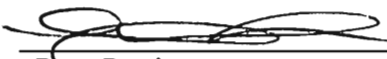
All technical parameters were met. No qualifiers were assigned to the data.

NOTES

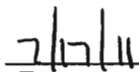
VOLATILE ORGANIC COMPOUNDS

Field Duplicates

No field duplicates were included with this sample delivery group. Data were not qualified on this basis.



Data Reviewer



Date

Glossary of Data Qualifiers

U	Not Detected.	The associated number indicates approximate sample concentration necessary to be detected.
UJ	Not Detected.	Quantitation limit may be inaccurate or imprecise.
J	Analyte Present.	Reported value may not be accurate or precise.
N	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts.
R	Unusable Result.	Analyte may or may not be present in the sample.
UR	Unusable Result.	Analyte may or may not be present in the sample.



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Annotated Form 1's *(Spreadsheet)*

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Report of Analysis

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Client Sample ID:	GP-13-180	Date Sampled:	06/13/11
Lab Sample ID:	MC1051-1	Date Received:	06/15/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L53960.D	1	06/16/11	AMY	n/a	n/a	MSL1793
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
• 156-59-2	cis-1,2-Dichloroethene	16.3	1.0	ug/l	
• 156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	138	1.0	ug/l	
79-01-6	Trichloroethene	25.4	1.0	ug/l	
• 75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		70-130%
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	85%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Client Sample ID:	GP-13-175	Date Sampled:	06/13/11
Lab Sample ID:	MC1051-2	Date Received:	06/15/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L53961.D	1	06/16/11	AMY	n/a	n/a	MSL1793
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	10.3	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	87%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Client Sample ID:	GP-13-170	Date Sampled:	06/13/11
Lab Sample ID:	MC1051-3	Date Received:	06/15/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L53962.D	1	06/16/11	AMY	n/a	n/a	MSL1793
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	9.5	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	88%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Client Sample ID:	GP-13-160	Date Sampled:	06/13/11
Lab Sample ID:	MC1051-4	Date Received:	06/15/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L53963.D	1	06/16/11	AMY	n/a	n/a	MSL1793
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	1.3	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	91%		70-130%
460-00-4	4-Bromofluorobenzene	87%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Client Sample ID:	GP-13-150	Date Sampled:	06/13/11
Lab Sample ID:	MC1051-5	Date Received:	06/15/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L53964.D	1	06/16/11	AMY	n/a	n/a	MSL1793
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-130%
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	86%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Client Sample ID:	GP-13-140	Date Sampled:	06/13/11
Lab Sample ID:	MC1051-6	Date Received:	06/15/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L53965.D	1	06/16/11	AMY	n/a	n/a	MSL1793
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	91%		70-130%
460-00-4	4-Bromofluorobenzene	87%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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3.7

Client Sample ID:	TB061311	Date Sampled:	06/13/11
Lab Sample ID:	MC1051-7	Date Received:	06/15/11
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L53957.D	1	06/16/11	AMY	n/a	n/a	MSL1793
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	89%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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3.8

Client Sample ID:	GP-13-130	Date Sampled:	06/14/11
Lab Sample ID:	MC1051-8	Date Received:	06/15/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L53959.D	1	06/16/11	AMY	n/a	n/a	MSL1793
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	89%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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3.9

Client Sample ID:	GP-13-120	Date Sampled:	06/14/11
Lab Sample ID:	MC1051-9	Date Received:	06/15/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L53966.D	1	06/16/11	AMY	n/a	n/a	MSL1793
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	85%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Client Sample ID:	GP-13-110	Date Sampled:	06/14/11
Lab Sample ID:	MC1051-10	Date Received:	06/15/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L53967.D	1	06/16/11	AMY	n/a	n/a	MSL1793
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	85%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Client Sample ID:	GP-13-100	Date Sampled:	06/14/11
Lab Sample ID:	MC1051-11	Date Received:	06/15/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L53968.D	1	06/16/11	AMY	n/a	n/a	MSL1793
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	86%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:12 13-Jul-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	EB061411	Date Sampled:	06/14/11
Lab Sample ID:	MC1051-12	Date Received:	06/15/11
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L53958.D	1	06/16/11	AMY	n/a	n/a	MSL1793
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	89%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:12 13-Jul-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	GP-12-180	Date Sampled:	06/14/11
Lab Sample ID:	MC1051-13	Date Received:	06/15/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L53969.D	1	06/16/11	AMY	n/a	n/a	MSL1793
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	4.4	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	88%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



ECT.CON INC.

Environmental and Computer
Technology Consultants

Support Documentation

Laboratory Case Narrative



07/13/11

Technical Report for

WSP Environmental & Energy

Former Trans Technology 1 Robert Lane Glen Head, NY

13224.00/00003

Accutest Job Number: MC1051

Sampling Dates: 06/13/11 - 06/14/11

Report to:

WSP Environmental & Energy

dave.carstens@wspgroup.com

ATTN: Dave Carstens

Total number of pages in report: 209



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Reza Pand
Lab Director

Client Service contact: Frank DAgostino 508-481-6200

Certifications: MA (M-MA136, SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) ISO 17025:2005 (L2235)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Test results relate only to samples analyzed.

Sample Summary

WSP Environmental & Energy

Job No: MC1051

Former Trans Technology 1 Robert Lane Glen Head, NY
Project No: 13224.00/00003

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
MC1051-1	06/13/11	13:45 DC	06/15/11	AQ	Ground Water	GP-13-180
MC1051-2	06/13/11	14:15 DC	06/15/11	AQ	Ground Water	GP-13-175
MC1051-3	06/13/11	15:00 DC	06/15/11	AQ	Ground Water	GP-13-170
MC1051-4	06/13/11	16:10 DC	06/15/11	AQ	Ground Water	GP-13-160
MC1051-5	06/13/11	17:05 DC	06/15/11	AQ	Ground Water	GP-13-150
MC1051-6	06/13/11	18:15 DC	06/15/11	AQ	Ground Water	GP-13-140
MC1051-7	06/13/11	18:20 DC	06/15/11	AQ	Trip Blank Water	TB061311
MC1051-8	06/14/11	08:45 DC	06/15/11	AQ	Ground Water	GP-13-130
MC1051-8D	06/14/11	08:45 DC	06/15/11	AQ	Water Dup/MSD	GP-13-130
MC1051-8S	06/14/11	08:45 DC	06/15/11	AQ	Water Matrix Spike	GP-13-130
MC1051-9	06/14/11	09:15 DC	06/15/11	AQ	Ground Water	GP-13-120
MC1051-10	06/14/11	10:00 DC	06/15/11	AQ	Ground Water	GP-13-110
MC1051-11	06/14/11	10:40 DC	06/15/11	AQ	Ground Water	GP-13-100



Sample Summary
(continued)

WSP Environmental & Energy

Job No: MC1051

Former Trans Technology 1 Robert Lane Glen Head, NY
Project No: 13224.00/00003

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
MC1051-12	06/14/11	11:45 DC	06/15/11	AQ Equipment Blank	EB061411
MC1051-13	06/14/11	17:15 DC	06/15/11	AQ Ground Water	GP-12-180

SAMPLE DELIVERY GROUP CASE NARRATIVE**Client:** WSP Environmental & Energy**Job No** MC1051**Site:** Former Trans Technology | Robert Lane Glen Head, NY**Report Date** 7/12/2011 11:38:04 AM

12 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on between 06/13/2011 and 06/14/2011 and were received at Accutest on 06/15/2011 properly preserved, at 1.7 Deg. C and intact. These Samples received an Accutest job number of MC1051. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix	AQ	Batch ID:	MSL1793

- ▣ All samples were analyzed within the recommended method holding time.
- ▣ All method blanks for this batch meet method specific criteria.
- ▣ Sample(s) MC1051-8MS, MC1051-8MSD were used as the QC samples indicated.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC1051).

Chain of Custody

CHAIN OF CUSTODY RECORD

MC1051 Page 1 of 1

Project Number: 13224/1		Site and Location: FORMER TTC - GLEN HEAD, NY		Matrices: S = Soil Aq = Water A = Air; B = Bulk W = Wipe Rt = Root OW = Only Waste O = Other		N° 02226	
Contact Name: DAVE BOUCHARD		Contact Email: dave.bouchard@wspgroup.com		Sampler's Name: DAVID CRISTENS		Sampler's Signature: <i>[Signature]</i>	
Sample Identification:		Depth	Date	Time	Matrix	Number of Containers	Remarks
GP-13-180	-1	180	6/13/11	1345	AQ	3	
GP-13-175	-2	175		1415	AQ	3	
GP-13-170	-3	170		1500	AQ	3	
GP-13-160	-4	160		1610	AQ	3	
GP-13-150	-5	150		1705	AQ	3	
GP-13-140	-6	140		1815	AQ	3	
TB061311	-7			1820	AQ	3	
GP-13-130	-8, sb	130	6/14/11	0845	AQ	9	EXTRA VOLUME FOR MS/MSD
GP-13-120	-9	120		0915	AQ	3	
GP-13-110	-10	110		1000	AQ	3	
GP-13-100	-11	100		1040	AQ	3	
EB061411	-12			1145	AQ	3	
GP-12-180	-13	180		1715	AQ	3	
							1B4
Relinquished by (Signature): <i>[Signature]</i>		Date: 6/14/11 Time: 1800		Received by (Signature): <i>[Signature]</i>		Laboratory Name: ACOUTEST	
Relinquished by (Signature): FedEx		Date: 6/15/11 Time: 10:30		Received by (Signature): <i>[Signature]</i>		Laboratory Location: MA	
Turn-Around Time: STANDARD		Tracking Number: 8759 0905 2319		Custody Seal Numbers:		Method of Shipment: FEDEX	
☐ Reston Office: 11190 Sunrise Valley Dr., #300, Reston, VA 20191 / Tel: 703-709-6500 ☐ Pittsburgh Office: 750 Holiday Dr., #410, Pittsburgh, PA 15220 / Tel: 412-604-1040 ☐ San Jose Office: 2025 Gateway Place, #435, San Jose, CA 95110 / Tel: 408-453-6100 ☐ New Jersey Office: 334 Elizabeth Ave., Somerset, NJ 08873 / Tel: 732-564-0888				☐ Denver Office: 4600 South Ulster, #930, Denver, CO 80237 / Tel: 303-850-9200 ☐ Minneapolis Office: 123 North 3rd St., #808, Minneapolis, MN 55401 / Tel: 612-343-0510 ☐ Foxborough Office: 1740 Massachusetts Ave., Foxborough, MA 01719 / Tel: 978-635-9600 ☒ Cazenovia Office: 5 Sullivan St., Cazenovia, NY 13035 / Tel: 315-655-3900			

MC1051: Chain of Custody

Page 1 of 2



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC1051 Client: WSP Immediate Client Services Action Required: No
Date / Time Received: 6/15/2011 Delivery Method: Client Service Action Required at Login: No
Project: FORMER TIC GLEN HEAD NY No. Coolers: 1 Airbill #'s: N/A

Cooler Security		Y or N	Y or N		Sample Integrity - Documentation	Y or N
1. Custody Seals Present:	☒	☐	3. COC Present:	☒	1. Sample labels present on bottles:	☒
2. Custody Seals Intact:	☒	☐	4. Smpl Dates/Time OK	☒	2. Container labeling complete:	☒
Cooler Temperature		Y or N			3. Sample container label / COC agree:	☒
1. Temp criteria achieved:	☒	☐			Sample Integrity - Condition	
2. Cooler temp verification:	Infrared gun				1. Sample recvd within HT:	☒
3. Cooler media:	Ice (bag)				2. All containers accounted for:	☒
Quality Control Preservation		Y or N	N/A	3. Condition of sample:		Intact
1. Trip Blank present / cooler:	☒	☐	☐	Sample Integrity - Instructions		Y or N
2. Trip Blank listed on COC:	☒	☐	☐	1. Analysis requested is clear:		☒
3. Samples preserved properly:	☒	☐	☐	2. Bottles received for unspecified tests:		☐
4. VOCs headspace free:	☒	☐	☐	3. Sufficient volume recvd for analysis:		☒
				4. Compositing instructions clear:		☐
				5. Filtering instructions clear:		☐

Comments

Accutest Laboratories
V 508 481.6200

495 Technology Center West, Bldg One
F 508 481.7753

Marlborough, MA
www.accutest.com

MC1051: Chain of Custody
Page 2 of 2

Worksheets

SDG NUMBER

MC1051

VALIDATION REPORT DATE

7/17/2011

VALIDATION GUIDANCE

NFG

CLIENT NAME

WSP Environmental and Energy

PROJECT NAME

Former Trans Technology, 1 Robert Lane, Glen Head, NY

LABORATORY

Accutest

METHOD(S) UTILIZED

8260B

ANALYTICAL FRACTION(S)

VOCs

COOLER TEMPERATURES

Ok

FIELD DUPLICATES

NONE

SDG	SAMPLE DATE	SAMPLE ID	LABORATORY ID	MATRIX	8260C
1	6/13/2011	GP-13-180	MC1051-1	Aqueous	X
2	6/13/2011	GP-13-175	MC1051-2	Aqueous	X
3	6/13/2011	GP-13-170	MC1051-3	Aqueous	X
4	6/13/2011	GP-13-160	MC1051-4	Aqueous	X
5	6/13/2011	GP-13-150	MC1051-5	Aqueous	X
6	6/13/2011	GP-13-140	MC1051-6	Aqueous	X
7	6/13/2011	TB061311	MC1051-7	Aqueous	X
8	6/14/2011	GP-13-130	MC1051-8	Aqueous	X
9	6/14/2011	GP-13-120	MC1051-9	Aqueous	X
10	6/14/2011	GP-13-110	MC1051-10	Aqueous	X
11	6/14/2011	GP-13-100	MC1051-11	Aqueous	X
12	6/14/2011	EB061411	MC1051-12	Aqueous	X
13	6/14/2011	GP-12-180	MC1051-13	Aqueous	X

HOLDING TIMES

SAMPLE DATE	SAMPLE ID	LAB ID	MATRIX	PARAMETER	DATE ANALYZED	DF
6/13/2011	GP-13-180	MC1051-1	Aqueous	X	6/16/2011	1X
6/13/2011	GP-13-175	MC1051-2	Aqueous	X	6/16/2011	1X
6/13/2011	GP-13-170	MC1051-3	Aqueous	X	6/16/2011	1X
6/13/2011	GP-13-160	MC1051-4	Aqueous	X	6/16/2011	1X
6/13/2011	GP-13-150	MC1051-5	Aqueous	X	6/16/2011	1X
6/13/2011	GP-13-140	MC1051-6	Aqueous	X	6/16/2011	1X
6/13/2011	TB061311	MC1051-7	Aqueous	X	6/16/2011	1X
6/14/2011	GP-13-130	MC1051-8	Aqueous	X	6/16/2011	1X
6/14/2011	GP-13-120	MC1051-9	Aqueous	X	6/16/2011	1X
6/14/2011	GP-13-110	MC1051-10	Aqueous	X	6/16/2011	1X
6/14/2011	GP-13-100	MC1051-11	Aqueous	X	6/16/2011	1X
6/14/2011	EB061411	MC1051-12	Aqueous	X	6/16/2011	1X
6/14/2011	GP-12-180	MC1051-13	Aqueous	X	6/16/2011	1X

14 days from collection to analysis
Sample Date 6/13/2011 Analyze by 6/27/2011
Sample Date 6/14/2011 Analyze by 6/28/2011

TARGET COMPOUNDS AND QUANTITATION LIMITS

Was a target compound list provided by the client? Yes, 5 compounds only
Did Sample Form 1s match the target compound list yes
Were required quantitation limits provided by the client? No
Did all compounds meet the required quantitation limits? NA

SYSTEM MONITORING COMPOUNDS

SAMPLE	DF	SURROGATE	RECOVERY	ACTION
All OK				

Were surrogate RTs within windows established by the ICAL? Yes
Were there any transcription errors between the raw data and Form 2? No
Were laboratory acceptance limits used as the basis for validation? Yes
Did the laboratory provide CLP Form II or equivalent? Yes

GP-13-180	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 2
DBFM	44.34	50	88.7	89
Tol-d8	44.64	50	89.3	89
BFB	42.56	50	85.1	85

Recovery = (Amount Found/Amount Spiked)*100

MS/MSD RECOVERY and RELATIVE PERCENT DIFFERENCE

Gp-13-130 MS/MSD						
COMPOUND	MS %R	MSD %R	RPD	NATIVE	SPIKE	ACTION
All Parameters	ok	ok	ok			

Were there any transcription errors between the raw data and Form 3? No
Were laboratory acceptance limits used as the basis for validation? 70-130%
Did the laboratory provide CLP Form III or equivalent? No
Were chromatograms and quan reports present for all MS/MSDs? Yes

tetrachloroethene	AMOUNT FOUND	AMOUNT NATIVE	AMOUNT SPIKED	%R	Form 3
MS	43.1	0	50	86.2	86
MSD	42.6	0	50	85.2	85
RPD	1.2			1.2	1.0

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

RPD = ((MS-MSD)/((MS+MSD)/2))*100

LABORATORY CONTROL SAMPLES

SAMPLE	COMPOUND	LCS %R	LCSD %R	RPD	Samples	ACTION
MSL1793-BS	All Parameters	ok	ok			

Were there any transcription errors between the raw data and Form 3? No
 Were laboratory acceptance limits used as the basis for validation? 70-130%
 Did the laboratory provide CLP Form III or equivalent? Yes
 Were chromatograms and quan reports present for all LCS/LCDs? Yes

MSL1793-BS	PCE	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 3
	LCS	44.4	50	88.8	89%

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

BLANKS

BLANK	COMPOUND	RESULT	5X OR 10X	ACTION LEVEL	ACTION
MSL1793-MB	All Parameters	ND		#VALUE!	
TB061311	All Parameters	ND		#VALUE!	
EB061411	All Parameters	ND		#VALUE!	

Were Form Is provided for all blanks? Yes
 Were chromatograms and quan reports present for all blanks? Yes
 Did the laboratory provide CLP Form IVs or equivalent? No

CALIBRATION

Initial
 Are chromatograms and quan reports present for all ICAL standards? Yes
 Are CLP For VIs or equivalent present and complete? Yes
 Any transcription or calculation errors? No
 What linearity criteria was used? 30% RSD
 Are RRFs greater than 0.05? Yes
Continuing
 Are chromatograms and quan reports present for all CCV standards? Yes
 Are CLP For VIIs or equivalent present and complete? Yes
 Any transcription or calculation errors? No
 What %D criteria was used? 30%D
 Were samples analyzed within 12 hours of the tune? Yes
 Are RRFs greater than 0.05? Yes

*Shading indicates a value outside the 12 hour criteria.

	ICAL	CCV	ICAL	CCV	CCV	CCV
Instrument	GCMSL					
Date	5/22/2011	6/16/2011				
Tune	8:30	8:59				
CCV		8:59				
Blank		1:28				
COMPOUNDS						
	All OK	All OK				
SAMPLES						

INITIAL CALIBRATION RRF

Date
Instrument
Compound
Reported RRF
Calculated RRF

5/22/2011
GCMSL
tetrachloroethene
0.65
0.64985

Compound

Area (A1) 16552
Conc (C1) 25

Internal Std

Area (A2) 50941
Conc (C2) 50

RRF = (A1/A2) * (C2/C1)

INITIAL CALIBRATION AVERAGE RRF

Rptd Avg RRF 0.676
Calcd Avg RRF 0.676444
RRF1 0.739
RRF2 0.646
RRF3 0.629
RRF4 0.609
RRF5 0.728
RRF6 0.766
RRF7 0.65
RRF8 0.668
RRF9 0.653
SUM 6.088

INITIAL CALIBRATION %RSD

Reported %RSD 8
Calculated %RSD 8.036

STD DEV 0.0544

%RSD = (Std Dev/ Avg RRF)* 100

CONTINUING CALIBRATION %D

Date
Time
Instrument
Compound
Reported RRF
Calculated RRF

6/16/2011
8:59
GCMSL
tetrachloroethene
0.608
0.608

Compound

Area (A1) 37758
Conc (C1) 50

Reported %Difference 10.1
Calculated %Difference 10.09

Internal Std

Area (A2) 62124
Conc (C2) 50

ICAL RRF 0.676
CCV RRF 0.6078

%Difference = ((ICAL - CCV)/ICAL)*100

TUNE			
Raw data and mass assignments correct?	Yes	Instrument	GCMSL
Mass listing normalized to specified m/x?	Yes	Date	6/16/2011
Were all tune reports present?	Yes	Time	8:59

m/z	Area	Calculated %	Reported %	Abundance Criteria
50	4450	16.2%	16.2	15-40% of mass 95
75	12704	46.3%	46.3	30-60% of mass 95
95	27416	100.0%	100	base peak, 100%
96	1736	6.3%	6.3	5-9% of mass 95
173	262	1.1%	1.1	<2% of mass 174
174	23384	85.3%	85.3	50%-120% of mass 95
175	1876	8.0%	9	5-9% of mass 174
176	22760	97.3%	97.3	95%-101% of mass 174
177	1421	6.2%	6.2	5-9% of mass 176

INTERNAL STANDARD CHECK

CCV Date	6/16/2011	Shading indicates a percent recovery outside the -50% to 100% criteria.				
CCV Time	8:59	Shading indicates a retention time outside the +/- 0.5 minute criteria.				
Instrument	GCMSL					
	PFB	RT	14-DFB	RT	CB-d5	RT
	73421	8.19	109232	9.03	62124	12.26
UPPER	146842	8.69	218464	9.53	124248	12.76
LOWER	36711	7.69	54616	8.53	31062	11.76
GP-13-130	71465	8.200	101907	9.030	57410	12.270
	97%		93%		92%	

RELATIVE RETENTION TIMES

SAMPLE GP-13-130

Compound	Compound RT	IS RT	RRT
PCE	11.63	12.27	0.948
cis-12-DCE	7.51	8.2	0.916
TCE	9.45	9.03	1.047

CCV Date and Time

6/16/11 @ 0859 GCMSL

Compound	Compound RT	IS RT	RRT	RANGE	
PCE	11.63	12.26	0.949	0.889	1.009
cis-12-DCE	7.51	8.19	0.917	0.857	0.977
TCE	9.45	9.03	1.047	0.987	1.107

Shading indicates a relative retention time outside the +/- 0.06 RRT unit criteria.

FIELD DUPLICATES - None Present

SAMPLE CALCULATION

GP-13-130, tetrachloroethene, 138 µg/L

Compound area	107020	Compound area		Compound area	
IS area	57410	IS area		IS area	
IS conc	50	IS conc		IS conc	
Compound RRF	0.676	Compound RRF		Compound RRF	
Volume	1	Volume		Volume	
DF	1	DF		DF	
Concentration ppbv	137.88	Concentration	#DIV/0!	Concentration	#DIV/0!

Concentration = (Compound area/ IS area) * (IS conc/Compound RRF) * (DF/ Volume)

Are there any transcription errors?	No
Are Form Is present for all field and quality control samples?	Yes
Are chromatograms and quan reports present for all samples?	Yes
Are RLs adjusted to reflect sample dilutions, percent solids, etc.?	Yes
For soils, any percent solids <50%?	NA
For soils, any percent solids <10%?	NA

Volatile Surrogate Recovery Summary

Page 1 of 1

Job Number: MC1051

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Method: SW846 8260B

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC1051-1	L53960.D	89.0	89.0	85.0
MC1051-2	L53961.D	89.0	93.0	87.0
MC1051-3	L53962.D	94.0	93.0	88.0
MC1051-4	L53963.D	92.0	91.0	87.0
MC1051-5	L53964.D	91.0	92.0	86.0
MC1051-6	L53965.D	92.0	91.0	87.0
MC1051-7	L53957.D	91.0	93.0	89.0
MC1051-8	L53959.D	92.0	93.0	89.0
MC1051-9	L53966.D	92.0	92.0	85.0
MC1051-10	L53967.D	93.0	92.0	85.0
MC1051-11	L53968.D	93.0	93.0	86.0
MC1051-12	L53958.D	91.0	94.0	89.0
MC1051-13	L53969.D	93.0	93.0	88.0
MC1051-8MS	L53975.D	84.0	87.0	88.0
MC1051-8MSD	L53976.D	84.0	89.0	89.0
MSL1793-BS	L53953.D	87.0	91.0	93.0
MSL1793-MB	L53955.D	90.0	95.0	91.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

5.6.1



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L53960.D Vial: 10
Acq On : 16 Jun 2011 12:52 pm Operator: amym
Sample : mc1051-1 Inst : MAMSL
Misc : ms23249,ms11793,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 16 13:37:26 2011 Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Sun May 22 15:35:26 2011
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.85	65	21574	500.00	ug/L	-0.01
4) pentafluorobenzene	8.20	168	71465	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.03	114	101907	50.00	ug/L	0.00
66) chlorobenzene-d5	12.27	82	57410	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	51661	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	30469	44.34	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	88.68%
60) toluene-d8 (s)	10.81	98	110265	44.64	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	89.28%
82) bromofluorobenzene (s)	13.49	95	39680	42.56	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	85.12%

Target Compounds						Qvalue
19) methyl tert butyl ether	6.80	73	2669	5.66	ug/L	95
32) 1,1-dichloroethane	6.94	63	735	0.61	ug/L	87
36) cis-1,2-dichloroethene	7.51	96	13243	16.29	ug/L	96
51) trichloroethene	9.45	95	19341	25.44	ug/L	92
62) toluene	10.88	92	923	0.49	ug/L #	75
67) tetrachloroethene	11.63	166	107020	137.79	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
L53960.D L052211W.M Thu Jun 16 15:41:36 2011 RPT1

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC1051

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC1051-8MS	L53975.D	1	06/16/11	AMY	n/a	n/a	MSL1793
MC1051-8MSD	L53976.D	1	06/16/11	AMY	n/a	n/a	MSL1793
MC1051-8	L53959.D	1	06/16/11	AMY	n/a	n/a	MSL1793

The QC reported here applies to the following samples:

Method: SW846 8260B

MC1051-1, MC1051-2, MC1051-3, MC1051-4, MC1051-5, MC1051-6, MC1051-7, MC1051-8, MC1051-9, MC1051-10, MC1051-11, MC1051-12, MC1051-13

CAS No.	Compound	MC1051-8 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethene	ND	50	43.6	87	42.7	85	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	50	41.1	82	40.4	81	2	70-130/30
127-18-4	Tetrachloroethene	ND	50	43.1	86	42.6	85	1	70-130/30
79-01-6	Trichloroethene	ND	50	46.5	93	46.4	93	0	70-130/30
75-01-4	Vinyl chloride	ND	50	40.5	81	40.5	81	0	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC1051-8	Limits
1868-53-7	Dibromofluoromethane	84%	84%	92%	70-130%
2037-26-5	Toluene-D8	87%	89%	93%	70-130%
460-00-4	4-Bromofluorobenzene	88%	89%	89%	70-130%

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L53975.D

Vial: 25

Acq On : 16 Jun 2011 8:10 pm

Operator: amym

Sample : mc1051-8ms

Inst : MAMSL

Misc : ms23249,ms11793,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jun 17 08:05:19 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.83	65	19000	500.00	ug/L	-0.03
4) pentafluorobenzene	8.19	168	67386	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.03	114	95250	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	54021	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	51400	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	27168	41.93	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	83.86%		
60) toluene-d8 (s)	10.80	98	100515	43.54	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	87.08%		
82) bromofluorobenzene (s)	13.48	95	40924	44.12	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	88.24%		

Target Compounds

						Qvalue
2) tertiary butyl alcohol	5.91	59	28388	533.13	ug/L	100
3) Ethanol	4.80	45	34612	3324.52	ug/L	97
5) dichlorodifluoromethane	3.72	85	28971	47.38	ug/L	91
6) chloromethane	3.95	50	24252	37.01	ug/L	99
7) vinyl chloride	4.16	62	29909	40.47	ug/L	94
8) bromomethane	4.60	96	8043	16.97	ug/L	93
9) chloroethane	4.76	64	21209	46.18	ug/L	99
10) ethyl ether	5.57	59	23854	41.21	ug/L	87
11) acetonitrile	5.25	41	16019	65.45	ug/L	93
12) trichlorofluoromethane	5.34	101	47208	39.44	ug/L	93
13) freon-113	6.08	101	23764	42.63	ug/L	97
14) acrolein	5.33	56	11967	368.53	ug/L	85
15) 1,1-dichloroethene	5.89	96	27703	38.18	ug/L	91
16) acetone	5.45	43	13655	41.52	ug/L	89
17) Methyl Acetate	6.05	43	45116	36.89	ug/L #	90
18) methylene chloride	6.04	84	33999	39.97	ug/L	97
19) methyl tert butyl ether	6.80	73	85611	47.65	ug/L	99
20) acrylonitrile	5.93	53	11082	35.00	ug/L	94
21) allyl chloride	6.12	41	33728	46.63	ug/L	85
22) trans-1,2-dichloroethene	6.69	96	28267	41.06	ug/L	91
23) iodomethane	5.94	142	20988	36.76	ug/L	84
24) carbon disulfide	6.28	76	86306	40.76	ug/L	100
25) propionitrile	6.93	54	3787	41.39	ug/L	100
26) vinyl acetate	7.03	43	21610	48.22	ug/L	100
27) chloroprene	7.30	53	39813	51.68	ug/L	97
28) di-isopropyl ether	7.36	45	83037	47.45	ug/L	91
29) methacrylonitrile	7.44	41	16725	42.76	ug/L	79
30) 2-butanone	7.34	72	3853	43.13	ug/L #	75
31) Hexane	7.35	41	32391	41.37	ug/L	94
32) 1,1-dichloroethane	6.94	63	52514	46.17	ug/L	98
33) tert-butyl ethyl ether	7.75	59	79215	75.27	ug/L	98
34) isobutyl alcohol	7.74	43	8928	238.95	ug/L	84
35) 2,2-dichloropropane	7.78	77	17349	48.50	ug/L	93
36) cis-1,2-dichloroethene	7.51	96	33390	43.56	ug/L	93
37) ethyl acetate	7.74	43	8936	71.31	ug/L	76

(#)=qualifier out of range (m)=manual integration

L53975.D L052211W.M

Fri Jun 17 08:18:38 2011

RPT1

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Blank Spike Summary

Page 1 of 1

Job Number: MC1051

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1793-BS	L53953.D	1	06/16/11	AMY	n/a	n/a	MSL1793

The QC reported here applies to the following samples:

Method: SW846 8260B

MC1051-1, MC1051-2, MC1051-3, MC1051-4, MC1051-5, MC1051-6, MC1051-7, MC1051-8, MC1051-9, MC1051-10, MC1051-11, MC1051-12, MC1051-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethene	50	45.0	90	70-130
156-60-5	trans-1,2-Dichloroethene	50	43.2	86	70-130
127-18-4	Tetrachloroethene	50	44.4	89	70-130
79-01-6	Trichloroethene	50	46.9	94	70-130
75-01-4	Vinyl chloride	50	49.7	99	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	87%	70-130%
2037-26-5	Toluene-D8	91%	70-130%
460-00-4	4-Bromofluorobenzene	93%	70-130%

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L53953.D

Vial: 3

Acq On : 16 Jun 2011 9:28 am

Operator: amym

Sample : bs

Inst : MAMSL

Misc : ms23248,ms11793,,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jun 16 12:10:06 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.84	65	21247	500.00	ug/L	-0.03
4) pentafluorobenzene	8.19	168	73946	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.03	114	106373	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	60587	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	54955	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	30887	43.44	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	86.88%
60) toluene-d8 (s)	10.80	98	117563	45.60	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	91.20%
82) bromofluorobenzene (s)	13.48	95	45929	46.31	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	92.62%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	5.91	59	33415	558.65	ug/L	97
3) Ethanol	4.80	45	45068	3871.02	ug/L	98
5) dichlorodifluoromethane	3.73	85	36592	54.54	ug/L	97
6) chloromethane	3.95	50	36188	49.08	ug/L	99
7) vinyl chloride	4.16	62	40330	49.73	ug/L	97
8) bromomethane	4.61	96	20860	36.46	ug/L	91
9) chloroethane	4.75	64	22554	44.75	ug/L	96
10) ethyl ether	5.58	59	28864	45.44	ug/L	86
11) acetonitrile	5.25	41	19979	75.71	ug/L	90
12) trichlorofluoromethane	5.34	101	57135	42.66	ug/L	95
13) freon-113	6.08	101	31349	50.45	ug/L	96
14) acrolein	5.32	56	17450	489.71	ug/L	94
15) 1,1-dichloroethene	5.89	96	33941	42.63	ug/L	87
16) acetone	5.44	43	16602	46.56	ug/L	81
17) Methyl Acetate	6.05	43	58412	43.52	ug/L #	89
18) methylene chloride	6.04	84	38910	41.69	ug/L	97
19) methyl tert butyl ether	6.80	73	96076	48.70	ug/L	95
20) acrylonitrile	5.93	53	14308	41.17	ug/L	91
21) allyl chloride	6.12	41	40553	51.10	ug/L	89
22) trans-1,2-dichloroethene	6.69	96	32650	43.21	ug/L	90
23) iodomethane	5.94	142	33330	53.22	ug/L	84
24) carbon disulfide	6.28	76	105302	45.32	ug/L	98
25) propionitrile	6.94	54	4832	47.31	ug/L	100
26) vinyl acetate	7.03	43	26029	52.05	ug/L	99
27) chloroprene	7.30	53	47762	56.50	ug/L	93
28) di-isopropyl ether	7.36	45	100985	52.59	ug/L	91
29) methacrylonitrile	7.44	41	20535	47.84	ug/L	81
30) 2-butanone	7.35	72	4743	47.67	ug/L #	1
31) Hexane	7.35	41	41697	48.54	ug/L	90
32) 1,1-dichloroethane	6.94	63	61187	49.02	ug/L	99
33) tert-butyl ethyl ether	7.75	59	91596	78.61	ug/L	96
34) isobutyl alcohol	7.74	43	10127	244.69	ug/L	79
35) 2,2-dichloropropane	7.78	77	19489	49.21	ug/L	88
36) cis-1,2-dichloroethene	7.51	96	37889	45.05	ug/L	93
37) ethyl acetate	7.74	43	9503	69.15	ug/L	63

(#)=qualifier out of range (m)=manual integration

L53953.D L052211W.M

Thu Jun 16 12:42:59 2011

RPT1

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L53953.D
 Acq On : 16 Jun 2011 9:28 am
 Sample : bs
 Misc : ms23248,ms11793,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Jun 16 12:10:06 2011

Vial: 3
 Operator: amym
 Inst : MAMSL
 Multiplr: 1.00

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Sun May 22 15:35:26 2011
 Response via : Initial Calibration
 DataAcq Meth : L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	7.66	128	17802	51.03	ug/L	89
39) chloroform	7.70	83	67180	45.43	ug/L	96
41) Tetrahydrofuran	8.03	42	9185	48.27	ug/L	69
42) 1,1,1-trichloroethane	8.44	97	51344	47.85	ug/L	93
44) Cyclohexane	8.73	56	45920	57.92	ug/L	87
45) carbon tetrachloride	8.79	117	46271	56.42	ug/L	97
46) 1,1-dichloropropene	8.62	75	44563	43.89	ug/L	92
47) benzene	8.81	78	147177	48.40	ug/L	96
48) 1,2-dichloroethane	8.33	62	48606	47.64	ug/L	97
49) tert-amyl methyl ether	8.97	73	91590	74.83	ug/L	99
50) heptane	9.34	43	29941	48.35	ug/L	88
51) trichloroethene	9.45	95	37195	46.86	ug/L	95
52) 1,2-dichloropropane	9.41	63	35010	49.48	ug/L	99
53) dibromomethane	9.38	93	24979	50.80	ug/L	96
54) bromodichloromethane	9.49	83	51995	53.81	ug/L	99
55) Methylcyclohexane	9.98	83	46378	49.00	ug/L	93
57) methyl methacrylate	9.61	69	26312	54.53	ug/L	95
58) 1,4-dioxane	9.59	88	1975	241.77	ug/L #	47
59) cis-1,3-dichloropropene	10.12	75	53194	50.15	ug/L	93
61) 4-methyl-2-pentanone	10.23	43	29779	45.80	ug/L	97
62) toluene	10.87	92	92575	46.80	ug/L	90
63) trans-1,3-dichloropropene	10.54	75	49766	58.13	ug/L	90
64) 1,1,2-trichloroethane	10.70	83	29425	49.38	ug/L	99
65) ethyl methacrylate	10.93	69	43186	54.33	ug/L #	54
67) tetrachloroethene	11.63	166	36406	44.42	ug/L ✓	97
68) 1,3-dichloropropane	10.94	76	59194	48.05	ug/L	96
69) dibromochloromethane	11.21	129	39552	48.68	ug/L	95
70) 1,2-dibromoethane	11.46	107	35920	44.57	ug/L	99
71) 2-hexanone	11.12	43	19706	41.24	ug/L	94
72) chlorobenzene	12.30	112	98662	43.34	ug/L	97
73) 1,1,1,2-tetrachloroethane	12.23	131	34213	50.54	ug/L	93
74) ethylbenzene	12.47	91	167105	42.85	ug/L	100
75) m,p-xylene	12.66	106	127631	84.12	ug/L	96
76) o-xylene	13.07	106	63642	43.99	ug/L	96
77) styrene	12.99	104	107996	43.86	ug/L	84
78) bromoform	12.80	173	31882	55.16	ug/L	92
79) trans-1,4-dichloro-2-buten	13.24	53	8020	88.21	ug/L #	77
81) isopropylbenzene	13.44	105	148139	49.90	ug/L	93
83) bromobenzene	13.71	156	42433	45.26	ug/L	90
84) 1,1,2,2-tetrachloroethane	13.09	83	50079	48.78	ug/L	97
85) 1,2,3-trichloropropane	13.23	75	50069	59.83	ug/L	99
86) n-propylbenzene	13.88	91	175871	44.63	ug/L	99
87) 2-chlorotoluene	13.99	91	112410	44.39	ug/L	97
88) 4-chlorotoluene	14.07	91	118588	46.18	ug/L	97
89) 1,3,5-trimethylbenzene	14.16	105	127223	45.11	ug/L	96
90) tert-butylbenzene	14.46	91	70793	45.63	ug/L	94
91) 1,2,4-trimethylbenzene	14.56	105	130939	45.17	ug/L	96
92) sec-butylbenzene	14.69	105	151393	46.08	ug/L	97
93) 1,3-dichlorobenzene	14.78	146	72912	46.35	ug/L	98

(#)=qualifier out of range (m)=manual integration

L53953.D L052211W.M

Thu Jun 16 12:42:59 2011

RPT1

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Method Blank Summary

Page 1 of 1

Job Number: MC1051

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1793-MB	L53955.D	1	06/16/11	AMY	n/a	n/a	MSL1793

The QC reported here applies to the following samples:

Method: SW846 8260B

MC1051-1, MC1051-2, MC1051-3, MC1051-4, MC1051-5, MC1051-6, MC1051-7, MC1051-8, MC1051-9, MC1051-10, MC1051-11, MC1051-12, MC1051-13

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	90%	70-130%
2037-26-5	Toluene-D8	95%	70-130%
460-00-4	4-Bromofluorobenzene	91%	70-130%

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC1051

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample: MSL1764-BFB

Injection Date: 05/22/11

Lab File ID: L52992.D

Injection Time: 08:30

Instrument ID: GCMSL

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	3967	18.1	Pass
75	30.0 - 60.0% of mass 95	10972	50.0	Pass
95	Base peak, 100% relative abundance	21949	100.0	Pass
96	5.0 - 9.0% of mass 95	1346	6.13	Pass
173	Less than 2.0% of mass 174	207	0.94 (1.06) ^a	Pass
174	50.0 - 150.0% of mass 95	19600	89.3	Pass
175	5.0 - 9.0% of mass 174	1274	5.80 (6.50) ^a	Pass
176	95.0 - 101.0% of mass 174	19453	88.6 (99.3) ^a	Pass
177	5.0 - 9.0% of mass 176	1259	5.74 (6.47) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSL1764-IC1764	L52995.D	05/22/11	10:13	01:43	Initial cal 0.5
MSL1765-IC1765	L52995A.D	05/22/11	10:13	01:43	Initial cal 0.5
MSL1765-IC1765	L52996A.D	05/22/11	10:42	02:12	Initial cal 1
MSL1764-IC1764	L52996.D	05/22/11	10:42	02:12	Initial cal 1
MSL1765-IC1765	L52997A.D	05/22/11	11:10	02:40	Initial cal 2
MSL1764-IC1764	L52997.D	05/22/11	11:10	02:40	Initial cal 2
MSL1765-IC1765	L52998A.D	05/22/11	11:39	03:09	Initial cal 5
MSL1764-IC1764	L52998.D	05/22/11	11:39	03:09	Initial cal 5
MSL1765-IC1765	L52999A.D	05/22/11	12:08	03:38	Initial cal 10
MSL1764-IC1764	L52999.D	05/22/11	12:08	03:38	Initial cal 10
MSL1765-IC1765	L53000A.D	05/22/11	12:36	04:06	Initial cal 25
MSL1764-IC1764	L53000.D	05/22/11	12:36	04:06	Initial cal 25
MSL1765-IC1765	L53001A.D	05/22/11	13:05	04:35	Initial cal 400
MSL1764-IC1764	L53001.D	05/22/11	13:05	04:35	Initial cal 400
MSL1765-IC1765	L53002A.D	05/22/11	13:34	05:04	Initial cal 200
MSL1764-IC1764	L53002.D	05/22/11	13:34	05:04	Initial cal 200
MSL1765-ICC1765	L53003A.D	05/22/11	14:02	05:32	Initial cal 100
MSL1764-ICC1764	L53003.D	05/22/11	14:02	05:32	Initial cal 100
MSL1765-IC1765	L53004A.D	05/22/11	14:31	06:01	Initial cal 50
MSL1764-IC1764	L53004.D	05/22/11	14:31	06:01	Initial cal 50
MSL1764-ICV1764	L53005.D	05/22/11	15:56	07:26	Initial cal verification 50
MSL1765-ICV1765	L53005A.D	05/22/11	15:56	07:26	Initial cal verification 50

Initial Calibration Summary

Page 1 of 6

Job Number: MC1051

Sample: MSL1764-ICC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L53003.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Response Factor Report MAMSL

Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Sun May 22 15:35:26 2011
 Response via : Initial Calibration

Calibration Files

0.5 =L52995.D 2 =L52997.D 5 =L52998.D 50 =L53004.D
 100 =L53003.D 200 =L53002.D 400 =L53001.D 25 =L53000.D
 1 =L52996.D 10 =L52999.D = =

Compound	0.5	2	5	50	100	200	400	25	1	10	Avg	%RSD

1) tert butyl alcohol-d9 -----ISTD-----
 2) tertiary butyl alcohol
 0.638 0.905 1.364 1.406 1.430 1.543 1.245 1.148 1.210 25.12
 ----- Linear regression ----- Coefficient = 0.9988
 Response Ratio = -0.14706 + 1.53919 *A

3) Ethanol
 0.277 0.253 0.242 0.267 0.299 0.323 0.275 0.256 0.274 9.59

4) I pentafluorobenzene -----ISTD-----
 5) dichlorodifluoromethane
 0.500 0.458 0.403 0.373 0.498 0.569 0.405 0.423 0.454 14.39
 6) chloromethane
 0.495 0.482 0.488 0.509 0.633 0.771 0.475 0.482 0.542 19.54
 ----- Quadratic regression ----- Coefficient = 0.9998
 Response Ratio = -0.00987 + 0.47167 *A + 0.03766 *A^2

✓ 7) vinyl chloride
 0.620 0.544 0.540 0.533 0.621 0.439 0.548 0.559 0.532 0.548 ✓ 9.80 ✓

8) bromomethane
 0.288 0.233 0.400 0.395 0.433 0.411 0.251 0.374 0.235 0.335 24.54
 ----- Linear regression ----- Coefficient = 0.9987
 Response Ratio = -0.02237 + 0.41750 *A

9) chloroethane
 0.417 0.344 0.306 0.294 0.316 0.360 0.312 0.417 0.301 0.341 14.08

10) ethyl ether
 0.436 0.395 0.424 0.425 0.455 0.481 0.425 0.412 0.413 0.429 5.89

11) acetonitrile
 0.444 0.210 0.129 0.198 0.225 0.334 0.423 0.281 43.06
 ----- Quadratic regression ----- Coefficient = 0.9941
 Response Ratio = 0.05425 + 0.12465 *A + 0.01185 *A^2

12) trichlorofluoromethane
 1.003 0.898 0.810 0.770 0.994 1.133 0.823 0.613 0.818 0.874 17.54
 ----- Linear regression ----- Coefficient = 0.9921
 Response Ratio = -0.18220 + 1.11921 *A

13) freon-113
 0.501 0.406 0.398 0.544 0.650 0.442 0.442 0.483 18.59
 ----- Quadratic regression ----- Coefficient = 0.9990
 Response Ratio = -0.00854 + 0.39627 *A + 0.03210 *A^2

14) acrolein

Initial Calibration Summary

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Job Number: MC1051

Sample:

MSL1764-ICC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID:

L53003.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

		0.023	0.025	0.024	0.024	0.026	0.024		0.023	0.024	3.54	
15)	1,1-dichloroethene	0.703	0.570	0.473	0.451	0.539	0.595	0.500	0.507	0.509	14.20	
16)	acetone	0.459	0.228	0.214	0.228	0.219	0.296		0.341	0.284	32.06	
	----- Linear regression -----	Coefficient = 0.9992										
	Response Ratio = 0.02255 + 0.21687 *A											
17)	Methyl Acetate	1.050	0.889	0.891	0.897	0.946	0.925	0.828		0.834	0.908	7.76
18)	methylene chloride	0.649	0.574	0.576	0.590	0.635	0.729	0.601	0.737	0.589	0.631	9.99
19)	methyl tert butyl ether	0.959	0.857	1.132	1.191	1.195	0.719	1.000	0.998	0.909	0.996	15.91
	----- Quadratic regression -----	Coefficient = 0.9944										
	Response Ratio = -0.14017 + 1.57983 *A + -0.10457 *A^2											
20)	acrylonitrile	0.208	0.204	0.253	0.245	0.252	0.254	0.251		0.214	0.235	9.50
21)	allyl chloride	0.578	0.482	0.498	0.521	0.531	0.600	0.562		0.522	0.537	7.50
✓ 22)	trans-1,2-dichloroethene	0.555	0.452	0.495	0.489	0.530	0.595	0.484	0.524	0.474	0.511	✓ 8.70 ✓
23)	iodomethane	0.250	0.462	0.417	0.360	0.273	0.383		0.293	0.348	22.66	
	----- Quadratic regression -----	Coefficient = 0.9993										
	Response Ratio = -0.01833 + 0.46617 *A + -0.02394 *A^2											
24)	carbon disulfide	1.797	1.540	1.346	1.514	1.593	1.770	1.479	1.614	1.489	1.571	9.09
25)	propionitrile	0.027	0.069	0.070	0.075	0.076	0.064		0.048	0.061	29.06	
	----- Linear regression -----	Coefficient = 0.9998										
	Response Ratio = -0.00768 + 0.07717 *A											
26)	vinyl acetate	0.111	0.318	0.350	0.399	0.399	0.189		0.148	0.274	44.46	
	----- Linear regression -----	Coefficient = 0.9991										
	Response Ratio = -0.07353 + 0.40875 *A											
27)	chloroprene	0.553	0.520	0.553	0.549	0.637	0.656	0.555		0.550	0.572	8.39
28)	di-isopropyl ether	1.316	1.163	1.283	1.307	1.394	1.476	1.259	1.284	1.204	1.298	7.23
29)	methacrylonitrile	0.263	0.292	0.288	0.292	0.323	0.288		0.285	0.290	6.04	
30)	2-butanone	0.042	0.065	0.067	0.072	0.076	0.065		0.064	0.065	16.80	
	----- Linear regression -----	Coefficient = 0.9989										
	Response Ratio = -0.00899 + 0.07671 *A											
31)	Hexane	0.615	0.546	0.533	0.519	0.638	0.701	0.554		0.543	0.581	10.97
32)	1,1-dichloroethane	0.908	0.764	0.824	0.844	0.899	0.993	0.811	0.770	0.782	0.844	9.04
33)	tert-butyl ethyl ether	0.215	0.222	0.589	0.695	0.803	0.942	0.354		0.261	0.510	55.91
	----- Linear regression -----	Coefficient = 0.9933										
	Response Ratio = -0.24517 + 0.94380 *A											

5.7.1



Initial Calibration Summary

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Job Number: MC1051

Sample:

MSL1764-ICC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID:

L53003.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

34)	isobutyl alcohol	0.001	0.026	0.031	0.034	0.038	0.014	0.007	0.022	66.68		
	----- Linear regression -----	Coefficient = 0.9975										
	Response Ratio =	-0.05322 + 0.03886 *A										
35)	2,2-dichloropropane	0.253	0.363	0.356	0.417	0.092	0.003	0.247	67.14			
	----- Linear regression -----	Coefficient = 0.9965										
	Response Ratio =	-0.15926 + 0.42962 *A										
✓ 36)	cis-1,2-dichloroethene	0.606	0.506	0.538	0.556	0.588	0.649	0.552	0.606	0.517	0.569	8.22
37)	ethyl acetate	0.096	0.157	0.098	0.176	0.070	0.033	0.105	50.92			
	----- Quadratic regression -----	Coefficient = 0.9832										
	Response Ratio =	0.02598 + 0.05395 *A + 0.01459 *A^2										
38)	bromochloromethane	0.245	0.236	0.223	0.233	0.253	0.282	0.234	0.192	0.225	0.236	10.32
39)	chloroform	1.055	0.943	0.926	0.952	1.011	1.127	0.926	1.144	0.914	1.000	8.95
40)	dibromofluoromethane (s)	0.437	0.460	0.457	0.511	0.564	0.459	0.477	0.481	9.01		
41)	Tetrahydrofuran	0.104	0.132	0.133	0.140	0.146	0.127	0.120	0.129	10.69		
42)	1,1,1-trichloroethane	0.399	0.374	0.653	0.684	0.779	0.880	0.523	0.251	0.442	0.554	37.54
	----- Linear regression -----	Coefficient = 0.9954										
	Response Ratio =	-0.14258 + 0.87453 *A										
43) I	1,4-difluorobenzene	-----ISTD-----										
44)	Cyclohexane	0.396	0.361	0.351	0.469	0.557	0.382	0.379	0.414	17.92		
	----- Quadratic regression -----	Coefficient = 0.9991										
	Response Ratio =	-0.00850 + 0.34960 *A + 0.02626 *A^2										
45)	carbon tetrachloride	0.274	0.249	0.349	0.369	0.375	0.300	0.292	0.271	0.310	15.48	
	----- Quadratic regression -----	Coefficient = 0.9987										
	Response Ratio =	-0.04015 + 0.43996 *A + -0.01672 *A^2										
46)	1,1-dichloropropene	0.543	0.459	0.425	0.436	0.493	0.568	0.435	0.511	0.426	0.477	11.28
47)	benzene	1.494	1.497	1.300	1.326	1.392	1.466	1.576	1.359	1.565	1.319	7.22
48)	1,2-dichloroethane	0.544	0.457	0.460	0.457	0.473	0.508	0.471	0.484	0.460	0.480	6.12
49)	tert-amyl methyl ether	0.347	0.210	0.446	0.517	0.586	0.681	0.317	0.282	0.423	38.37	
	----- Linear regression -----	Coefficient = 0.9941										
	Response Ratio =	-0.15737 + 0.68050 *A										
50)	heptane	0.281	0.261	0.261	0.344	0.385	0.286	0.268	0.298	16.04		
	----- Linear regression -----	Coefficient = 0.9930										
	Response Ratio =	-0.09268 + 0.38694 *A										
✓ 51)	trichloroethene	0.404	0.347	0.356	0.366	0.402	0.440	0.364	0.320	0.358	0.373	9.65

5.7.1

5



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ACCUTEST
LABORATORIES

Initial Calibration Summary

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Job Number: MC1051

Sample:

MSL1764-ICC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID:

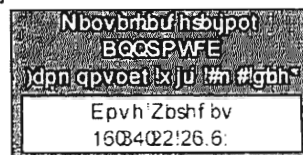
L53003.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

52)	1,2-dichloropropane	0.335	0.314	0.314	0.336	0.351	0.384	0.319	0.308	0.333	7.60
53)	dibromomethane	0.262	0.234	0.208	0.211	0.217	0.245	0.238	0.234	0.231	7.92
54)	bromodichloromethane	0.459	0.389	0.463	0.487	0.497	0.535	0.442	0.410	0.406	10.57
55)	Methylcyclohexane	0.429	0.403	0.397	0.524	0.583	0.424		0.398	0.451	16.19
	----- Linear regression -----					Coefficient =				0.9935	
	Response Ratio =	-0.13844 + 0.58614 *A									
56)	2-chloroethyl vinyl ether	0.004	0.011	0.017	0.033	0.001				0.013	98.81
	----- Linear regression -----					Coefficient =				0.9553	
	Response Ratio =	-0.03915 + 0.03589 *A									
57)	methyl methacrylate	0.106	0.210	0.232	0.253	0.274	0.160		0.132	0.195	32.53
	----- Linear regression -----					Coefficient =				0.9983	
	Response Ratio =	-0.05496 + 0.27722 *A									
58)	1,4-dioxane	0.004	0.004	0.005	0.005	0.003				0.004	21.02
	----- Linear regression -----					Coefficient =				0.9997	
	Response Ratio =	-0.00772 + 0.00544 *A									
59)	cis-1,3-dichloropropene	0.221	0.221	0.449	0.500	0.541	0.555	0.355	0.188	0.274	40.09
	----- Linear regression -----					Coefficient =				0.9992	
	Response Ratio =	-0.06102 + 0.55939 *A									
60)	toluene-d8 (s)	1.035	1.152	1.181	1.343	1.468	1.107		1.197	1.212	12.14
61)	4-methyl-2-pentanone	0.227	0.310	0.316	0.326	0.355	0.281		0.233	0.293	16.39
	----- Linear regression -----					Coefficient =				0.9985	
	Response Ratio =	-0.04535 + 0.35511 *A									
62)	toluene	0.996	0.856	0.852	0.905	0.957	1.035	0.870	1.027	0.870	8.05
63)	trans-1,3-dichloropropene	0.097	0.121	0.326	0.379	0.426	0.484	0.215	0.033	0.161	64.14
	----- Linear regression -----					Coefficient =				0.9952	
	Response Ratio =	-0.09310 + 0.48253 *A									
64)	1,1,2-trichloroethane	0.264	0.258	0.274	0.286	0.298	0.323	0.275	0.277	0.266	7.12
65)	ethyl methacrylate	0.144	0.329	0.381	0.434	0.464	0.237		0.180	0.310	40.44
	----- Linear regression -----					Coefficient =				0.9983	
	Response Ratio =	-0.10681 + 0.47191 *A									
66)	I chlorobenzene-d5	-----ISTD-----									
67)	tetrachloroethene	0.739	0.646	0.629	0.609	0.728	0.766	0.650	0.668	0.653	8.00
68)	1,3-dichloropropane	1.054	0.961	0.975	0.953	1.042	1.135	1.003	1.015	1.011	5.53
69)	dibromochloromethane	0.476	0.439	0.609	0.621	0.718	0.768	0.552	0.431	0.502	21.13

5.7.1





Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L53000.D
 Acq On : 22 May 2011 12:36 pm
 Sample : icl764-25
 Misc : ms23036,msl1764,,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: May 22 13:53:14 2011

Vial: 6
 Operator: amym
 Inst : MAMSL
 Multiplr: 1.00

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Sun May 22 13:52:34 2011
 Response via : Initial Calibration
 DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.89	65	22209	500.00	ug/L	0.02
4) pentafluorobenzene	8.19	168	68737	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.02	114	97998	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	50941	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	50143	50.00	ug/L	0.00

System Monitoring Compounds						
40) dibromofluoromethane (s)	7.81	113	15768	20.34	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	40.68%		
60) toluene-d8 (s)	10.80	98	54249	18.85	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	37.70%		
82) bromofluorobenzene (s)	13.49	95	21608	21.72	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	43.44%		

Target Compounds						Qvalue
2) tertiary butyl alcohol	5.93	59	13824	203.14	ug/L	# 56
3) Ethanol	4.83	45	30569	2279.48	ug/L	94
5) dichlorodifluoromethane	3.71	85	13913	17.79	ug/L	99
6) chloromethane	3.94	50	16328	15.41	ug/L	100
7) vinyl chloride	4.15	62	18818	31.20	ug/L	96
8) bromomethane	4.59	96	8639	15.30	ug/L	90
9) chloroethane	4.74	64	10732	21.71	ug/L	99
10) ethyl ether	5.57	59	14604	22.08	ug/L	86
11) acetonitrile	5.24	41	11489	35.64	ug/L	78
12) trichlorofluoromethane	5.34	101	28288	18.16	ug/L	95
13) freon-113	6.07	101	15201	17.00	ug/L	84
14) acrolein	5.31	56	4106	116.48	ug/L	85
15) 1,1-dichloroethene	5.89	96	17169	20.99	ug/L	89
16) acetone	5.44	43	10187	34.12	ug/L	99
17) Methyl Acetate	6.04	43	28450	21.78	ug/L	92
18) methylene chloride	6.03	84	20652	20.27	ug/L	91
19) methyl tert butyl ether	6.79	73	34355	34.74	ug/L	95
20) acrylonitrile	5.91	53	8620	24.76	ug/L	97
21) allyl chloride	6.12	41	19324	23.46	ug/L	82
22) trans-1,2-dichloroethene	6.69	96	16640	20.36	ug/L	92
23) iodomethane	5.93	142	13167	34.97	ug/L	94
24) carbon disulfide	6.27	76	50843	20.89	ug/L	100
25) propionitrile	6.93	54	2191	19.87	ug/L	100
26) vinyl acetate	7.03	43	6511	11.84	ug/L	92
27) chloroprene	7.29	53	19063	21.13	ug/L	89
28) di-isopropyl ether	7.36	45	43254	21.31	ug/L	91
29) methacrylonitrile	7.44	41	9901	22.29	ug/L	80
30) 2-butanone	7.34	72	2228	21.13	ug/L	# 10
31) Hexane	7.34	41	19032	19.88	ug/L	91
32) 1,1-dichloroethane	6.94	63	27890	20.43	ug/L	96
33) tert-butyl ethyl ether	7.74	59	12151	9.44	ug/L	91
34) isobutyl alcohol	7.74	43	2355	47.46	ug/L	79
35) 2,2-dichloropropane	7.78	77	3173	5.53	ug/L	93
36) cis-1,2-dichloroethene	7.50	96	18984	21.29	ug/L	86
37) ethyl acetate	7.74	43	2389	9.32	ug/L	71

(#) = qualifier out of range (m) = manual integration

L53000.D L052211W.M

Mon May 23 15:12:23 2011

RPT1

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L53000.D
 Acq On : 22 May 2011 12:36 pm
 Sample : icl764-25
 Misc : ms23036,msl1764,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: May 22 13:53:14 2011

Vial: 6
 Operator: amym
 Inst : MAMSL
 Multiplr: 1.00

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Sun May 22 13:52:34 2011
 Response via : Initial Calibration
 DataAcq Meth : L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	7.65	128	8038	20.70	ug/L	88
39) chloroform	7.69	83	31835	20.54	ug/L	99
41) Tetrahydrofuran	8.03	42	4362	21.44	ug/L	68
42) 1,1,1-trichloroethane	8.43	97	17987	14.87	ug/L	93
44) Cyclohexane	8.73	56	18728	17.15	ug/L	86
45) carbon tetrachloride	8.79	117	14292	24.30	ug/L	99
46) 1,1-dichloropropene	8.62	75	21292	19.12	ug/L	95
47) benzene	8.81	78	66610	21.57	ug/L	99
48) 1,2-dichloroethane	8.33	62	23091	23.19	ug/L	94
49) tert-amyl methyl ether	8.98	73	15518	11.63	ug/L	92
50) heptane	9.34	43	14018	18.57	ug/L	90
51) trichloroethene	9.45	95	17839	20.70	ug/L	94
52) 1,2-dichloropropane	9.40	63	15646	20.79	ug/L	97
53) dibromomethane	9.38	93	11685	24.35	ug/L	91
54) bromodichloromethane	9.49	83	21635	20.62	ug/L	100
55) Methylcyclohexane	9.98	83	20777	18.19	ug/L	91
56) 2-chloroethyl vinyl ether	9.95	63	39m	0.60	ug/L	
57) methyl methacrylate	9.61	69	7844	14.59	ug/L	97
58) 1,4-dioxane	9.59	88	724m	70.16	ug/L	
59) cis-1,3-dichloropropene	10.12	75	17410	15.99	ug/L	95
61) 4-methyl-2-pentanone	10.24	43	13784	19.79	ug/L	96
62) toluene	10.87	92	42619	21.01	ug/L	96
63) trans-1,3-dichloropropene	10.54	75	10549	11.13	ug/L	78
64) 1,1,2-trichloroethane	10.70	83	13483	21.33	ug/L	92
65) ethyl methacrylate	10.93	69	11613	12.71	ug/L #	1
67) tetrachloroethene	11.63	166	16552	21.04	ug/L	93
68) 1,3-dichloropropane	10.94	76	25535	21.80	ug/L	97
69) dibromochloromethane	11.21	129	14059	17.83	ug/L	96
70) 1,2-dibromoethane	11.46	107	15367	19.51	ug/L	98
71) 2-hexanone	11.11	43	9207	18.96	ug/L	87
72) chlorobenzene	12.30	112	45731	21.60	ug/L	94
73) 1,1,1,2-tetrachloroethane	12.23	131	11061	16.99	ug/L	90
74) ethylbenzene	12.48	91	79550	21.46	ug/L	98
75) m,p-xylene	12.66	106	62902	42.60	ug/L	97
76) o-xylene	13.07	106	30675	20.06	ug/L	89
77) styrene	12.99	104	49959	20.31	ug/L	79
78) bromoform	12.80	173	9106	15.10	ug/L	97
79) trans-1,4-dichloro-2-buten	13.24	53	761m	7.33	ug/L	
81) isopropylbenzene	13.44	105	65629	22.46	ug/L	91
83) bromobenzene	13.71	156	20830	22.51	ug/L	90
84) 1,1,2,2-tetrachloroethane	13.09	83	23690	23.76	ug/L	100
85) 1,2,3-trichloropropane	13.23	75	18104	20.84	ug/L	100
86) n-propylbenzene	13.89	91	88050	22.35	ug/L	99
87) 2-chlorotoluene	14.00	91	55343	23.07	ug/L	95
88) 4-chlorotoluene	14.08	91	56289	23.01	ug/L	92
89) 1,3,5-trimethylbenzene	14.16	105	63402	22.61	ug/L	93
90) tert-butylbenzene	14.46	91	34500	21.38	ug/L	92
91) 1,2,4-trimethylbenzene	14.57	105	63496	22.24	ug/L	94
92) sec-butylbenzene	14.69	105	74887	21.99	ug/L	98

(#) = qualifier out of range (m) = manual integration

L53000.D L052211W.M

Mon May 23 15:12:23 2011

RPT1

Page 2



Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC1051

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample: MSL1793-BFB

Injection Date: 06/16/11

Lab File ID: L53952.D

Injection Time: 08:59

Instrument ID: GCMSL

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	4450	16.2	Pass
75	30.0 - 60.0% of mass 95	12704	46.3	Pass
95	Base peak, 100% relative abundance	27416	100.0	Pass
96	5.0 - 9.0% of mass 95	1736	6.33	Pass
173	Less than 2.0% of mass 174	262	0.96 (1.12) ^a	Pass
174	50.0 - 150.0% of mass 95	23384	85.3	Pass
175	5.0 - 9.0% of mass 174	1876	6.84 (8.02) ^a	Pass
176	95.0 - 101.0% of mass 174	22760	83.0 (97.3) ^a	Pass
177	5.0 - 9.0% of mass 176	1421	5.18 (6.24) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSL1793-CC1764	L53952.D	06/16/11	08:59	00:00	Continuing cal 50
MSL1793-BS	L53953.D	06/16/11	09:28	00:29	Blank Spike
MSL1793-MB	L53955.D	06/16/11	10:27	01:28	Method Blank
ZZZZZZ	L53956.D	06/16/11	10:55	01:56	(unrelated sample)
MC1051-7	L53957.D	06/16/11	11:24	02:25	TB061311
MC1051-12	L53958.D	06/16/11	11:53	02:54	EB061411
MC1051-8	L53959.D	06/16/11	12:23	03:24	GP-13-130
MC1051-1	L53960.D	06/16/11	12:52	03:53	GP-13-180
MC1051-2	L53961.D	06/16/11	13:21	04:22	GP-13-175
MC1051-3	L53962.D	06/16/11	13:50	04:51	GP-13-170
MC1051-4	L53963.D	06/16/11	14:18	05:19	GP-13-160
MC1051-5	L53964.D	06/16/11	14:47	05:48	GP-13-150
MC1051-6	L53965.D	06/16/11	15:16	06:17	GP-13-140
MC1051-9	L53966.D	06/16/11	15:45	06:46	GP-13-120
MC1051-10	L53967.D	06/16/11	16:14	07:15	GP-13-110
MC1051-11	L53968.D	06/16/11	16:43	07:44	GP-13-100
MC1051-13	L53969.D	06/16/11	17:12	08:13	GP-12-180
ZZZZZZ	L53970.D	06/16/11	17:42	08:43	(unrelated sample)
ZZZZZZ	L53971.D	06/16/11	18:11	09:12	(unrelated sample)
ZZZZZZ	L53973.D	06/16/11	19:12	10:13	(unrelated sample)
ZZZZZZ	L53974.D	06/16/11	19:41	10:42	(unrelated sample)
MC1051-8MS	L53975.D	06/16/11	20:10	11:11	Matrix Spike
MC1051-8MSD	L53976.D	06/16/11	20:39	11:40	Matrix Spike Duplicate

Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: MC1051
Account: WSPNYC WSP Environmental & Energy
Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Check Std: MSL1793-CC1764 Injection Date: 06/16/11
Lab File ID: L53952.D Injection Time: 08:59
Instrument ID: GCMSL Method: SW846 8260B

	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
Check Std	73421	8.19	109232	9.03	62124	12.26	55715	14.82	25486	5.86
Upper Limit ^a	146842	8.69	218464	9.53	124248	12.76	111430	15.32	50972	6.36
Lower Limit ^b	36711	7.69	54616	8.53	31062	11.76	27858	14.32	12743	5.36

Lab	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
Sample ID	AREA		AREA		AREA		AREA		AREA	
MSL1793-BS	73946	8.19	106373	9.03	60587	12.26	54955	14.82	21247	5.84
MSL1793-MB	71996	8.20	100746	9.03	56656	12.27	51570	14.82	21925	5.85
ZZZZZZ	68765	8.20	98829	9.03	54895	12.27	50653	14.82	21977	5.85
MC1051-7	70544	8.20	100452	9.03	56336	12.27	51261	14.82	22669	5.85
MC1051-12	70326	8.20	99380	9.03	55474	12.27	50503	14.83	24033	5.85
MC1051-8	69835	8.20	101272	9.03	56496	12.27	50582	14.82	22659	5.85
MC1051-1	71465	8.20	101907	9.03	57410	12.27	51661	14.82	21574	5.85
MC1051-2	71215	8.20	100881	9.03	56587	12.27	50734	14.83	21581	5.85
MC1051-3	70526	8.20	102416	9.03	57511	12.27	52062	14.83	24235	5.85
MC1051-4	70370	8.20	101870	9.03	57242	12.27	51766	14.83	22363	5.85
MC1051-5	69902	8.20	100364	9.03	56911	12.27	51239	14.83	21313	5.85
MC1051-6	70902	8.20	102229	9.03	56860	12.27	51294	14.82	23773	5.85
MC1051-9	68849	8.20	100996	9.03	57057	12.27	51564	14.83	21818	5.85
MC1051-10	70617	8.20	102723	9.03	57033	12.27	51412	14.83	21202	5.85
MC1051-11	69936	8.20	100644	9.03	56648	12.27	51578	14.83	24799	5.85
MC1051-13	69329	8.20	99373	9.03	55770	12.27	49692	14.83	21576	5.86
ZZZZZZ	72876	8.20	105745	9.03	59890	12.27	53609	14.83	25181	5.85
ZZZZZZ	74995	8.19	108871	9.03	58654	12.26	56924	14.82	21833	5.85
ZZZZZZ	73313	8.19	105834	9.03	56915	12.26	55663	14.82	21888	5.84
ZZZZZZ	68252	8.19	96479	9.03	51691	12.26	51766	14.82	18506	5.85
MC1051-8MS	67386	8.19	95250	9.03	54021	12.26	51400	14.82	19000	5.83
MC1051-8MSD	67963	8.19	96573	9.03	54090	12.26	51871	14.82	20796	5.83

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\L53952.D

Vial: 2

Acq On : 16 Jun 2011 8:59 am

Operator: amym

Sample : bfb

Inst : MAMSL

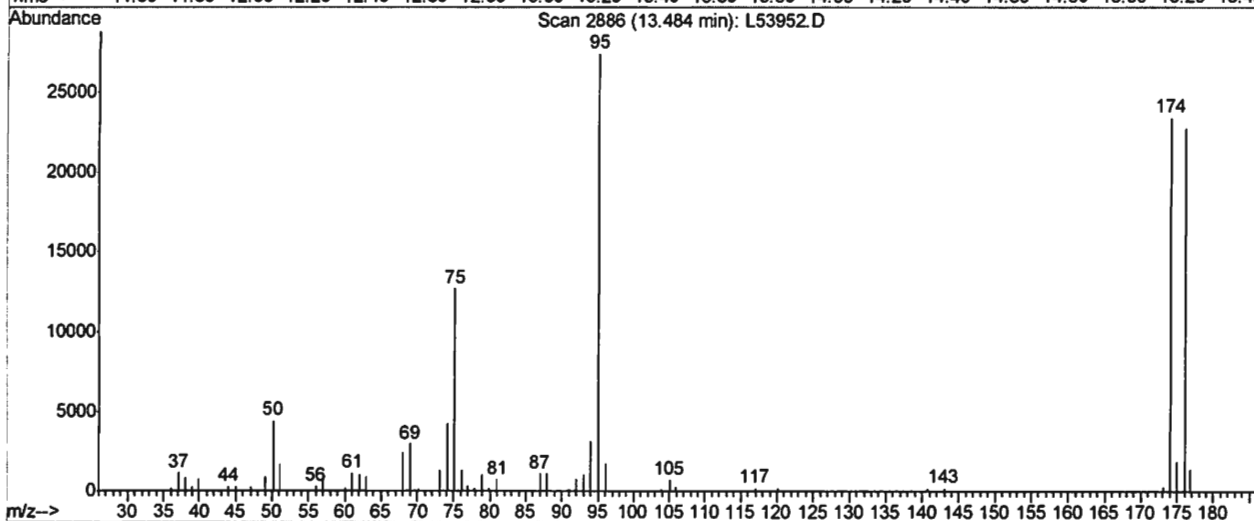
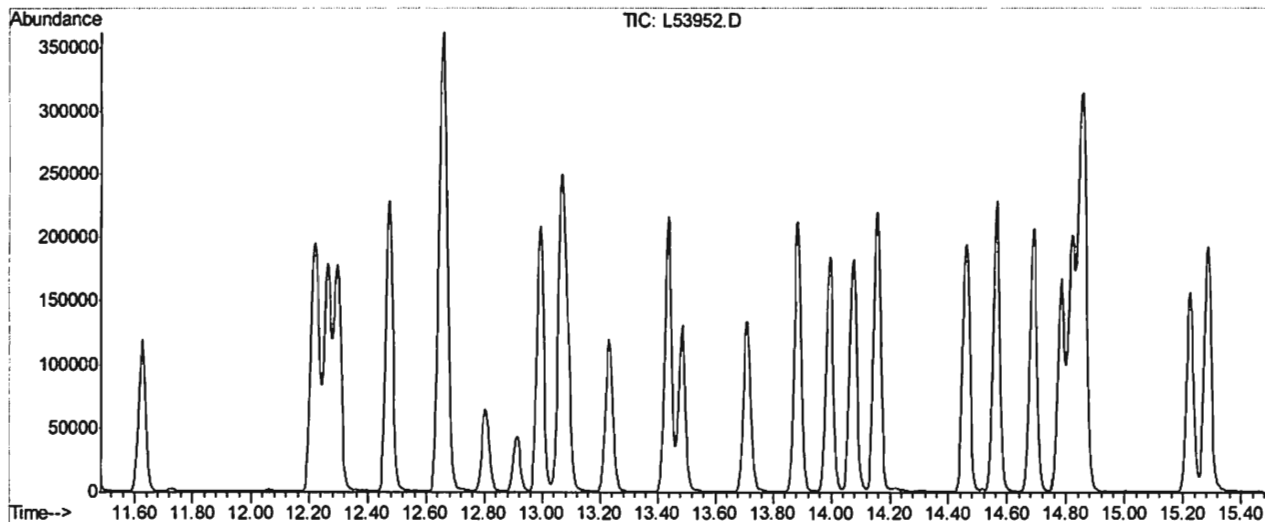
Misc : ms23248,msl1793,,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260



Spectrum Information: Scan 2886

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
Mass	Mass	Limit%	Limit%	Abn%	Abn	Pass/Fail
50	95	15	40	16.2	4450	PASS
75	95	30	60	46.3	12704	PASS
95	95	100	100	100.0	27416	PASS
96	95	5	9	6.3	1736	PASS
173	174	0.00	2	1.1	262	PASS
174	95	50	150	85.3	23384	PASS
175	174	5	9	8.0	1876	PASS
176	174	95	101	97.3	22760	PASS
177	176	5	9	6.2	1421	PASS

L53952.D L052211W.M Thu Jun 16 12:40:35 2011 RPT1

Continuing Calibration Summary

Page 1 of 4

Job Number: MC1051

Sample: MSL1793-CC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L53952.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\L53952.D

Vial: 2

Acq On : 16 Jun 2011 8:59 am

Operator: amym

Sample : cc1764-50

Inst : MAMSL

Misc : ms23248,msl1793,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min

Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	101	0.00	5.86
2	tertiary butyl alcohol	True 500.000	Calc. 497.975	% Drift 0.4	103	0.02	5.93
3	Ethanol	AvgRF 0.274	CCRF 0.185	% Dev 32.5#	77	0.04	4.84
4 I	pentafluorobenzene	1.000	1.000	0.0	105	0.00	8.19
5 M	dichlorodifluoromethane	0.454	0.547	-20.5#	142	0.02	3.73
6 P	chloromethane	True 50.000	Calc. 53.104	% Drift -6.2	115	0.02	3.95
✓ 7 c	vinyl chloride	AvgRF 0.548	CCRF 0.559	% Dev -2.0	108	0.03	4.16
8 M	bromomethane	True 50.000	Calc. 33.002	% Drift 34.0#	66	0.00	4.61
9 M	chloroethane	AvgRF 0.341	CCRF 0.333	% Dev 2.3	114	0.01	4.75
10 M	ethyl ether	0.429	0.412	4.0	102	0.00	5.58
11 M	acetonitrile	True 50.000	Calc. 29.564	% Drift 40.9#	66	0.00	5.25
12 M	trichlorofluoromethane	50.000	44.192	11.6	104	0.01	5.35
13 M	freon-113	50.000	52.426	-4.9	114	0.00	6.08
14 M	acrolein	AvgRF 0.024	CCRF 0.009	% Dev 62.5#	39#	0.00	5.33
15 c	1,1-dichloroethene	0.538	0.458	14.9	102	0.00	5.89
16 M	acetone	True 50.000	Calc. 52.766	% Drift -5.5	116	0.00	5.45
17 M	Methyl Acetate	AvgRF 0.908	CCRF 0.726	% Dev 20.0#	85	0.00	6.06
18 M	methylene chloride	0.631	0.559	11.4	102	0.00	6.04
19 M	methyl tert butyl ether	True 50.000	Calc. 52.126	% Drift -4.3	129	0.00	6.80

Continuing Calibration Summary

Page 2 of 4

Job Number: MC1051

Sample: MSL1793-CC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L53952.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

		AvgRF	CCRF	% Dev			
20 M	acrylonitrile	0.235	0.197	16.2	82	0.01	5.93
21 M	allyl chloride	0.537	0.568	-5.8	120	0.00	6.12
✓ 22 M	trans-1,2-dichloroethene	0.511	0.466	8.8	99	0.00	6.69
		True	Calc.	% Drift			
23 M	iodomethane	50.000	52.577	-5.2	101	0.00	5.94
		AvgRF	CCRF	% Dev			
24 M	carbon disulfide	1.571	1.479	5.9	115	0.00	6.28
		True	Calc.	% Drift			
25 M	propionitrile	50.000	51.984	-4.0	109	0.00	6.94
26 M	vinyl acetate	50.000	68.094	-36.2#	159	0.00	7.03
		AvgRF	CCRF	% Dev			
27 M	chloroprene	0.572	0.676	-18.2	128	0.00	7.30
28 M	di-isopropyl ether	1.298	1.431	-10.2	117	0.00	7.36
29 M	methacrylonitrile	0.290	0.298	-2.8	107	0.00	7.45
		True	Calc.	% Drift			
30 M	2-butanone	50.000	56.408	-12.8	125	0.00	7.35
		AvgRF	CCRF	% Dev			
31 M	Hexane	0.581	0.593	-2.1	117	0.00	7.35
32 P	1,1-dichloroethane	0.844	0.885	-4.9	113	0.00	6.94
		True	Calc.	% Drift			
33 M	tert-butyl ethyl ether	50.000	84.447	-68.9#	240	0.00	7.75
34 M	isobutyl alcohol	250.000	265.022	-6.0	123	-0.02	7.74
35 M	2,2-dichloropropane	50.000	79.817	-59.6#	218	0.00	7.78
		AvgRF	CCRF	% Dev			
✓ 36 M	cis-1,2-dichloroethene	0.569	0.545	4.2	106	0.00	7.51
		True	Calc.	% Drift			
37 M	ethyl acetate	50.000	81.716	-63.4#	168	-0.02	7.74
		AvgRF	CCRF	% Dev			
38 M	bromochloromethane	0.236	0.228	3.4	107	0.00	7.66
39 c	chloroform	1.000	0.935	6.5	106	0.00	7.70
40 S	dibromofluoromethane (s)	0.481	0.428	11.0	97	0.00	7.81
41 M	Tetrahydrofuran	0.129	0.129	0.0	102	0.00	8.03
		True	Calc.	% Drift			
42 M	1,1,1-trichloroethane	50.000	52.896	-5.8	126	0.00	8.44
		AvgRF	CCRF	% Dev			
43 I	1,4-difluorobenzene	1.000	1.000	0.0	108	0.00	9.03
		True	Calc.	% Drift			
44 M	Cyclohexane	50.000	58.224	-16.4	130	0.00	8.73
45 M	carbon tetrachloride	50.000	58.599	-17.2	140	0.00	8.79
		AvgRF	CCRF	% Dev			
46 M	1,1-dichloropropene	0.477	0.425	10.9	108	0.00	8.62
47 M	benzene	1.429	1.375	3.8	112	0.00	8.81
48 M	1,2-dichloroethane	0.480	0.457	4.8	107	0.00	8.33

5.7.3



Continuing Calibration Summary

Page 3 of 4

Job Number: MC1051

Sample: MSL1793-CC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L53952.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

		True	Calc.	% Drift			
49 M	tert-amyl methyl ether	50.000	75.981	-52.0#	213	0.00	8.97
50 M	heptane	50.000	49.157	1.7	119	0.00	9.34

		AvgRF	CCRF	% Dev			
51 M	trichloroethene	0.373	0.358	4.0	109	0.00	9.45
52 c	1,2-dichloropropane	0.333	0.333	0.0	115	0.00	9.41
53 M	dibromomethane	0.231	0.234	-1.3	121	0.00	9.38
54 M	bromodichloromethane	0.454	0.490	-7.9	115	0.00	9.49

		True	Calc.	% Drift			
55 M	Methylcyclohexane	50.000	49.295	1.4	118	0.00	9.98
56 M	2-chloroethyl vinyl ether			NA			
57 M	methyl methacrylate	50.000	51.685	-3.4	119	0.00	9.61
58 M	1,4-dioxane	250.000	242.018	3.2	100	0.00	9.59
59 M	cis-1,3-dichloropropene	50.000	52.701	-5.4	127	0.00	10.12

		AvgRF	CCRF	% Dev			
60 S	toluene-d8 (s)	1.212	1.069	11.8	100	0.00	10.80

		True	Calc.	% Drift			
61 M	4-methyl-2-pentanone	50.000	46.851	6.3	100	0.01	10.24

		AvgRF	CCRF	% Dev			
62 c	toluene	0.930	0.870	6.5	110	0.00	10.88

		True	Calc.	% Drift			
63 M	trans-1,3-dichloropropene	50.000	58.493	-17.0	156	0.00	10.54

		AvgRF	CCRF	% Dev			
64 M	1,1,2-trichloroethane	0.280	0.282	-0.7	111	0.00	10.70

		True	Calc.	% Drift			
65 M	ethyl methacrylate	50.000	57.337	-14.7	143	0.00	10.93

		AvgRF	CCRF	% Dev			
66 I	chlorobenzene-d5	1.000	1.000	0.0	115	0.00	12.26
67 M	tetrachloroethene	0.676	0.608	10.1	111	0.00	11.63
68 M	1,3-dichloropropane	1.017	0.981	3.5	115	0.00	10.94

		True	Calc.	% Drift			
69 M	dibromochloromethane	50.000	48.394	3.2	122	0.00	11.21
70 M	1,2-dibromoethane	50.000	44.954	10.1	109	0.00	11.46
71 M	2-hexanone	50.000	45.071	9.9	102	0.03	11.11

		AvgRF	CCRF	% Dev			
72 P	chlorobenzene	1.879	1.659	11.7	110	0.00	12.30

		True	Calc.	% Drift			
73 M	1,1,1,2-tetrachloroethane	50.000	51.169	-2.3	131	0.00	12.23

		AvgRF	CCRF	% Dev			
74 c	ethylbenzene	3.218	2.795	13.1	106	0.00	12.47
75 M	m,p-xylene	1.252	1.081	13.7	103	0.00	12.66
76 M	o-xylene	1.194	1.058	11.4	103	0.00	13.07
77 M	styrene	2.032	1.776	12.6	104	0.00	12.99

		True	Calc.	% Drift			

Continuing Calibration Summary

Page 4 of 4

Job Number: MC1051

Sample: MSL1793-CC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L53952.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

78 P	bromoform	50.000	55.822	-11.6	143	0.00	12.81
79 M	trans-1,4-dichloro-2-bute	50.000	96.571	-93.1#	343	0.00	13.24
		AvgRF	CCRF	% Dev			
80 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	107	0.00	14.82
81 M	isopropylbenzene	2.701	2.745	-1.6	112	0.00	13.44
82 S	bromofluorobenzene (s)	0.902	0.837	7.2	103	0.00	13.48
83 M	bromobenzene	0.853	0.792	7.2	102	0.00	13.71
84 P	1,1,2,2-tetrachloroethane	0.934	0.944	-1.1	107	0.00	13.09
85 M	1,2,3-trichloropropane	0.761	0.970	-27.5#	135	0.00	13.23
86 M	n-propylbenzene	3.586	3.292	8.2	99	0.00	13.88
87 M	2-chlorotoluene	2.304	2.069	10.2	101	0.00	13.99
88 M	4-chlorotoluene	2.336	2.207	5.5	106	0.00	14.07
89 M	1,3,5-trimethylbenzene	2.566	2.365	7.8	100	0.00	14.16
90 M	tert-butylbenzene	1.412	1.326	6.1	101	0.00	14.46
91 M	1,2,4-trimethylbenzene	2.638	2.447	7.2	102	0.00	14.56
92 M	sec-butylbenzene	2.989	2.856	4.4	101	0.00	14.69
93 M	1,3-dichlorobenzene	1.431	1.344	6.1	103	0.00	14.78
94 M	p-isopropyltoluene	2.339	2.291	2.1	104	0.00	14.86
95 M	1,4-dichlorobenzene	1.584	1.419	10.4	101	0.00	14.85
96 M	1,2-dichlorobenzene	1.404	1.304	7.1	101	0.00	15.22
97 M	n-butylbenzene	2.356	2.216	5.9	101	0.00	15.29
		True	Calc.	% Drift			
98 M	1,2-dibromo-3-chloropropa	50.000	55.818	-11.6	125	0.00	15.70
		AvgRF	CCRF	% Dev			
99	1,3,5-trichlorobenzene	1.036	0.982	5.2	100	0.00	16.51
100 M	1,2,4-trichlorobenzene	0.948	0.938	1.1	100	0.00	17.05
101 M	hexachlorobutadiene	0.468	0.478	-2.1	111	0.00	17.34
102 M	naphthalene	2.569	2.294	10.7	88	0.00	17.29
103 M	1,2,3-trichlorobenzene	0.915	0.859	6.1	95	0.00	17.51
		True	Calc.	% Drift			
104 m	2-Methylnaphthalene	50.000	13.487	73.0#	32	0.01	18.56

(14.1 %) 14 of 99 compounds'%D > 20

(#) = Out of Range

L53004.D L052211W.M

SPCC's out = 0 CCC's out = 0

Thu Jun 16 12:48:22 2011 RPT1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L53952.D

Vial: 2

Acq On : 16 Jun 2011 8:59 am

Operator: amym

Sample : cc1764-50

Inst : MAMSL

Misc : ms23248,ms11793,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jun 16 12:10:02 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	7.66	128	16721	48.27	ug/L #	84
39) chloroform	7.70	83	68641	46.75	ug/L	99
41) Tetrahydrofuran	8.03	42	9446	50.00	ug/L #	66
42) 1,1,1-trichloroethane	8.44	97	57460	52.90	ug/L	97
44) Cyclohexane	8.73	56	47429	58.22	ug/L	85
45) carbon tetrachloride	8.79	117	49429	58.60	ug/L	99
46) 1,1-dichloropropene	8.62	75	46468	44.57	ug/L	95
47) benzene	8.81	78	150238	48.11	ug/L	98
48) 1,2-dichloroethane	8.33	62	49957	47.68	ug/L	93
49) tert-amyl methyl ether	8.97	73	95767	75.98	ug/L	97
50) heptane	9.34	43	31430	49.16	ug/L	85
51) trichloroethene	9.45	95	39052	47.91	ug/L	96
52) 1,2-dichloropropane	9.41	63	36378	50.06	ug/L	96
53) dibromomethane	9.38	93	25554	50.61	ug/L	95
54) bromodichloromethane	9.49	83	53572	53.99	ug/L	92
55) Methylcyclohexane	9.98	83	48001	49.30	ug/L	92
57) methyl methacrylate	9.61	69	25298	51.68	ug/L	95
58) 1,4-dioxane	9.59	88	2031	242.02	ug/L	93
59) cis-1,3-dichloropropene	10.12	75	57739	52.70	ug/L	99
61) 4-methyl-2-pentanone	10.24	43	31392	46.85	ug/L	97
62) toluene	10.88	92	95027	46.78	ug/L	97
63) trans-1,3-dichloropropene	10.54	75	51491	58.49	ug/L	89
64) 1,1,2-trichloroethane	10.70	83	30794	50.32	ug/L	97
65) ethyl methacrylate	10.93	69	47445	57.34	ug/L #	64
67) tetrachloroethene	11.63	166	37758	44.93	ug/L	96
68) 1,3-dichloropropane	10.94	76	60946	48.25	ug/L	98
69) dibromochloromethane	11.21	129	40283	48.39	ug/L	100
70) 1,2-dibromoethane	11.46	107	37196	44.95	ug/L	99
71) 2-hexanone	11.11	43	22481	45.07	ug/L	94
72) chlorobenzene	12.30	112	103055	44.15	ug/L	96
73) 1,1,1,2-tetrachloroethane	12.23	131	35576	51.17	ug/L	89
74) ethylbenzene	12.47	91	173666	43.44	ug/L	99
75) m,p-xylene	12.66	106	134317	86.34	ug/L	91
76) o-xylene	13.07	106	65727	44.30	ug/L	91
77) styrene	12.99	104	110356	43.71	ug/L	84
78) bromoform	12.81	173	33182	55.82	ug/L	92
79) trans-1,4-dichloro-2-buten	13.24	53	9308	96.57	ug/L #	88
81) isopropylbenzene	13.44	105	152952	50.82	ug/L	95
83) bromobenzene	13.71	156	44149	46.45	ug/L	95
84) 1,1,2,2-tetrachloroethane	13.09	83	52614	50.55	ug/L	95
85) 1,2,3-trichloropropane	13.23	75	54017	63.67	ug/L	99
86) n-propylbenzene	13.88	91	183437	45.91	ug/L	98
87) 2-chlorotoluene	13.99	91	115256	44.89	ug/L	99
88) 4-chlorotoluene	14.07	91	122967	47.23	ug/L	96
89) 1,3,5-trimethylbenzene	14.16	105	131777	46.09	ug/L	96
90) tert-butylbenzene	14.46	91	73873	46.96	ug/L	95
91) 1,2,4-trimethylbenzene	14.56	105	136351	46.39	ug/L	95
92) sec-butylbenzene	14.69	105	159103	47.77	ug/L	97
93) 1,3-dichlorobenzene	14.78	146	74900	46.96	ug/L	98

(#)=qualifier out of range (m)=manual integration

L53952.D L052211W.M

Thu Jun 16 12:42:01 2011

RPT1

Page 2



Data Validation Report

**WSP Environment and Energy
Former TTC – Glen Head, NY**

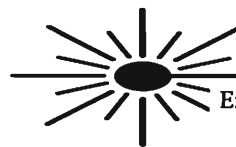
SDG# MC1182



ECT.CON INC.

Environmental and Computer
Technology Consultants

3531 Fox Chase Drive
Imperial, PA 15126
(724) 695-8042
FAX (724) 695-2698
e-mail: ectconinc@comcast.net



Data Validation Report

SDG#	MC1182
Validation Report Date	July 17, 2011
Validation Guidance	USEPA CLP National Functional Guidelines for Data Review
Client Name	WSP Environment and Energy
Project Name	Former TTC – Glen Head, NY
Laboratory	Accutest
Method(s) Utilized	SW 846 8260B
Analytical Fraction	Volatile Organic Compounds (VOCs)

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
6/15/2011	TB061511	MC1182-1	X	Aqueous
6/15/2011	GP-12-170	MC1182-2	X	Aqueous
6/15/2011	GP-12-160	MC1182-3	X	Aqueous
6/15/2011	GP-12-150	MC1182-4	X	Aqueous
6/15/2011	GP-12-140	MC1182-5	X	Aqueous
6/15/2011	GP-12-130	MC1182-6	X	Aqueous
6/15/2011	GP-12-120	MC1182-7	X	Aqueous
6/15/2011	GP-12-110	MC1182-8	X	Aqueous
6/15/2011	EB061511	MC1182-9	X	Aqueous
6/16/2011	GP-11-180	MC1182-10	X	Aqueous
6/16/2011	GP-11-170	MC1182-11	X	Aqueous
6/16/2011	GP-11-160	MC1182-12	X	Aqueous
6/16/2011	GP-11-150	MC1182-13	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. Laboratory calculations have been verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the Former TTC – Glen Head, NY site consists of 11 aqueous field samples, one equipment blank, and one trip blank. These samples were analyzed for the parameters as provided in the Table 1. The findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct.

The VOC findings are based upon the assessment of the following:

- * • Data Completeness
- * • Holding Times
- * • Calibration (Initial and Continuing)
- * • Blanks
- * • System Monitoring Compounds (Surrogate Spikes)
- * • Matrix Spike/Matrix Spike Duplicates
- * • Laboratory Control Sample Results
- * • Internal Standards
- * • Target Compound Identification
- * • Compound Quantification and Reported Contract Quantitation Limits
- * • System Performance

* Criteria were met for this evaluation item.

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

All technical parameters were met. No qualifiers were assigned to the data.

NOTES

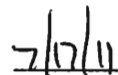
VOLATILE ORGANIC COMPOUNDS

Field Duplicates

No field duplicates were included with this sample delivery group. Data were not qualified on this basis.



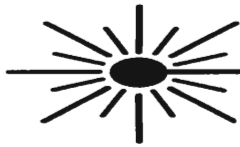
Data Reviewer



Date

Glossary of Data Qualifiers

U	Not Detected.	The associated number indicates approximate sample concentration necessary to be detected.
UJ	Not Detected.	Quantitation limit may be inaccurate or imprecise.
J	Analyte Present.	Reported value may not be accurate or precise.
N	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts.
R	Unusable Result.	Analyte may or may not be present in the sample.
UR	Unusable Result.	Analyte may or may not be present in the sample.



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Annotated Form 1's *(Spreadsheet)*

Accutest LabLink@114300 08:12 13-Jul-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	TB061511	Date Sampled:	06/15/11
Lab Sample ID:	MC1182-1	Date Received:	06/17/11
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54046.D	1	06/19/11	AMY	n/a	n/a	MSL1796
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	86%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:12 13-Jul-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	GP-12-170	Date Sampled:	06/15/11
Lab Sample ID:	MC1182-2	Date Received:	06/17/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54048.D	1	06/19/11	AMY	n/a	n/a	MSL1796
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	5.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	59.7	1.0	ug/l	
79-01-6	Trichloroethene	4.6	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	85%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:12 13-Jul-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	GP-12-160	Date Sampled:	06/15/11
Lab Sample ID:	MC1182-3	Date Received:	06/17/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54049.D	1	06/19/11	AMY	n/a	n/a	MSL1796
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	2.8	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	74.5	1.0	ug/l	
79-01-6	Trichloroethene	3.3	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	85%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:12 13-Jul-2011

Report of Analysis

Page 1 of 1

3.4

Client Sample ID:	GP-12-150	Date Sampled:	06/15/11
Lab Sample ID:	MC1182-4	Date Received:	06/17/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54050.D	1	06/19/11	AMY	n/a	n/a	MSL1796
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	18.3	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	91%		70-130%
460-00-4	4-Bromofluorobenzene	84%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:12 13-Jul-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	GP-12-140	Date Sampled:	06/15/11
Lab Sample ID:	MC1182-5	Date Received:	06/17/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54051.D	1	06/19/11	AMY	n/a	n/a	MSL1796
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	1.6	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	34.5	1.0	ug/l	
79-01-6	Trichloroethene	6.6	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	86%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:12 13-Jul-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	GP-12-130	Date Sampled:	06/15/11
Lab Sample ID:	MC1182-6	Date Received:	06/17/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54052.D	1	06/19/11	AMY	n/a	n/a	MSL1796
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	1.3	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	4.6	1.0	ug/l	
79-01-6	Trichloroethene	7.1	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	84%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:12 13-Jul-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	GP-12-120	Date Sampled:	06/15/11
Lab Sample ID:	MC1182-7	Date Received:	06/17/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54053.D	1	06/19/11	AMY	n/a	n/a	MSL1796
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	1.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	2.1	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	91%		70-130%
460-00-4	4-Bromofluorobenzene	83%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:12 13-Jul-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	GP-12-110	Date Sampled:	06/15/11
Lab Sample ID:	MC1182-8	Date Received:	06/17/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54054.D	1	06/19/11	AMY	n/a	n/a	MSL1796
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	1.7	1.0	ug/l	
79-01-6	Trichloroethene	4.9	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	88%		70-130%
460-00-4	4-Bromofluorobenzene	81%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:12 13-Jul-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	EB061511	Date Sampled:	06/15/11
Lab Sample ID:	MC1182-9	Date Received:	06/17/11
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54047.D	1	06/19/11	AMY	n/a	n/a	MSL1796
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	86%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:12 13-Jul-2011

Report of Analysis

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Client Sample ID:	GP-11-180	Date Sampled:	06/16/11
Lab Sample ID:	MC1182-10	Date Received:	06/17/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54055.D	1	06/19/11	AMY	n/a	n/a	MSL1796
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	83%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:12 13-Jul-2011

Report of Analysis

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Client Sample ID:	GP-11-170	Date Sampled:	06/16/11
Lab Sample ID:	MC1182-11	Date Received:	06/17/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54056.D	1	06/19/11	AMY	n/a	n/a	MSL1796
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	83%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:12 13-Jul-2011

Report of Analysis

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Client Sample ID:	GP-11-160	Date Sampled:	06/16/11
Lab Sample ID:	MC1182-12	Date Received:	06/17/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54057.D	1	06/19/11	AMY	n/a	n/a	MSL1796
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%
2037-26-5	Toluene-D8	90%		70-130%
460-00-4	4-Bromofluorobenzene	84%		70-130%

Wk
7/17/11

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:12 13-Jul-2011

Report of Analysis

Page 1 of 1

Client Sample ID: GP-11-150

Lab Sample ID: MC1182-13

Matrix: AQ - Ground Water

Method: SW846 8260B

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Date Sampled: 06/16/11

Date Received: 06/17/11

Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54058.D	1	06/19/11	AMY	n/a	n/a	MSL1796
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

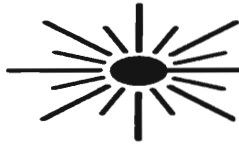
VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	86%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



ECT.CON INC.

Environmental and Computer
Technology Consultants

Support Documentation

Laboratory Case Narrative



Sample Summary

WSP Environmental & Energy

Job No: MC1182

Former Trans Technology 1 Robert Lane Glen Head, NY
Project No: 13224.00/00003

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
MC1182-1	06/15/11	00:00 DC	06/17/11	AQ	Trip Blank Water	TB061511
MC1182-2	06/15/11	09:15 DC	06/17/11	AQ	Ground Water	GP-12-170
MC1182-3	06/15/11	10:25 DC	06/17/11	AQ	Ground Water	GP-12-160
MC1182-4	06/15/11	11:30 DC	06/17/11	AQ	Ground Water	GP-12-150
MC1182-5	06/15/11	12:10 DC	06/17/11	AQ	Ground Water	GP-12-140
MC1182-6	06/15/11	13:40 DC	06/17/11	AQ	Ground Water	GP-12-130
MC1182-7	06/15/11	14:20 DC	06/17/11	AQ	Ground Water	GP-12-120
MC1182-8	06/15/11	15:00 DC	06/17/11	AQ	Ground Water	GP-12-110
MC1182-9	06/15/11	16:00 DC	06/17/11	AQ	Equipment Blank	EB061511
MC1182-10	06/16/11	11:55 DC	06/17/11	AQ	Ground Water	GP-11-180
MC1182-11	06/16/11	13:15 DC	06/17/11	AQ	Ground Water	GP-11-170
MC1182-12	06/16/11	15:00 DC	06/17/11	AQ	Ground Water	GP-11-160
MC1182-13	06/16/11	16:15 DC	06/17/11	AQ	Ground Water	GP-11-150

SAMPLE DELIVERY GROUP CASE NARRATIVE**Client:** WSP Environmental & Energy**Job No** MC1182**Site:** Former Trans Technology I Robert Lane Glen Head, NY**Report Date** 7/12/2011 11:45:26 AM

12 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on between 06/15/2011 and 06/16/2011 and were received at Accutest on 06/17/2011 properly preserved, at 2.3 Deg. C and intact. These Samples received an Accutest job number of MC1182. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ	Batch ID: MSL1796

- ▣ All samples were analyzed within the recommended method holding time.
- ▣ All method blanks for this batch meet method specific criteria.
- ▣ Sample(s) MC1182-2MS, MC1182-2MSD were used as the QC samples indicated.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC1182).

Chain of Custody

CHAIN OF CUSTODY RECORD

MC1182

Page 1 of 1

Project Number: 13224/1		Site and Location: FORMER TTC - GLEN HEAD NY		Matrices: S = Soil Aq = Water A = Air Mu = Bulk W = Wipe Di = Dioxin OW = Only Waste O = Other		N° 02227	
Contact Name: DAVE BOUCHARD		Contact Email: dave.boucharde@wspcorp.com		Sampler's Name: DAVID CARSTENS		Sampler's Signature: <i>[Signature]</i>	
Sample Identification:		Depth	Date	Time	Matrix	Number of Containers	Remarks
TB061511 -1		---	6/10/11	---	AQ	2	DELIVERABLE: COMM. B REPORT +
GP-12-170 -2		170		0915	AQ	3	NY EDD
GP-12-160 -3		160		1025	AQ	3	
GP-12-150 -4		150		1130	AQ	3	
GP-12-140 -5		140		1210	AQ	3	
GP-12-130 -6		130		1340	AQ	3	
GP-12-120 -7		120		1420	AQ	3	
GP-12-110 -8		110		1500	AQ	3	
EB061511 -9		---		1600	AQ	3	
GP-11-180 -10		180	6/14/11	1155	AQ	3	
GP-11-170 -11		170		1315	AQ	3	
GP-11-160 -12		160		1500	AQ	3	
GP-11-150 -13		150		1615	AQ	3	
							163
Relinquished by (Signature): <i>[Signature]</i>		Date/Time: 6/16/2011 1800	Received by (Signature): <i>[Signature]</i>		Laboratory Name: ACCUTEST		 WSP WSP Environment & Energy SEAL OF: REC 2.3°C
Relinquished by (Signature): <i>[Signature]</i>		Date/Time: 6/17/11 07:30	Received by (Signature): <i>[Signature]</i>		Laboratory Location: MA		
Turn-Around Time: STANDARD		Tracking Number: 8759 0905 2308		Custody Seal Numbers:			
				Method of Shipment: FEDEX			
☐ Reston Office: 11190 Sunrise Valley Dr., #300, Reston, VA 20191 / Tel: 703-709-6500 ☐ Pittsburgh Office: 750 Holiday Dr., #410, Pittsburgh, PA 15220 / Tel: 412-604-1040 ☐ San Jose Office: 2025 Gateway Place, #435, San Jose, CA 95110 / Tel: 408-453-6100 ☐ New Jersey Office: 334 Elizabeth Ave., Somerset, NJ 08873 / Tel: 732-564-0888				☒ Denver Office: 4600 South Ulster, #930, Denver, CO 80237 / Tel: 303-850-9200 ☐ Minneapolis Office: 123 North 3rd St., #808, Minneapolis, MN 55401 / Tel: 612-343-0510 ☐ Hoxborough Office: 1740 Massachusetts Ave., Hoxborough, MA 01719 / Tel: 978-635-9600 ☒ Cazenovia Office: 5 Sullivan St., Cazenovia, NY 13035 / Tel: 315-655-3900			

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MC1182: Chain of Custody

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Worksheets

SDG NUMBER	MC1182
VALIDATION REPORT DATE	7/17/2011
VALIDATION GUIDANCE	NFG
CLIENT NAME	WSP Environmental and Energy
PROJECT NAME	Former Trans Technology, 1 Robert Lane, Glen Head, NY
LABORATORY	Accutest
METHOD(S) UTILIZED	8260B
ANALYTICAL FRACTION(S)	VOCs
COOLER TEMPERATURES	Ok
FIELD DUPLICATES	NONE

SDG	SAMPLE DATE	SAMPLE ID	LABORATORY ID	MATRIX	8260C
1	6/15/2011	TB061511	MC1182-1	Aqueous	X
2	6/15/2011	GP-12-170	MC1182-2	Aqueous	X
3	6/15/2011	GP-12-160	MC1182-3	Aqueous	X
4	6/15/2011	GP-12-150	MC1182-4	Aqueous	X
5	6/15/2011	GP-12-140	MC1182-5	Aqueous	X
6	6/15/2011	GP-12-130	MC1182-6	Aqueous	X
7	6/15/2011	GP-12-120	MC1182-7	Aqueous	X
8	6/15/2011	GP-12-110	MC1182-8	Aqueous	X
9	6/15/2011	EB061511	MC1182-9	Aqueous	X
10	6/16/2011	GP-11-180	MC1182-10	Aqueous	X
11	6/16/2011	GP-11-170	MC1182-11	Aqueous	X
12	6/16/2011	GP-11-160	MC1182-12	Aqueous	X
13	6/16/2011	GP-11-150	MC1182-13	Aqueous	X

HOLDING TIMES						
SAMPLE DATE	SAMPLE ID	LAB ID	MATRIX	PARAMETER	DATE ANALYZED	DF
6/15/2011	TB061511	MC1182-1	Aqueous	X	6/19/2011	1X
6/15/2011	GP-12-170	MC1182-2	Aqueous	X	6/19/2011	1X
6/15/2011	GP-12-160	MC1182-3	Aqueous	X	6/19/2011	1X
6/15/2011	GP-12-150	MC1182-4	Aqueous	X	6/19/2011	1X
6/15/2011	GP-12-140	MC1182-5	Aqueous	X	6/19/2011	1X
6/15/2011	GP-12-130	MC1182-6	Aqueous	X	6/19/2011	1X
6/15/2011	GP-12-120	MC1182-7	Aqueous	X	6/19/2011	1X
6/15/2011	GP-12-110	MC1182-8	Aqueous	X	6/19/2011	1X
6/15/2011	EB061511	MC1182-9	Aqueous	X	6/19/2011	1X
6/16/2011	GP-11-180	MC1182-10	Aqueous	X	6/19/2011	1X
6/16/2011	GP-11-170	MC1182-11	Aqueous	X	6/19/2011	1X
6/16/2011	GP-11-160	MC1182-12	Aqueous	X	6/19/2011	1X
6/16/2011	GP-11-150	MC1182-13	Aqueous	X	6/19/2011	1X

14 days from collection to analysis
Sample Date 6/15/2011 Analyze by 6/29/2011
Sample Date 6/16/2011 Analyze by 6/30/2011

TARGET COMPOUNDS AND QUANTITATION LIMITS	
Was a target compound list provided by the client?	Yes, 5 compounds only
Did Sample Form 1s match the target compound list	yes
Were required quantitation limits provided by the client?	No
Did all compounds meet the required quantitation limits?	NA

SYSTEM MONITORING COMPOUNDS				
SAMPLE	DF	SURROGATE	RECOVERY	ACTION
All OK				

Were surrogate RTs within windows established by the ICAL? Yes
Were there any transcription errors between the raw data and Form 2? No
Were laboratory acceptance limits used as the basis for validation? Yes
Did the laboratory provide CLP Form II or equivalent? Yes

gp-12-170	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 2
DBFM	47.03	50	94.1	94
Tol-d8	46.14	50	92.3	92
BFB	42.66	50	85.3	85

Recovery = (Amount Found/Amount Spiked)*100

MS/MSD RECOVERY and RELATIVE PERCENT DIFFERENCE						
gp-12-170 MS/MSD						
COMPOUND	MS %R	MSD %R	RPD	NATIVE	SPIKE	ACTION
All Parameters	ok	ok	ok			

Were there any transcription errors between the raw data and Form 3? No
Were laboratory acceptance limits used as the basis for validation? 70-130%
Did the laboratory provide CLP Form III or equivalent? No
Were chromatograms and quan reports present for all MS/MSDs? Yes

tetrachloroethene	AMOUNT FOUND	AMOUNT NATIVE	AMOUNT SPIKED	%R	Form 3
MS	274	59.7	250	85.7	86
MSD	255	59.7	250	78.1	78
RPD	7.2			9.3	7.0

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100
RPD = ((MS-MSD)/((MS+MSD)/2))*100

LABORATORY CONTROL SAMPLES

SAMPLE	COMPOUND	LCS %R	LCSD %R	RPD	Samples	ACTION
MSL1796-BS	All Parameters	ok	ok			

Were there any transcription errors between the raw data and Form 3?

No

Were laboratory acceptance limits used as the basis for validation?

70-130%

Did the laboratory provide CLP Form III or equivalent?

Yes

Were chromatograms and quan reports present for all LCS/LCDs?

Yes

MSL1796-BS	PCE	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 3
	LCS	43.4	50	86.8	87%

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

BLANKS

BLANK	COMPOUND	RESULT	5X OR 10X	ACTION LEVEL	ACTION
MSL1796-MB	All Parameters	ND		#VALUE!	
TB061511	All Parameters	ND		#VALUE!	
EB061511	All Parameters	ND		#VALUE!	

Were Form Is provided for all blanks?

Yes

Were chromatograms and quan reports present for all blanks?

Yes

Did the laboratory provide CLP Form IVs or equivalent?

No

CALIBRATION

Initial

Are chromatograms and quan reports present for all ICAL standards?

Yes

Are CLP For VIs or equivalent present and complete?

Yes

Any transcription or calculation errors?

No

What linearity criteria was used?

30% RSD

Are RRFs greater than 0.05?

Yes

Continuing

Are chromatograms and quan reports present for all CCV standards?

Yes

Are CLP For VIIIs or equivalent present and complete?

Yes

Any transcription or calculation errors?

No

What %D criteria was used?

30%D

Were samples analyzed within 12 hours of the tune?

Yes

Are RRFs greater than 0.05?

Yes

*Shading indicates a value outside the 12 hour criteria.

	ICAL	CCV	ICAL	CCV	CCV	CCV
Instrument	GCMSL					
Date	5/22/2011	6/19/2011				
Tune	8:30	9:14				
CCV		9:14				
Blank		10:12				
COMPOUNDS						
	All OK	All OK				
SAMPLES						

INITIAL CALIBRATION RRF

Date 5/22/2011
Instrument GCMSL
Compound tetrachloroethene
Reported RF 0.65
Calculated RF 0.64985

Compound Area (A1) 16552
Conc (C1) 25

Internal Std Area (A2) 50941
Conc (C2) 50

INITIAL CALIBRATION AVERAGE RRF

Rptd Avg RRF 0.676
Calcd Avg RRF 0.676444

RRF1 0.739
RRF2 0.646
RRF3 0.629
RRF4 0.609
RRF5 0.728
RRF6 0.766
RRF7 0.65
RRF8 0.668
RRF9 0.653
SUM 6.088

$$RRF = (A1/A2) * (C2/C1)$$

INITIAL CALIBRATION %RSD

Reported %RSD 8
Calculated %RSD 8.036

STD DEV 0.0544

$$\%RSD = (Std Dev / Avg RRF) * 100$$

CONTINUING CALIBRATION %D

Date 6/19/2011
Time 9:14
Instrument GCMSL
Compound tetrachloroethene
Reported RRF 0.587
Calculated RF 0.587

Compound Area (A1) 35830
Conc (C1) 50

Reported %Difference 13.2
Calculated %Difference 13.12

Internal Std Area (A2) 61007
Conc (C2) 50

ICAL RRF 0.676
CCV RRF 0.5873

$$\%Difference = ((ICAL - CCV)/ICAL) * 100$$

TUNE

Raw data and mass assignments correct? Yes Instrument GCMSL
Mass listing normalized to specified m/z? Yes Date 6/19/2011
Were all tune reports present? Yes Time 9:14

m/z	Area	Calculated %	Reported %	Abundance Criteria
50	3789	16.8%	16.8	15-40% of mass 95
75	10548	46.8%	46.8	30-60% of mass 95
95	22560	100.0%	100	base peak, 100%
96	1508	6.7%	6.7	5-9% of mass 95
173	186	1.0%	1	<2% of mass 174
174	19416	86.1%	86.1	50%-120% of mass 95
175	1720	8.9%	8.9	5-9% of mass 174
176	18672	96.2%	96.2	95%-101% of mass 174
177	1498	8.0%	8	5-9% of mass 176

INTERNAL STANDARD CHECK

CCV Date	6/19/2011	Shading indicates a percent recovery outside the -50% to 100% criteria.				
CCV Time	9:14	Shading indicates a retention time outside the +/- 0.5 minute criteria.				
Instrument	GCMSL					
	PFB	RT	14-DFB	RT	CB-d5	RT
	71926	8.19	106289	9.03	61007	12.26
UPPER	143852	8.69	212578	9.53	122014	12.76
LOWER	35963	7.69	53145	8.53	30504	11.76
gp-12-170	67388	8.200	96817	9.030	55413	12.270
	94%		91%		91%	

RELATIVE RETENTION TIMES

SAMPLE	gp-12-170		
Compound	Compound RT	IS RT	RRT
PCE	11.63	12.27	0.948
cis-12-DCE	7.51	8.2	0.916
TCE	9.45	9.03	1.047

CCV Date and Time		6/19/11 @ 0914 GCMSL			
Compound	Compound RT	IS RT	RRT	RANGE	
PCE	11.63	12.26	0.949	0.889	1.009
cis-12-DCE	7.51	8.19	0.917	0.857	0.977
TCE	9.45	9.03	1.047	0.987	1.107

Shading indicates a relative retention time outside the +/- 0.06 RRT unit criteria.

FIELD DUPLICATES - None Present

SAMPLE CALCULATION

GP-12-170, tetrachloroethene, 59.7 µg/L

Compound area	44756	Compound area		Compound area	
IS area	55413	IS area		IS area	
IS conc	50	IS conc		IS conc	
Compound RRF	0.676	Compound RRF		Compound RRF	
Volume	1	Volume		Volume	
DF	1	DF		DF	
Concentration ppbv	59.74	Concentration	#DIV/0!	Concentration	#DIV/0!

Concentration = (Compound area/ IS area) * (IS conc/Compound RRF) * (DF/ Volume)

Are there any transcription errors?	No
Are Form Is present for all field and quality control samples?	Yes
Are chromatograms and quan reports present for all samples?	Yes
Are RLs adjusted to reflect sample dilutions, percent solids, etc.?	Yes
For soils, any percent solids <50%?	NA
For soils, any percent solids <10%?	NA

Volatile Surrogate Recovery Summary

Page 1 of 1

Job Number: MC1182

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Method: SW846 8260B

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC1182-1	L54046.D	93.0	92.0	86.0
MC1182-2	L54048.D	94.0	92.0	85.0
MC1182-3	L54049.D	93.0	92.0	85.0
MC1182-4	L54050.D	93.0	91.0	84.0
MC1182-5	L54051.D	94.0	93.0	86.0
MC1182-6	L54052.D	94.0	93.0	84.0
MC1182-7	L54053.D	94.0	91.0	83.0
MC1182-8	L54054.D	92.0	88.0	81.0
MC1182-9	L54047.D	92.0	94.0	86.0
MC1182-10	L54055.D	93.0	92.0	83.0
MC1182-11	L54056.D	93.0	92.0	83.0
MC1182-12	L54057.D	95.0	90.0	84.0
MC1182-13	L54058.D	94.0	92.0	86.0
MC1182-2MS	L54060.D	83.0	88.0	83.0
MC1182-2MSD	L54061.D	84.0	87.0	84.0
MSL1796-BS	L54039.D	88.0	89.0	89.0
MSL1796-MB	L54041.D	91.0	93.0	88.0

Surrogate Compounds	Recovery Limits

S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

5.6.1



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54048.D Vial: 12
 Acq On : 19 Jun 2011 1:40 pm Operator: amym
 Sample : mcl182-2 Inst : MAMSL
 Misc : ms23270,ms11796,,,,5,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Jun 20 08:02:23 2011 Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Sun May 22 15:35:26 2011
 Response via : Initial Calibration
 DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.85	65	22975	500.00	ug/L	-0.02
4) pentafluorobenzene	8.20	168	67388	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.03	114	96817	50.00	ug/L	0.00
66) chlorobenzene-d5	12.27	82	55413	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	49321	50.00	ug/L	0.00

System Monitoring Compounds		R.T.	QIon	Response	Conc	Units	Dev(Min)
40) dibromofluoromethane (s)		7.81	113	30475	47.03	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	94.06%	
60) toluene-d8 (s)		10.81	98	108272	46.14	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	92.28%	
82) bromofluorobenzene (s)		13.49	95	37974	42.66	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	85.32%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
19) methyl tert butyl ether	6.80	73	9260	8.89	ug/L	99
32) 1,1-dichloroethane	6.94	63	695	0.61	ug/L #	49
36) cis-1,2-dichloroethene	7.51	96	3823	4.99	ug/L	96
51) trichloroethene	9.45	95	3338	4.62	ug/L	89
62) toluene	10.88	92	652	0.36	ug/L	94
67) tetrachloroethene	11.63	166	44756	59.70	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 L54048.D L052211W.M Mon Jun 20 09:43:27 2011 RPT1



GP-12-170

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC1182

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC1182-2MS	L54060.D	5	06/19/11	AMY	n/a	n/a	MSL1796
MC1182-2MSD	L54061.D	5	06/19/11	AMY	n/a	n/a	MSL1796
MC1182-2	L54048.D	1	06/19/11	AMY	n/a	n/a	MSL1796

The QC reported here applies to the following samples:

Method: SW846 8260B

MC1182-1, MC1182-2, MC1182-3, MC1182-4, MC1182-5, MC1182-6, MC1182-7, MC1182-8, MC1182-9, MC1182-10, MC1182-11, MC1182-12, MC1182-13

CAS No.	Compound	MC1182-2 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethene	5.0	250	230	90	207	81	11	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	210	84	189	76	11	70-130/30
127-18-4	Tetrachloroethene	59.7	250	274	86	255	78	7	70-130/30
79-01-6	Trichloroethene	4.6	250	247	97	216	85	13	70-130/30
75-01-4	Vinyl chloride	ND	250	240	96	227	91	6	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC1182-2	Limits
1868-53-7	Dibromofluoromethane	83%	84%	94%	70-130%
2037-26-5	Toluene-D8	88%	87%	92%	70-130%
460-00-4	4-Bromofluorobenzene	83%	84%	85%	70-130%

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54060.D

Vial: 24

Acq On : 19 Jun 2011 7:29 pm

Operator: amym

Sample : mcl182-2ms

Inst : MAMSL

Misc : ms23270,msl1796,,,,,5,5

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jun 20 08:02:59 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.83	65	19801	500.00	ug/L	-0.03
4) pentafluorobenzene	8.19	168	73503	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.02	114	106053	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	62492	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	62851	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	29401	41.60	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	83.20%
60) toluene-d8 (s)	10.80	98	112634	43.82	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	87.64%
82) bromofluorobenzene (s)	13.48	95	46855	41.31	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	82.62%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	5.91	59	30147	542.35	ug/L	99
3) Ethanol	4.80	45	40424	3725.70	ug/L	97
5) dichlorodifluoromethane	3.73	85	41951	62.90	ug/L	100
6) chloromethane	3.95	50	33996	46.61	ug/L	93
7) vinyl chloride	4.16	62	38760	48.08	ug/L	96
8) bromomethane	4.61	96	13034	23.92	ug/L	95
9) chloroethane	4.75	64	21795	43.50	ug/L	92
10) ethyl ether	5.58	59	26334	41.71	ug/L	90
11) acetonitrile	5.25	41	17305	64.71	ug/L	92
12) trichlorofluoromethane	5.34	101	55256	41.72	ug/L	93
13) freon-113	6.08	101	29254	47.62	ug/L	90
14) acrolein	5.32	56	14029	396.08	ug/L	93
15) 1,1-dichloroethene	5.89	96	31130	39.33	ug/L	92
16) acetone	5.44	43	14320	39.72	ug/L	88
17) Methyl Acetate	6.05	43	49531	37.13	ug/L	94
18) methylene chloride	6.04	84	37222	40.12	ug/L	98
19) methyl tert butyl ether	6.80	73	95144	48.52	ug/L	95
20) acrylonitrile	5.93	53	12379	35.84	ug/L	96
21) allyl chloride	6.12	41	36324	46.04	ug/L	85
22) trans-1,2-dichloroethene	6.69	96	31548	42.01	ug/L	96
23) iodomethane	5.95	142	26899	43.13	ug/L	83
24) carbon disulfide	6.28	76	96698	41.86	ug/L	99
25) propionitrile	6.94	54	4530	44.91	ug/L	100
26) vinyl acetate	7.03	43	25927	52.14	ug/L	96
27) chloroprene	7.30	53	44472	52.93	ug/L	93
28) di-isopropyl ether	7.36	45	93887	49.19	ug/L	90
29) methacrylonitrile	7.44	41	18817	44.10	ug/L	85
30) 2-butanone	7.35	72	4329	44.25	ug/L #	13
31) Hexane	7.35	41	36915	43.23	ug/L	98
32) 1,1-dichloroethane	6.94	63	60130	48.47	ug/L	97
33) tert-butyl ethyl ether	7.75	59	85927	74.92	ug/L	95
34) isobutyl alcohol	7.74	43	9621	236.90	ug/L	85
35) 2,2-dichloropropane	7.78	77	15751	43.47	ug/L	91
36) cis-1,2-dichloroethene	7.51	96	38540	46.10	ug/L	91
37) ethyl acetate	7.74	43	9599	70.25	ug/L	70

(#)=qualifier out of range (m)=manual integration

L54060.D L052211W.M

Mon Jun 20 11:52:55 2011

RPT1

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54060.D

Vial: 24

Acq On : 19 Jun 2011 7:29 pm

Operator: amym

Sample : mcl182-2ms

Inst : MAMSL

Misc : ms23270,msl1796,,,,5,5

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jun 20 08:02:59 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	7.66	128	17879	51.56	ug/L	86
39) chloroform	7.70	83	66731	45.40	ug/L	98
41) Tetrahydrofuran	8.03	42	7718	40.81	ug/L	72
42) 1,1,1-trichloroethane	8.44	97	52711	49.15	ug/L	97
44) Cyclohexane	8.73	56	41585	53.07	ug/L	84
45) carbon tetrachloride	8.79	117	45516	55.70	ug/L	97
46) 1,1-dichloropropene	8.62	75	43036	42.52	ug/L	97
47) benzene	8.81	78	144424	47.63	ug/L	99
48) 1,2-dichloroethane	8.33	62	48140	47.32	ug/L	94
49) tert-amyl methyl ether	8.97	73	87345	72.08	ug/L	97
50) heptane	9.34	43	24033	41.26	ug/L	87
51) trichloroethene	9.45	95	39054	49.35	ug/L	94
52) 1,2-dichloropropane	9.41	63	34331	48.66	ug/L	96
53) dibromomethane	9.38	93	25101	51.21	ug/L	90
54) bromodichloromethane	9.49	83	53092	55.11	ug/L	96
55) Methylcyclohexane	9.98	83	42534	46.02	ug/L	92
57) methyl methacrylate	9.60	69	24755	52.01	ug/L	93
58) 1,4-dioxane	9.59	88	1864	232.66	ug/L	98
59) cis-1,3-dichloropropene	10.12	75	51464	48.83	ug/L	94
61) 4-methyl-2-pentanone	10.23	43	27900	43.43	ug/L	97
62) toluene	10.87	92	92893	47.10	ug/L	91
63) trans-1,3-dichloropropene	10.54	75	47851	56.40	ug/L	89
64) 1,1,2-trichloroethane	10.70	83	29973	50.45	ug/L	98
65) ethyl methacrylate	10.93	69	43030	54.31	ug/L	70
67) tetrachloroethene	11.63	166	46314	54.78	ug/L	98
68) 1,3-dichloropropane	10.94	76	58724	46.22	ug/L	96
69) dibromochloromethane	11.21	129	40950	48.84	ug/L	96
70) 1,2-dibromoethane	11.46	107	36716	44.23	ug/L	98
71) 2-hexanone	11.11	43	18548	38.26	ug/L	96
72) chlorobenzene	12.30	112	102624	43.70	ug/L	97
73) 1,1,1,2-tetrachloroethane	12.23	131	35720	51.09	ug/L	95
74) ethylbenzene	12.47	91	170612	42.42	ug/L	99
75) m,p-xylene	12.66	106	130541	83.42	ug/L	94
76) o-xylene	13.07	106	66390	44.49	ug/L	87
77) styrene	12.99	104	112368	44.24	ug/L	86
78) bromoform	12.80	173	33105	55.45	ug/L	93
79) trans-1,4-dichloro-2-buten	13.24	53	8420	89.34	ug/L #	79
81) isopropylbenzene	13.44	105	158497	46.68	ug/L	95
83) bromobenzene	13.71	156	45492	42.43	ug/L	93
84) 1,1,2,2-tetrachloroethane	13.09	83	51375	43.75	ug/L	98
85) 1,2,3-trichloropropane	13.23	75	51789	54.11	ug/L	98
86) n-propylbenzene	13.88	91	188178	41.75	ug/L	99
87) 2-chlorotoluene	13.99	91	121733	42.03	ug/L	100
88) 4-chlorotoluene	14.07	91	130172	44.33	ug/L	96
89) 1,3,5-trimethylbenzene	14.16	105	138920	43.07	ug/L	96
90) tert-butylbenzene	14.46	91	77680	43.78	ug/L	95
91) 1,2,4-trimethylbenzene	14.56	105	144152	43.48	ug/L	97
92) sec-butylbenzene	14.69	105	164341	43.74	ug/L	98
93) 1,3-dichlorobenzene	14.78	146	81503	45.30	ug/L	98

(#)=qualifier out of range (m)=manual integration

L54060.D L052211W.M

Mon Jun 20 11:52:55 2011

RPT1

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x5 = 273.5

Blank Spike Summary

Page 1 of 1

Job Number: MC1182

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1796-BS	L54039.D	1	06/19/11	AMY	n/a	n/a	MSL1796

The QC reported here applies to the following samples:

Method: SW846 8260B

MC1182-1, MC1182-2, MC1182-3, MC1182-4, MC1182-5, MC1182-6, MC1182-7, MC1182-8, MC1182-9, MC1182-10, MC1182-11, MC1182-12, MC1182-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethene	50	45.9	92	70-130
156-60-5	trans-1,2-Dichloroethene	50	43.5	87	70-130
127-18-4	Tetrachloroethene	50	43.4	87	70-130
79-01-6	Trichloroethene	50	45.7	91	70-130
75-01-4	Vinyl chloride	50	48.4	97	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	88%	70-130%
2037-26-5	Toluene-D8	89%	70-130%
460-00-4	4-Bromofluorobenzene	89%	70-130%

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54039.D

Vial: 3

Acq On : 19 Jun 2011 9:14 am

Operator: amym

Sample : ccl764-50

Inst : MAMSL

Misc : ms23267,msl1796,,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jun 20 08:01:57 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.83	65	25174	500.00	ug/L	-0.03
4) pentafluorobenzene	8.19	168	71926	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.03	114	106289	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	61007	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	54995	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	30389	43.94	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	87.88%
60) toluene-d8 (s)	10.80	98	114585	44.48	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	88.96%
82) bromofluorobenzene (s)	13.48	95	44002	44.33	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	88.66%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	5.91	59	36801	522.65	ug/L	96
3) Ethanol	4.80	45	50116	3633.12	ug/L	98
5) dichlorodifluoromethane	3.73	85	36938	56.60	ug/L	96
6) chloromethane	3.95	50	26615	37.97	ug/L	91
7) vinyl chloride	4.16	62	38149	48.36	ug/L	93
8) bromomethane	4.61	96	12145	22.90	ug/L	95
9) chloroethane	4.76	64	23470	47.87	ug/L	96
10) ethyl ether	5.58	59	29243	47.33	ug/L	87
11) acetone	5.25	41	17265	66.19	ug/L	87
12) trichlorofluoromethane	5.34	101	59290	44.97	ug/L	98
13) freon-113	6.08	101	31714	52.28	ug/L	94
14) acrolein	5.32	56	16519	476.60	ug/L	93
15) 1,1-dichloroethene	5.89	96	33265	42.95	ug/L	94
16) acetone	5.44	43	19313	56.71	ug/L	84
17) Methyl Acetate	6.05	43	58024	44.45	ug/L	93
18) methylene chloride	6.04	84	38008	41.86	ug/L	94
19) methyl tert butyl ether	6.80	73	96871	50.43	ug/L	93
20) acrylonitrile	5.93	53	14429	42.69	ug/L	84
21) allyl chloride	6.12	41	41350	53.56	ug/L	88
22) trans-1,2-dichloroethene	6.69	96	31961	43.49	ug/L	96
23) iodomethane	5.95	142	17987	29.69	ug/L	80
24) carbon disulfide	6.28	76	104125	46.07	ug/L	99
25) propionitrile	6.94	54	5457	54.13	ug/L	100
26) vinyl acetate	7.03	43	30915	61.57	ug/L	98
27) chloroprene	7.30	53	45913	55.84	ug/L	87
28) di-isopropyl ether	7.36	45	98879	52.94	ug/L	94
29) methacrylonitrile	7.44	41	21454	51.38	ug/L	81
30) 2-butanone	7.34	72	5197	52.95	ug/L #	42
31) Hexane	7.35	41	42163	50.46	ug/L	89
32) 1,1-dichloroethane	6.94	63	61700	50.82	ug/L	93
33) tert-butyl ethyl ether	7.75	59	90752	79.83	ug/L	95
34) isobutyl alcohol	7.74	43	10332	253.31	ug/L #	74
35) 2,2-dichloropropane	7.78	77	24967	58.93	ug/L	95
36) cis-1,2-dichloroethene	7.51	96	37560	45.91	ug/L	92
37) ethyl acetate	7.74	43	10103	75.37	ug/L	67

(#)= qualifier out of range (m)= manual integration

L54039.D L052211W.M

Mon Jun 20 09:35:52 2011

RPT1

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54039.D

Vial: 3

Acq On : 19 Jun 2011 9:14 am

Operator: amym

Sample : ccl764-50

Inst : MAMSL

Misc : ms23267,msl1796,,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jun 20 08:01:57 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	7.66	128	17121	50.46	ug/L	87
39) chloroform	7.70	83	65818	45.76	ug/L	97
41) Tetrahydrofuran	8.03	42	9265	50.06	ug/L #	60
42) 1,1,1-trichloroethane	8.44	97	53259	50.49	ug/L	95
44) Cyclohexane	8.73	56	46478	58.60	ug/L #	80
45) carbon tetrachloride	8.79	117	47613	58.03	ug/L	96
46) 1,1-dichloropropene	8.62	75	44911	44.27	ug/L	97
47) benzene	8.81	78	143763	47.31	ug/L	99
48) 1,2-dichloroethane	8.33	62	49293	48.35	ug/L	95
49) tert-amyl methyl ether	8.97	73	89621	73.52	ug/L	98
50) heptane	9.34	43	30147	48.63	ug/L	86
51) trichloroethene	9.45	95	36240	45.69	ug/L	98
52) 1,2-dichloropropane	9.41	63	34922	49.39	ug/L	96
53) dibromomethane	9.38	93	25365	51.63	ug/L	94
54) bromodichloromethane	9.49	83	52451	54.33	ug/L	97
55) Methylcyclohexane	9.98	83	45041	47.96	ug/L	91
57) methyl methacrylate	9.61	69	26084	54.18	ug/L	98
58) 1,4-dioxane	9.59	88	2084	251.34	ug/L	99
59) cis-1,3-dichloropropene	10.12	75	53643	50.56	ug/L	96
61) 4-methyl-2-pentanone	10.23	43	30307	46.53	ug/L	97
62) toluene	10.87	92	91063	46.07	ug/L	94
63) trans-1,3-dichloropropene	10.54	75	49442	57.85	ug/L	94
64) 1,1,2-trichloroethane	10.70	83	29629	49.76	ug/L	96
65) ethyl methacrylate	10.93	69	46356	57.53	ug/L	71
67) tetrachloroethene	11.63	166	35830	43.41	ug/L	99
68) 1,3-dichloropropane	10.94	76	59485	47.96	ug/L	96
69) dibromochloromethane	11.21	129	39488	48.32	ug/L	98
70) 1,2-dibromoethane	11.46	107	36066	44.46	ug/L	97
71) 2-hexanone	11.10	43	21284	43.71	ug/L	95
72) chlorobenzene	12.30	112	97107	42.36	ug/L	99
73) 1,1,1,2-tetrachloroethane	12.23	131	33869	49.79	ug/L	92
74) ethylbenzene	12.47	91	162280	41.33	ug/L	98
75) m,p-xylene	12.66	106	125354	82.05	ug/L	95
76) o-xylene	13.07	106	62345	42.79	ug/L	91
77) styrene	12.99	104	103202	41.62	ug/L	84
78) bromoform	12.80	173	32653	55.91	ug/L	94
79) trans-1,4-dichloro-2-buten	13.24	53	9399	98.60	ug/L #	84
81) isopropylbenzene	13.44	105	142863	48.09	ug/L	95
83) bromobenzene	13.71	156	41511	44.25	ug/L	92
84) 1,1,2,2-tetrachloroethane	13.09	83	52033	50.64	ug/L	99
85) 1,2,3-trichloropropane	13.23	75	54482	65.06	ug/L	99
86) n-propylbenzene	13.88	91	171787	43.56	ug/L	99
87) 2-chlorotoluene	13.99	91	108343	42.75	ug/L	99
88) 4-chlorotoluene	14.07	91	117003	45.53	ug/L	96
89) 1,3,5-trimethylbenzene	14.16	105	125224	44.37	ug/L	98
90) tert-butylbenzene	14.46	91	69436	44.72	ug/L	97
91) 1,2,4-trimethylbenzene	14.56	105	128156	44.18	ug/L	94
92) sec-butylbenzene	14.69	105	147595	44.89	ug/L	99
93) 1,3-dichlorobenzene	14.78	146	70989	45.09	ug/L	98

(#)=qualifier out of range (m)=manual integration

L54039.D L052211W.M

Mon Jun 20 09:35:52 2011

RPT1

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Method Blank Summary

Page 1 of 1

Job Number: MC1182

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1796-MB	L54041.D	1	06/19/11	AMY	n/a	n/a	MSL1796

The QC reported here applies to the following samples:

Method: SW846 8260B

MC1182-1, MC1182-2, MC1182-3, MC1182-4, MC1182-5, MC1182-6, MC1182-7, MC1182-8, MC1182-9, MC1182-10, MC1182-11, MC1182-12, MC1182-13

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Results	Limits
1868-53-7	Dibromofluoromethane	91%	70-130%
2037-26-5	Toluene-D8	93%	70-130%
460-00-4	4-Bromofluorobenzene	88%	70-130%

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC1182
 Account: WSPNYC WSP Environmental & Energy
 Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample:	MSL1764-BFB	Injection Date:	05/22/11
Lab File ID:	L52992.D	Injection Time:	08:30
Instrument ID:	GCMSL		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	3967	18.1	Pass
75	30.0 - 60.0% of mass 95	10972	50.0	Pass
95	Base peak, 100% relative abundance	21949	100.0	Pass
96	5.0 - 9.0% of mass 95	1346	6.13	Pass
173	Less than 2.0% of mass 174	207	0.94 (1.06) ^a	Pass
174	50.0 - 150.0% of mass 95	19600	89.3	Pass
175	5.0 - 9.0% of mass 174	1274	5.80 (6.50) ^a	Pass
176	95.0 - 101.0% of mass 174	19453	88.6 (99.3) ^a	Pass
177	5.0 - 9.0% of mass 176	1259	5.74 (6.47) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSL1764-IC1764	L52995.D	05/22/11	10:13	01:43	Initial cal 0.5
MSL1765-IC1765	L52995A.D	05/22/11	10:13	01:43	Initial cal 0.5
MSL1765-IC1765	L52996A.D	05/22/11	10:42	02:12	Initial cal 1
MSL1764-IC1764	L52996.D	05/22/11	10:42	02:12	Initial cal 1
MSL1765-IC1765	L52997A.D	05/22/11	11:10	02:40	Initial cal 2
MSL1764-IC1764	L52997.D	05/22/11	11:10	02:40	Initial cal 2
MSL1765-IC1765	L52998A.D	05/22/11	11:39	03:09	Initial cal 5
MSL1764-IC1764	L52998.D	05/22/11	11:39	03:09	Initial cal 5
MSL1765-IC1765	L52999A.D	05/22/11	12:08	03:38	Initial cal 10
MSL1764-IC1764	L52999.D	05/22/11	12:08	03:38	Initial cal 10
MSL1765-IC1765	L53000A.D	05/22/11	12:36	04:06	Initial cal 25
MSL1764-IC1764	L53000.D	05/22/11	12:36	04:06	Initial cal 25
MSL1765-IC1765	L53001A.D	05/22/11	13:05	04:35	Initial cal 400
MSL1764-IC1764	L53001.D	05/22/11	13:05	04:35	Initial cal 400
MSL1765-IC1765	L53002A.D	05/22/11	13:34	05:04	Initial cal 200
MSL1764-IC1764	L53002.D	05/22/11	13:34	05:04	Initial cal 200
MSL1765-ICC1765	L53003A.D	05/22/11	14:02	05:32	Initial cal 100
MSL1764-ICC1764	L53003.D	05/22/11	14:02	05:32	Initial cal 100
MSL1765-IC1765	L53004A.D	05/22/11	14:31	06:01	Initial cal 50
MSL1764-IC1764	L53004.D	05/22/11	14:31	06:01	Initial cal 50
MSL1764-ICV1764	L53005.D	05/22/11	15:56	07:26	Initial cal verification 50
MSL1765-ICV1765	L53005A.D	05/22/11	15:56	07:26	Initial cal verification 50

Initial Calibration Summary

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Job Number: MC1182

Sample: MSL1764-ICC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L53003.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Response Factor Report MAMSL

Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Sun May 22 15:35:26 2011
Response via : Initial Calibration

Calibration Files

0.5 =L52995.D 2 =L52997.D 5 =L52998.D 50 =L53004.D
100 =L53003.D 200 =L53002.D 400 =L53001.D 25 =L53000.D
1 =L52996.D 10 =L52999.D = =

Compound	0.5	2	5	50	100	200	400	25	1	10	Avg	%RSD
1) tert butyl alcohol-d9 -----ISTD-----												
2) tertiary butyl alcohol												
	0.638	0.905	1.364	1.406	1.430	1.543	1.245		1.148	1.210		25.12
----- Linear regression -----												
Response Ratio = -0.14706 + 1.53919 *A												
3) Ethanol												
	0.277	0.253	0.242	0.267	0.299	0.323	0.275		0.256	0.274		9.59
4) I pentafluorobenzene -----ISTD-----												
5) dichlorodifluoromethane												
	0.500	0.458	0.403	0.373	0.498	0.569	0.405		0.423	0.454		14.39
6) chloromethane												
	0.495	0.482	0.488	0.509	0.633	0.771	0.475		0.482	0.542		19.54
----- Quadratic regression -----												
Response Ratio = -0.00987 + 0.47167 *A + 0.03766 *A^2												
7) vinyl chloride												
	0.620	0.544	0.540	0.533	0.621	0.439	0.548	0.559	0.532	0.548		9.80
8) bromomethane												
	0.288	0.233	0.400	0.395	0.433	0.411	0.251	0.374	0.235	0.335		24.54
----- Linear regression -----												
Response Ratio = -0.02237 + 0.41750 *A												
9) chloroethane												
	0.417	0.344	0.306	0.294	0.316	0.360	0.312	0.417	0.301	0.341		14.08
10) ethyl ether												
	0.436	0.395	0.424	0.425	0.455	0.481	0.425	0.412	0.413	0.429		5.89
11) acetonitrile												
	0.444	0.210	0.129	0.198	0.225	0.334			0.423	0.281		43.06
----- Quadratic regression -----												
Response Ratio = 0.05425 + 0.12465 *A + 0.01185 *A^2												
12) trichlorofluoromethane												
	1.003	0.898	0.810	0.770	0.994	1.133	0.823	0.613	0.818	0.874		17.54
----- Linear regression -----												
Response Ratio = -0.18220 + 1.11921 *A												
13) freon-113												
	0.501	0.406	0.398	0.544	0.650	0.442			0.442	0.483		18.59
----- Quadratic regression -----												
Response Ratio = -0.00854 + 0.39627 *A + 0.03210 *A^2												
14) acrolein												

Initial Calibration Summary

Page 2 of 6

Job Number: MC1182

Sample:

MSL1764-ICC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID:

L53003.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

		0.023	0.025	0.024	0.024	0.026	0.024		0.023	0.024	3.54	
15)	1,1-dichloroethene	0.703	0.570	0.473	0.451	0.539	0.595	0.500	0.507	0.509	14.20	
16)	acetone	0.459	0.228	0.214	0.228	0.219	0.296		0.341	0.284	32.06	
	----- Linear regression -----							Coefficient = 0.9992				
	Response Ratio =	0.02255 + 0.21687 *A										
17)	Methyl Acetate	1.050	0.889	0.891	0.897	0.946	0.925	0.828		0.834	0.908	7.76
18)	methylene chloride	0.649	0.574	0.576	0.590	0.635	0.729	0.601	0.737	0.589	0.631	9.99
19)	methyl tert butyl ether	0.959	0.857	1.132	1.191	1.195	0.719	1.000	0.998	0.909	0.996	15.91
	----- Quadratic regression -----							Coefficient = 0.9944				
	Response Ratio =	-0.14017 + 1.57983 *A + -0.10457 *A^2										
20)	acrylonitrile	0.208	0.204	0.253	0.245	0.252	0.254	0.251		0.214	0.235	9.50
21)	allyl chloride	0.578	0.482	0.498	0.521	0.531	0.600	0.562		0.522	0.537	7.50
22)	trans-1,2-dichloroethene	0.555	0.452	0.495	0.489	0.530	0.595	0.484	0.524	0.474	0.511	8.70
23)	iodomethane	0.250	0.462	0.417	0.360	0.273	0.383		0.293	0.348	22.66	
	----- Quadratic regression -----							Coefficient = 0.9993				
	Response Ratio =	-0.01833 + 0.46617 *A + -0.02394 *A^2										
24)	carbon disulfide	1.797	1.540	1.346	1.514	1.593	1.770	1.479	1.614	1.489	1.571	9.09
25)	propionitrile	0.027	0.069	0.070	0.075	0.076	0.064		0.048	0.061	29.06	
	----- Linear regression -----							Coefficient = 0.9998				
	Response Ratio =	-0.00768 + 0.07717 *A										
26)	vinyl acetate	0.111	0.318	0.350	0.399	0.399	0.189		0.148	0.274	44.46	
	----- Linear regression -----							Coefficient = 0.9991				
	Response Ratio =	-0.07353 + 0.40875 *A										
27)	chloroprene	0.553	0.520	0.553	0.549	0.637	0.656	0.555		0.550	0.572	8.39
28)	di-isopropyl ether	1.316	1.163	1.283	1.307	1.394	1.476	1.259	1.284	1.204	1.298	7.23
29)	methacrylonitrile	0.263	0.292	0.288	0.292	0.323	0.288		0.285	0.290	6.04	
30)	2-butanone	0.042	0.065	0.067	0.072	0.076	0.065		0.064	0.065	16.80	
	----- Linear regression -----							Coefficient = 0.9989				
	Response Ratio =	-0.00899 + 0.07671 *A										
31)	Hexane	0.615	0.546	0.533	0.519	0.638	0.701	0.554		0.543	0.581	10.97
32)	1,1-dichloroethane	0.908	0.764	0.824	0.844	0.899	0.993	0.811	0.770	0.782	0.844	9.04
33)	tert-butyl ethyl ether	0.215	0.222	0.589	0.695	0.803	0.942	0.354		0.261	0.510	55.91
	----- Linear regression -----							Coefficient = 0.9933				
	Response Ratio =	-0.24517 + 0.94380 *A										

5.7.1



Initial Calibration Summary

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Job Number: MC1182

Sample: MSL1764-ICC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L53003.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

34)	isobutyl alcohol	0.001 0.026 0.031 0.034 0.038 0.014	0.007 0.022	66.68
	----- Linear regression -----	Coefficient = 0.9975		
	Response Ratio = -0.05322 + 0.03886 *A			
35)	2,2-dichloropropane	0.253 0.363 0.356 0.417 0.092	0.003 0.247	67.14
	----- Linear regression -----	Coefficient = 0.9965		
	Response Ratio = -0.15926 + 0.42962 *A			
36)	cis-1,2-dichloroethene	0.606 0.506 0.538 0.556 0.588 0.649 0.552 0.606 0.517 0.569		8.22
37)	ethyl acetate	0.096 0.157 0.098 0.176 0.070	0.033 0.105	50.92
	----- Quadratic regression -----	Coefficient = 0.9832		
	Response Ratio = 0.02598 + 0.05395 *A + 0.01459 *A^2			
38)	bromochloromethane	0.245 0.236 0.223 0.233 0.253 0.282 0.234 0.192 0.225 0.236		10.32
39)	chloroform	1.055 0.943 0.926 0.952 1.011 1.127 0.926 1.144 0.914 1.000		8.95
40)	dibromofluoromethane (s)	0.437 0.460 0.457 0.511 0.564 0.459	0.477 0.481	9.01
41)	Tetrahydrofuran	0.104 0.132 0.133 0.140 0.146 0.127	0.120 0.129	10.69
42)	1,1,1-trichloroethane	0.399 0.374 0.653 0.684 0.779 0.880 0.523 0.251 0.442 0.554		37.54
	----- Linear regression -----	Coefficient = 0.9954		
	Response Ratio = -0.14258 + 0.87453 *A			
43) I	1,4-difluorobenzene	-----ISTD-----		
44)	Cyclohexane	0.396 0.361 0.351 0.469 0.557 0.382	0.379 0.414	17.92
	----- Quadratic regression -----	Coefficient = 0.9991		
	Response Ratio = -0.00850 + 0.34960 *A + 0.02626 *A^2			
45)	carbon tetrachloride	0.274 0.249 0.349 0.369 0.375 0.300 0.292	0.271 0.310	15.48
	----- Quadratic regression -----	Coefficient = 0.9987		
	Response Ratio = -0.04015 + 0.43996 *A + -0.01672 *A^2			
46)	1,1-dichloropropene	0.543 0.459 0.425 0.436 0.493 0.568 0.435 0.511 0.426 0.477		11.28
47)	benzene	1.494 1.497 1.300 1.326 1.392 1.466 1.576 1.359 1.565 1.319 1.429		7.22
48)	1,2-dichloroethane	0.544 0.457 0.460 0.457 0.473 0.508 0.471 0.484 0.460 0.480		6.12
49)	tert-amyl methyl ether	0.347 0.210 0.446 0.517 0.586 0.681 0.317	0.282 0.423	38.37
	----- Linear regression -----	Coefficient = 0.9941		
	Response Ratio = -0.15737 + 0.68050 *A			
50)	heptane	0.281 0.261 0.261 0.344 0.385 0.286	0.268 0.298	16.04
	----- Linear regression -----	Coefficient = 0.9930		
	Response Ratio = -0.09268 + 0.38694 *A			
51)	trichloroethene	0.404 0.347 0.356 0.366 0.402 0.440 0.364 0.320 0.358 0.373		9.65

5.7.1



Initial Calibration Summary

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Job Number: MC1182

Sample: MSL1764-ICC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L53003.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

52)	1,2-dichloropropane	0.335	0.314	0.314	0.336	0.351	0.384	0.319	0.308	0.333	7.60
53)	dibromomethane	0.262	0.234	0.208	0.211	0.217	0.245	0.238	0.234	0.231	7.92
54)	bromodichloromethane	0.459	0.389	0.463	0.487	0.497	0.535	0.442	0.410	0.406	10.57
55)	Methylcyclohexane	0.429	0.403	0.397	0.524	0.583	0.424		0.398	0.451	16.19
	----- Linear regression -----	Coefficient = 0.9935									
	Response Ratio =	-0.13844 + 0.58614 *A									
56)	2-chloroethyl vinyl ether	0.004	0.011	0.017	0.033	0.001				0.013	98.81
	----- Linear regression -----	Coefficient = 0.9553									
	Response Ratio =	-0.03915 + 0.03589 *A									
57)	methyl methacrylate	0.106	0.210	0.232	0.253	0.274	0.160		0.132	0.195	32.53
	----- Linear regression -----	Coefficient = 0.9983									
	Response Ratio =	-0.05496 + 0.27722 *A									
58)	1,4-dioxane	0.004	0.004	0.005	0.005	0.003				0.004	21.02
	----- Linear regression -----	Coefficient = 0.9997									
	Response Ratio =	-0.00772 + 0.00544 *A									
59)	cis-1,3-dichloropropene	0.221	0.221	0.449	0.500	0.541	0.555	0.355	0.188	0.274	40.09
	----- Linear regression -----	Coefficient = 0.9992									
	Response Ratio =	-0.06102 + 0.55939 *A									
60)	toluene-d8 (s)	1.035	1.152	1.181	1.343	1.468	1.107		1.197	1.212	12.14
61)	4-methyl-2-pentanone	0.227	0.310	0.316	0.326	0.355	0.281		0.233	0.293	16.39
	----- Linear regression -----	Coefficient = 0.9985									
	Response Ratio =	-0.04535 + 0.35511 *A									
62)	toluene	0.996	0.856	0.852	0.905	0.957	1.035	0.870	1.027	0.870	8.05
63)	trans-1,3-dichloropropene	0.097	0.121	0.326	0.379	0.426	0.484	0.215	0.033	0.161	64.14
	----- Linear regression -----	Coefficient = 0.9952									
	Response Ratio =	-0.09310 + 0.48253 *A									
64)	1,1,2-trichloroethane	0.264	0.258	0.274	0.286	0.298	0.323	0.275	0.277	0.266	7.12
65)	ethyl methacrylate	0.144	0.329	0.381	0.434	0.464	0.237		0.180	0.310	40.44
	----- Linear regression -----	Coefficient = 0.9983									
	Response Ratio =	-0.10681 + 0.47191 *A									
66)	I chlorobenzene-d5	-----ISTD-----									
67)	tetrachloroethene	0.739	0.646	0.629	0.609	0.728	0.766	0.650	0.668	0.653	8.00
68)	1,3-dichloropropane	1.054	0.961	0.975	0.953	1.042	1.135	1.003	1.015	1.011	5.53
69)	dibromochloromethane	0.476	0.439	0.609	0.621	0.718	0.768	0.552	0.431	0.502	21.13

5.7.1



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L53000.D
Acq On : 22 May 2011 12:36 pm
Sample : ic1764-25
Misc : ms23036,msl1764,,,5,1
MS Integration Params: RTEINT.P
Quant Time: May 22 13:53:14 2011

Vial: 6
Operator: amym
Inst : MAMSL
Multiplr: 1.00

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Sun May 22 13:52:34 2011
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.89	65	22209	500.00	ug/L	0.02
4) pentafluorobenzene	8.19	168	68737	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.02	114	97998	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	50941	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	50143	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	15768	20.34	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	40.68%#
60) toluene-d8 (s)	10.80	98	54249	18.85	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	37.70%#
82) bromofluorobenzene (s)	13.49	95	21608	21.72	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	43.44%#

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) tertiary butyl alcohol	5.93	59	13824	203.14	ug/L	# 56
3) Ethanol	4.83	45	30569	2279.48	ug/L	94
5) dichlorodifluoromethane	3.71	85	13913	17.79	ug/L	99
6) chloromethane	3.94	50	16328	15.41	ug/L	100
7) vinyl chloride	4.15	62	18818	31.20	ug/L	96
8) bromomethane	4.59	96	8639	15.30	ug/L	90
9) chloroethane	4.74	64	10732	21.71	ug/L	99
10) ethyl ether	5.57	59	14604	22.08	ug/L	86
11) acetone	5.24	41	11489	35.64	ug/L	78
12) trichlorofluoromethane	5.34	101	28288	18.16	ug/L	95
13) freon-113	6.07	101	15201	17.00	ug/L	84
14) acrolein	5.31	56	4106	116.48	ug/L	85
15) 1,1-dichloroethene	5.89	96	17169	20.99	ug/L	89
16) acetone	5.44	43	10187	34.12	ug/L	99
17) Methyl Acetate	6.04	43	28450	21.78	ug/L	92
18) methylene chloride	6.03	84	20652	20.27	ug/L	91
19) methyl tert butyl ether	6.79	73	34355	34.74	ug/L	95
20) acrylonitrile	5.91	53	8620	24.76	ug/L	97
21) allyl chloride	6.12	41	19324	23.46	ug/L	82
22) trans-1,2-dichloroethene	6.69	96	16640	20.36	ug/L	92
23) iodomethane	5.93	142	13167	34.97	ug/L	94
24) carbon disulfide	6.27	76	50843	20.89	ug/L	100
25) propionitrile	6.93	54	2191	19.87	ug/L	100
26) vinyl acetate	7.03	43	6511	11.84	ug/L	92
27) chloroprene	7.29	53	19063	21.13	ug/L	89
28) di-isopropyl ether	7.36	45	43254	21.31	ug/L	91
29) methacrylonitrile	7.44	41	9901	22.29	ug/L	80
30) 2-butanone	7.34	72	2228	21.13	ug/L	# 10
31) Hexane	7.34	41	19032	19.88	ug/L	91
32) 1,1-dichloroethane	6.94	63	27890	20.43	ug/L	96
33) tert-butyl ethyl ether	7.74	59	12151	9.44	ug/L	91
34) isobutyl alcohol	7.74	43	2355	47.46	ug/L	79
35) 2,2-dichloropropane	7.78	77	3173	5.53	ug/L	93
36) cis-1,2-dichloroethene	7.50	96	18984	21.29	ug/L	86
37) ethyl acetate	7.74	43	2389	9.32	ug/L	71

(#)= qualifier out of range (m) = manual integration

L53000.D L052211W.M

Mon May 23 15:12:23 2011

RPT1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L53000.D

Vial: 6

Acq On : 22 May 2011 12:36 pm

Operator: amym

Sample : ic1764-25

Inst : MAMSL

Misc : ms23036,msl1764,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: May 22 13:53:14 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 13:52:34 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	7.65	128	8038	20.70	ug/L	88
39) chloroform	7.69	83	31835	20.54	ug/L	99
41) Tetrahydrofuran	8.03	42	4362	21.44	ug/L	68
42) 1,1,1-trichloroethane	8.43	97	17987	14.87	ug/L	93
44) Cyclohexane	8.73	56	18728	17.15	ug/L	86
45) carbon tetrachloride	8.79	117	14292	24.30	ug/L	99
46) 1,1-dichloropropene	8.62	75	21292	19.12	ug/L	95
47) benzene	8.81	78	66610	21.57	ug/L	99
48) 1,2-dichloroethane	8.33	62	23091	23.19	ug/L	94
49) tert-amyl methyl ether	8.98	73	15518	11.63	ug/L	92
50) heptane	9.34	43	14018	18.57	ug/L	90
51) trichloroethene	9.45	95	17839	20.70	ug/L	94
52) 1,2-dichloropropane	9.40	63	15646	20.79	ug/L	97
53) dibromomethane	9.38	93	11685	24.35	ug/L	91
54) bromodichloromethane	9.49	83	21635	20.62	ug/L	100
55) Methylcyclohexane	9.98	83	20777	18.19	ug/L	91
56) 2-chloroethyl vinyl ether	9.95	63	39m	0.60	ug/L	
57) methyl methacrylate	9.61	69	7844	14.59	ug/L	97
58) 1,4-dioxane	9.59	88	724m	70.16	ug/L	
59) cis-1,3-dichloropropene	10.12	75	17410	15.99	ug/L	95
61) 4-methyl-2-pentanone	10.24	43	13784	19.79	ug/L	96
62) toluene	10.87	92	42619	21.01	ug/L	96
63) trans-1,3-dichloropropene	10.54	75	10549	11.13	ug/L	78
64) 1,1,2-trichloroethane	10.70	83	13483	21.33	ug/L	92
65) ethyl methacrylate	10.93	69	11613	12.71	ug/L #	1
67) tetrachloroethene	11.63	166	16552	21.04	ug/L	93
68) 1,3-dichloropropane	10.94	76	25535	21.80	ug/L	97
69) dibromochloromethane	11.21	129	14059	17.83	ug/L	96
70) 1,2-dibromoethane	11.46	107	15367	19.51	ug/L	98
71) 2-hexanone	11.11	43	9207	18.96	ug/L	87
72) chlorobenzene	12.30	112	45731	21.60	ug/L	94
73) 1,1,1,2-tetrachloroethane	12.23	131	11061	16.99	ug/L	90
74) ethylbenzene	12.48	91	79550	21.46	ug/L	98
75) m,p-xylene	12.66	106	62902	42.60	ug/L	97
76) o-xylene	13.07	106	30675	20.06	ug/L	89
77) styrene	12.99	104	49959	20.31	ug/L	79
78) bromoform	12.80	173	9106	15.10	ug/L	97
79) trans-1,4-dichloro-2-buten	13.24	53	761m	7.33	ug/L	
81) isopropylbenzene	13.44	105	65629	22.46	ug/L	91
83) bromobenzene	13.71	156	20830	22.51	ug/L	90
84) 1,1,2,2-tetrachloroethane	13.09	83	23690	23.76	ug/L	100
85) 1,2,3-trichloropropane	13.23	75	18104	20.84	ug/L	100
86) n-propylbenzene	13.89	91	88050	22.35	ug/L	99
87) 2-chlorotoluene	14.00	91	55343	23.07	ug/L	95
88) 4-chlorotoluene	14.08	91	56289	23.01	ug/L	92
89) 1,3,5-trimethylbenzene	14.16	105	63402	22.61	ug/L	93
90) tert-butylbenzene	14.46	91	34500	21.38	ug/L	92
91) 1,2,4-trimethylbenzene	14.57	105	63496	22.24	ug/L	94
92) sec-butylbenzene	14.69	105	74887	21.99	ug/L	98

(#)=qualifier out of range (m)=manual integration

L53000.D L052211W.M

Mon May 23 15:12:23 2011

RPT1

Page 2

Instrument Performance Check (BFB)

Page 1 of 2

Job Number: MC1182
 Account: WSPNYC WSP Environmental & Energy
 Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample: MSL1796-BFB Injection Date: 06/19/11
 Lab File ID: L54039.D Injection Time: 09:14
 Instrument ID: GCMSL

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	3789	16.8	Pass
75	30.0 - 60.0% of mass 95	10548	46.8	Pass
95	Base peak, 100% relative abundance	22560	100.0	Pass
96	5.0 - 9.0% of mass 95	1508	6.68	Pass
173	Less than 2.0% of mass 174	186	0.82 (0.96) ^a	Pass
174	50.0 - 150.0% of mass 95	19416	86.1	Pass
175	5.0 - 9.0% of mass 174	1720	7.62 (8.86) ^a	Pass
176	95.0 - 101.0% of mass 174	18672	82.8 (96.2) ^a	Pass
177	5.0 - 9.0% of mass 176	1498	6.64 (8.02) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSL1796-CC1764	L54039.D	06/19/11	09:14	00:00	Continuing cal 50
MSL1796-BS	L54039.D	06/19/11	09:14	00:00	Blank Spike
MSL1796-MB	L54041.D	06/19/11	10:12	00:58	Method Blank
GP13109-LB1	L54042.D	06/19/11	10:43	01:29	Leachate Blank
ZZZZZZ	L54043.D	06/19/11	11:13	01:59	(unrelated sample)
ZZZZZZ	L54044.D	06/19/11	11:43	02:29	(unrelated sample)
ZZZZZZ	L54045.D	06/19/11	12:13	02:59	(unrelated sample)
MC1182-1	L54046.D	06/19/11	12:42	03:28	TB061511
MC1182-9	L54047.D	06/19/11	13:11	03:57	EB061511
MC1182-2	L54048.D	06/19/11	13:40	04:26	GP-12-170
MC1182-3	L54049.D	06/19/11	14:09	04:55	GP-12-160
MC1182-4	L54050.D	06/19/11	14:38	05:24	GP-12-150
MC1182-5	L54051.D	06/19/11	15:08	05:54	GP-12-140
MC1182-6	L54052.D	06/19/11	15:37	06:23	GP-12-130
MC1182-7	L54053.D	06/19/11	16:06	06:52	GP-12-120
MC1182-8	L54054.D	06/19/11	16:35	07:21	GP-12-110
MC1182-10	L54055.D	06/19/11	17:04	07:50	GP-11-180
MC1182-11	L54056.D	06/19/11	17:33	08:19	GP-11-170
MC1182-12	L54057.D	06/19/11	18:02	08:48	GP-11-160
MC1182-13	L54058.D	06/19/11	18:31	09:17	GP-11-150
ZZZZZZ	L54059.D	06/19/11	19:00	09:46	(unrelated sample)
MC1182-2MS	L54060.D	06/19/11	19:29	10:15	Matrix Spike
MC1182-2MSD	L54061.D	06/19/11	19:57	10:43	Matrix Spike Duplicate
GP13109-LS1	L54062.D	06/19/11	20:27	11:13	Leachate Spike



Instrument Performance Check (BFB)

Page 2 of 2

Job Number: MC1182

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample: MSL1796-BFB

Injection Date: 06/19/11

Lab File ID: L54039.D

Injection Time: 09:14

Instrument ID: GCMSL

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GP13109-LS2	L54063.D	06/19/11	20:56	11:42	Leachate Spike

5.4.2



SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\L54039.D

Vial: 3

Acq On : 19 Jun 2011 9:14 am

Operator: amym

Sample : bfb

Inst : MAMSL

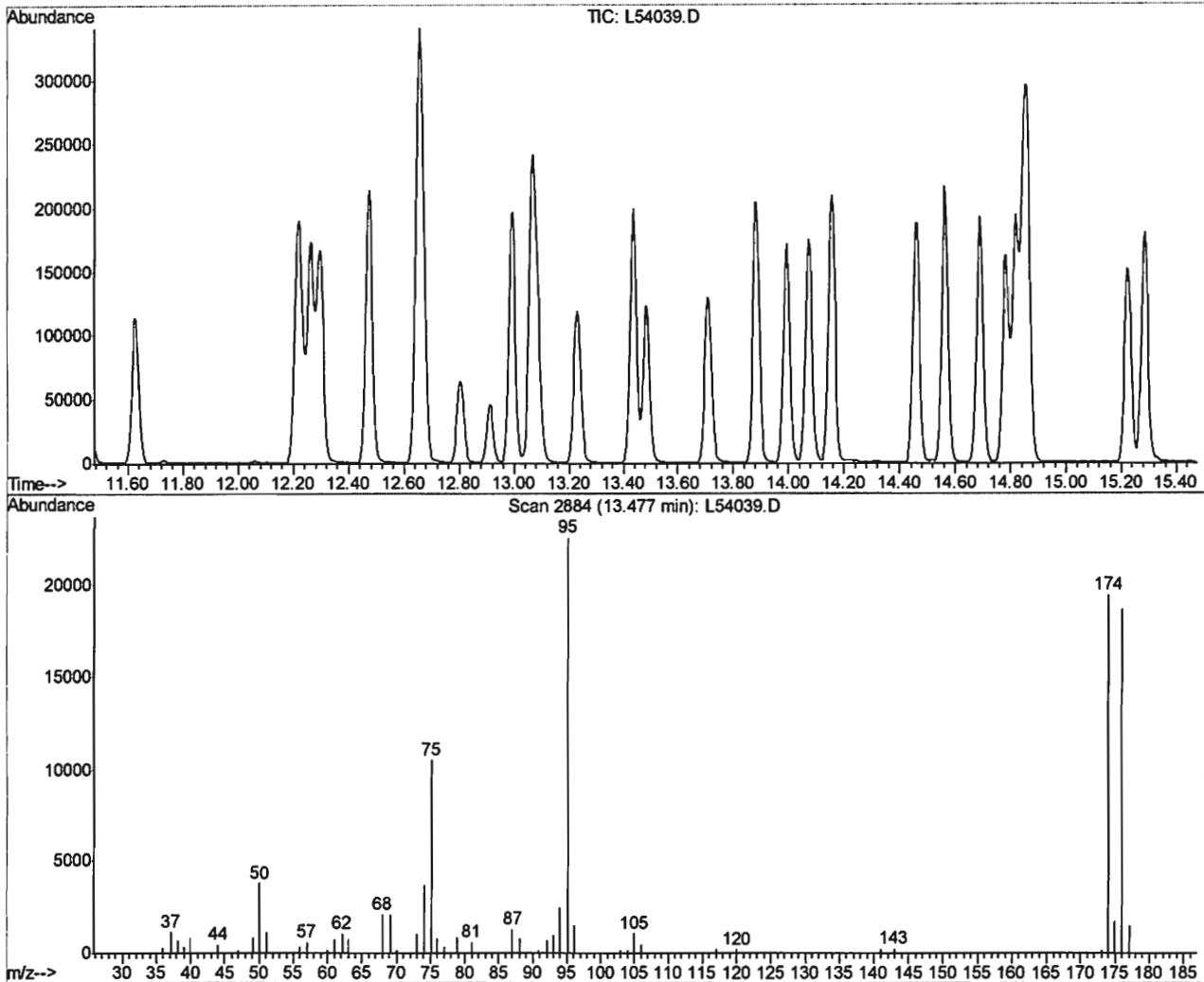
Misc : ms23267,msl1796,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260



Spectrum Information: Scan 2884

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
Mass	Mass	Limit%	Limit%	Abn%	Abn	Pass/Fail
50	95	15	40	16.8	3789	PASS
75	95	30	60	46.8	10548	PASS
95	95	100	100	100.0	22560	PASS
96	95	5	9	6.7	1508	PASS
173	174	0.00	2	1.0	186	PASS
174	95	50	150	86.1	19416	PASS
175	174	5	9	8.9	1720	PASS
176	174	95	101	96.2	18672	PASS
177	176	5	9	8.0	1498	PASS

Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: MC1182
Account: WSPNYC WSP Environmental & Energy
Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Check Std: MSL1796-CC1764	Injection Date: 06/19/11
Lab File ID: L54039.D	Injection Time: 09:14
Instrument ID: GCMSL	Method: SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	71926	8.19	106289	9.03	61007	12.26	54995	14.82	25174	5.83
Upper Limit ^a	143852	8.69	212578	9.53	122014	12.76	109990	15.32	50348	6.33
Lower Limit ^b	35963	7.69	53145	8.53	30504	11.76	27498	14.32	12587	5.33

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL1796-BS	71926	8.19	106289	9.03	61007	12.26	54995	14.82	25174	5.83
MSL1796-MB	69247	8.20	97798	9.03	55448	12.27	49944	14.82	22260	5.84
GP13109-LB1	70884	8.20	101503	9.03	57840	12.27	51108	14.82	24035	5.84
ZZZZZZ	67594	8.20	96892	9.03	54539	12.27	49576	14.82	23033	5.85
ZZZZZZ	68454	8.20	96360	9.03	55706	12.27	49500	14.82	25532	5.85
ZZZZZZ	67574	8.20	96311	9.03	54525	12.27	49445	14.82	23719	5.85
MC1182-1	67109	8.20	96912	9.03	54827	12.27	49340	14.82	21674	5.85
MC1182-9	66586	8.20	94264	9.03	54579	12.27	48443	14.82	19684	5.85
MC1182-2	67388	8.20	96817	9.03	55413	12.27	49321	14.82	22975	5.85
MC1182-3	68969	8.20	98531	9.03	56522	12.27	49635	14.82	20214	5.85
MC1182-4	66850	8.20	96082	9.03	54715	12.27	48958	14.82	20810	5.85
MC1182-5	67401	8.19	96081	9.03	55825	12.27	48609	14.82	24841	5.94
MC1182-6	68359	8.20	97912	9.03	56346	12.27	50341	14.82	20475	5.85
MC1182-7	67827	8.20	98897	9.03	56193	12.27	50241	14.82	21072	5.85
MC1182-8	67799	8.20	97903	9.03	56024	12.27	49795	14.82	21562	5.85
MC1182-10	67972	8.20	97313	9.03	56593	12.27	50518	14.82	21984	5.85
MC1182-11	67272	8.20	96504	9.03	54715	12.27	49593	14.82	23118	5.85
MC1182-12	67487	8.20	97400	9.03	55357	12.27	49201	14.82	20652	5.85
MC1182-13	66156	8.20	96422	9.03	55635	12.27	48435	14.82	20906	5.85
ZZZZZZ	66639	8.20	96670	9.03	57765	12.27	55579	14.82	18656	5.85
MC1182-2MS	73503	8.19	106053	9.02	62492	12.26	62851	14.82	19801	5.83
MC1182-2MSD	71286	8.19	102306	9.02	58623	12.26	58608	14.82	23269	5.83
GP13109-LS1	63739	8.19	88447	9.02	51384	12.26	51626	14.82	18074	5.83
GP13109-LS2	59252	8.19	84327	9.02	48877	12.26	47642	14.82	18320	5.83

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Continuing Calibration Summary

Page 1 of 4

Job Number: MC1182

Sample: MSL1796-CC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L54039.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\L54039.D

Vial: 3

Acq On : 19 Jun 2011 9:14 am

Operator: amym

Sample : ccl764-50

Inst : MAMSL

Misc : ms23267,msl1796,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min

Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	100	-0.03	5.83
	----- True Calc. % Drift -----						
2	tertiary butyl alcohol	500.000	522.653	-4.5	107	0.00	5.91
	----- AvgRF CCRF % Dev -----						
3	Ethanol	0.274	0.199	27.4#	82	0.00	4.80
4 I	pentafluorobenzene	1.000	1.000	0.0	103	0.00	8.19
5 M	dichlorodifluoromethane	0.454	0.514	-13.2	131	0.02	3.73
	----- True Calc. % Drift -----						
6 P	chloromethane	50.000	37.970	24.1#	78	0.02	3.95
	----- AvgRF CCRF % Dev -----						
7 c	vinyl chloride	0.548	0.530	3.3	101	0.03	4.16
	----- True Calc. % Drift -----						
8 M	bromomethane	50.000	22.901	54.2#	43	0.00	4.61
	----- AvgRF CCRF % Dev -----						
9 M	chloroethane	0.341	0.326	4.4	110	0.01	4.76
10 M	ethyl ether	0.429	0.407	5.1	98	0.00	5.58
	----- True Calc. % Drift -----						
11 M	acetonitrile	50.000	66.190	-32.4#	117	0.00	5.25
12 M	trichlorofluoromethane	50.000	44.966	10.1	104	0.00	5.34
13 M	freon-113	50.000	52.283	-4.6	111	0.00	6.08
	----- AvgRF CCRF % Dev -----						
14 M	acrolein	0.024	0.046	-91.7#	192	0.00	5.32
15 c	1,1-dichloroethene	0.538	0.462	14.1	100	0.00	5.89
	----- True Calc. % Drift -----						
16 M	acetone	50.000	56.708	-13.4	121	0.00	5.44
	----- AvgRF CCRF % Dev -----						
17 M	Methyl Acetate	0.908	0.807	11.1	93	0.00	6.05
18 M	methylene chloride	0.631	0.528	16.3	94	0.00	6.04
	----- True Calc. % Drift -----						
19 M	methyl tert butyl ether	50.000	50.428	-0.9	122	0.00	6.80

Continuing Calibration Summary

Page 2 of 4

Job Number: MC1182
Account: WSPNYC WSP Environmental & Energy
Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample: MSL1796-CC1764
Lab FileID: L54039.D

		AvgRF	CCRF	% Dev			
20 M	acrylonitrile	0.235	0.201	14.5	81	0.00	5.93
21 M	allyl chloride	0.537	0.575	-7.1	119	0.00	6.12
22 M	trans-1,2-dichloroethene	0.511	0.444	13.1	92	0.00	6.69
		True	Calc.	% Drift			
23 M	iodomethane	50.000	29.694	40.6#	55	0.00	5.95
		AvgRF	CCRF	% Dev			
24 M	carbon disulfide	1.571	1.448	7.8	110	0.01	6.28
		True	Calc.	% Drift			
25 M	propionitrile	50.000	54.132	-8.3	112	0.00	6.94
26 M	vinyl acetate	50.000	61.572	-23.1#	139	0.00	7.03
		AvgRF	CCRF	% Dev			
27 M	chloroprene	0.572	0.638	-11.5	118	0.00	7.30
28 M	di-isopropyl ether	1.298	1.375	-5.9	110	0.00	7.36
29 M	methacrylonitrile	0.290	0.298	-2.8	105	0.00	7.44
		True	Calc.	% Drift			
30 M	2-butanone	50.000	52.955	-5.9	115	0.00	7.34
		AvgRF	CCRF	% Dev			
31 M	Hexane	0.581	0.586	-0.9	113	0.00	7.35
32 P	1,1-dichloroethane	0.844	0.858	-1.7	107	0.00	6.94
		True	Calc.	% Drift			
33 M	tert-butyl ethyl ether	50.000	79.832	-59.7#	220	0.00	7.75
34 M	isobutyl alcohol	250.000	253.311	-1.3	113	-0.02	7.74
35 M	2,2-dichloropropane	50.000	58.934	-17.9	141	0.00	7.78
		AvgRF	CCRF	% Dev			
36 M	cis-1,2-dichloroethene	0.569	0.522	8.3	99	0.00	7.51
		True	Calc.	% Drift			
37 M	ethyl acetate	50.000	75.370	-50.7#	151	-0.02	7.74
		AvgRF	CCRF	% Dev			
38 M	bromochloromethane	0.236	0.238	-0.8	109	0.00	7.66
39 c	chloroform	1.000	0.915	8.5	101	0.00	7.70
40 S	dibromofluoromethane (s)	0.481	0.423	12.1	94	0.00	7.81
41 M	Tetrahydrofuran	0.129	0.129	0.0	100	0.00	8.03
		True	Calc.	% Drift			
42 M	1,1,1-trichloroethane	50.000	50.487	-1.0	116	0.00	8.44
		AvgRF	CCRF	% Dev			
43 I	1,4-difluorobenzene	1.000	1.000	0.0	105	0.00	9.03
		True	Calc.	% Drift			
44 M	Cyclohexane	50.000	58.598	-17.2	128	0.00	8.73
45 M	carbon tetrachloride	50.000	58.031	-16.1	135	0.00	8.79
		AvgRF	CCRF	% Dev			
46 M	1,1-dichloropropene	0.477	0.423	11.3	105	0.00	8.62
47 M	benzene	1.429	1.353	5.3	107	0.00	8.81
48 M	1,2-dichloroethane	0.480	0.464	3.3	106	0.00	8.33

5.7.3

5

Continuing Calibration Summary

Page 3 of 4

Job Number: MC1182

Sample: MSL1796-CC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L54039.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

		True	Calc.	% Drift			
49 M	tert-amyl methyl ether	50.000	73.516	-47.0#	199	0.00	8.97
50 M	heptane	50.000	48.626	2.7	114	0.00	9.34
		AvgRF	CCRF	% Dev			
51 M	trichloroethene	0.373	0.341	8.6	101	0.00	9.45
52 c	1,2-dichloropropane	0.333	0.329	1.2	110	0.00	9.41
53 M	dibromomethane	0.231	0.239	-3.5	121	0.00	9.38
54 M	bromodichloromethane	0.454	0.493	-8.6	112	0.00	9.49
		True	Calc.	% Drift			
55 M	Methylcyclohexane	50.000	47.958	4.1	111	0.00	9.98
56 M	2-chloroethyl vinyl ether			NA			
57 M	methyl methacrylate	50.000	54.175	-8.3	123	0.00	9.61
58 M	1,4-dioxane	250.000	251.339	-0.5	103	0.00	9.59
59 M	cis-1,3-dichloropropene	50.000	50.565	-1.1	118	0.00	10.12
		AvgRF	CCRF	% Dev			
60 S	toluene-d8 (s)	1.212	1.078	11.1	99	0.00	10.80
		True	Calc.	% Drift			
61 M	4-methyl-2-pentanone	50.000	46.534	6.9	97	0.00	10.23
		AvgRF	CCRF	% Dev			
62 c	toluene	0.930	0.857	7.8	106	0.00	10.87
		True	Calc.	% Drift			
63 M	trans-1,3-dichloropropene	50.000	57.848	-15.7	150	0.00	10.54
		AvgRF	CCRF	% Dev			
64 M	1,1,2-trichloroethane	0.280	0.279	0.4	107	0.00	10.70
		True	Calc.	% Drift			
65 M	ethyl methacrylate	50.000	57.525	-15.0	140	0.00	10.93
		AvgRF	CCRF	% Dev			
66 I	chlorobenzene-d5	1.000	1.000	0.0	113	0.00	12.26
67 M	tetrachloroethene	0.676	0.587	13.2	105	0.00	11.63
68 M	1,3-dichloropropane	1.017	0.975	4.1	113	0.00	10.94
		True	Calc.	% Drift			
69 M	dibromochloromethane	50.000	48.318	3.4	120	0.00	11.21
70 M	1,2-dibromoethane	50.000	44.462	11.1	105	0.00	11.46
71 M	2-hexanone	50.000	43.710	12.6	96	0.02	11.10
		AvgRF	CCRF	% Dev			
72 P	chlorobenzene	1.879	1.592	15.3	104	0.00	12.30
		True	Calc.	% Drift			
73 M	1,1,1,2-tetrachloroethane	50.000	49.791	0.4	125	0.00	12.23
		AvgRF	CCRF	% Dev			
74 c	ethylbenzene	3.218	2.660	17.3	99	0.00	12.47
75 M	m,p-xylene	1.252	1.027	18.0	96	0.00	12.66
76 M	o-xylene	1.194	1.022	14.4	98	0.00	13.07
77 M	styrene	2.032	1.692	16.7	97	0.00	12.99
		True	Calc.	% Drift			

5.7.3



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54039.D
 Acq On : 19 Jun 2011 9:14 am
 Sample : cc1764-50
 Misc : ms23267,msl1796,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Jun 20 08:01:57 2011

Vial: 3
 Operator: amym
 Inst : MAMSL
 Multiplr: 1.00

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Sun May 22 15:35:26 2011
 Response via : Initial Calibration
 DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.83	65	25174	500.00	ug/L	-0.03
4) pentafluorobenzene	8.19	168	71926	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.03	114	106289	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	61007	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	54995	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	30389	43.94	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	87.88%
60) toluene-d8 (s)	10.80	98	114585	44.48	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	88.96%
82) bromofluorobenzene (s)	13.48	95	44002	44.33	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	88.66%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	5.91	59	36801	522.65	ug/L	96
3) Ethanol	4.80	45	50116	3633.12	ug/L	98
5) dichlorodifluoromethane	3.73	85	36938	56.60	ug/L	96
6) chloromethane	3.95	50	26615	37.97	ug/L	91
7) vinyl chloride	4.16	62	38149	48.36	ug/L	93
8) bromomethane	4.61	96	12145	22.90	ug/L	95
9) chloroethane	4.76	64	23470	47.87	ug/L	96
10) ethyl ether	5.58	59	29243	47.33	ug/L	87
11) acetonitrile	5.25	41	17265	66.19	ug/L	87
12) trichlorofluoromethane	5.34	101	59290	44.97	ug/L	98
13) freon-113	6.08	101	31714	52.28	ug/L	94
14) acrolein	5.32	56	16519	476.60	ug/L	93
15) 1,1-dichloroethene	5.89	96	33265	42.95	ug/L	94
16) acetone	5.44	43	19313	56.71	ug/L	84
17) Methyl Acetate	6.05	43	58024	44.45	ug/L	93
18) methylene chloride	6.04	84	38008	41.86	ug/L	94
19) methyl tert butyl ether	6.80	73	96871	50.43	ug/L	93
20) acrylonitrile	5.93	53	14429	42.69	ug/L	84
21) allyl chloride	6.12	41	41350	53.56	ug/L	88
22) trans-1,2-dichloroethene	6.69	96	31961	43.49	ug/L	96
23) iodomethane	5.95	142	17987	29.69	ug/L	80
24) carbon disulfide	6.28	76	104125	46.07	ug/L	99
25) propionitrile	6.94	54	5457	54.13	ug/L	100
26) vinyl acetate	7.03	43	30915	61.57	ug/L	98
27) chloroprene	7.30	53	45913	55.84	ug/L	87
28) di-isopropyl ether	7.36	45	98879	52.94	ug/L	94
29) methacrylonitrile	7.44	41	21454	51.38	ug/L	81
30) 2-butanone	7.34	72	5197	52.95	ug/L #	42
31) Hexane	7.35	41	42163	50.46	ug/L	89
32) 1,1-dichloroethane	6.94	63	61700	50.82	ug/L	93
33) tert-butyl ethyl ether	7.75	59	90752	79.83	ug/L	95
34) isobutyl alcohol	7.74	43	10332	253.31	ug/L #	74
35) 2,2-dichloropropane	7.78	77	24967	58.93	ug/L	95
36) cis-1,2-dichloroethene	7.51	96	37560	45.91	ug/L	92
37) ethyl acetate	7.74	43	10103	75.37	ug/L	67

(#) = qualifier out of range (m) = manual integration

L54039.D L052211W.M

Mon Jun 20 09:35:52 2011

RPT1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54039.D
 Acq On : 19 Jun 2011 9:14 am
 Sample : cc1764-50
 Misc : ms23267,ms11796,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Jun 20 08:01:57 2011

Vial: 3
 Operator: amym
 Inst : MAMSL
 Multiplr: 1.00

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Sun May 22 15:35:26 2011
 Response via : Initial Calibration
 DataAcq Meth : L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	7.66	128	17121	50.46	ug/L	87
39) chloroform	7.70	83	65818	45.76	ug/L	97
41) Tetrahydrofuran	8.03	42	9265	50.06	ug/L #	60
42) 1,1,1-trichloroethane	8.44	97	53259	50.49	ug/L	95
44) Cyclohexane	8.73	56	46478	58.60	ug/L #	80
45) carbon tetrachloride	8.79	117	47613	58.03	ug/L	96
46) 1,1-dichloropropene	8.62	75	44911	44.27	ug/L	97
47) benzene	8.81	78	143763	47.31	ug/L	99
48) 1,2-dichloroethane	8.33	62	49293	48.35	ug/L	95
49) tert-amyl methyl ether	8.97	73	89621	73.52	ug/L	98
50) heptane	9.34	43	30147	48.63	ug/L	86
51) trichloroethene	9.45	95	36240	45.69	ug/L	98
52) 1,2-dichloropropane	9.41	63	34922	49.39	ug/L	96
53) dibromomethane	9.38	93	25365	51.63	ug/L	94
54) bromodichloromethane	9.49	83	52451	54.33	ug/L	97
55) Methylcyclohexane	9.98	83	45041	47.96	ug/L	91
57) methyl methacrylate	9.61	69	26084	54.18	ug/L	98
58) 1,4-dioxane	9.59	88	2084	251.34	ug/L	99
59) cis-1,3-dichloropropene	10.12	75	53643	50.56	ug/L	96
61) 4-methyl-2-pentanone	10.23	43	30307	46.53	ug/L	97
62) toluene	10.87	92	91063	46.07	ug/L	94
63) trans-1,3-dichloropropene	10.54	75	49442	57.85	ug/L	94
64) 1,1,2-trichloroethane	10.70	83	29629	49.76	ug/L	96
65) ethyl methacrylate	10.93	69	46356	57.53	ug/L	71
67) tetrachloroethene	11.63	166	35830	43.41	ug/L	99
68) 1,3-dichloropropane	10.94	76	59485	47.96	ug/L	96
69) dibromochloromethane	11.21	129	39488	48.32	ug/L	98
70) 1,2-dibromoethane	11.46	107	36066	44.46	ug/L	97
71) 2-hexanone	11.10	43	21284	43.71	ug/L	95
72) chlorobenzene	12.30	112	97107	42.36	ug/L	99
73) 1,1,1,2-tetrachloroethane	12.23	131	33869	49.79	ug/L	92
74) ethylbenzene	12.47	91	162280	41.33	ug/L	98
75) m,p-xylene	12.66	106	125354	82.05	ug/L	95
76) o-xylene	13.07	106	62345	42.79	ug/L	91
77) styrene	12.99	104	103202	41.62	ug/L	84
78) bromoform	12.80	173	32653	55.91	ug/L	94
79) trans-1,4-dichloro-2-buten	13.24	53	9399	98.60	ug/L #	84
81) isopropylbenzene	13.44	105	142863	48.09	ug/L	95
83) bromobenzene	13.71	156	41511	44.25	ug/L	92
84) 1,1,2,2-tetrachloroethane	13.09	83	52033	50.64	ug/L	99
85) 1,2,3-trichloropropane	13.23	75	54482	65.06	ug/L	99
86) n-propylbenzene	13.88	91	171787	43.56	ug/L	99
87) 2-chlorotoluene	13.99	91	108343	42.75	ug/L	99
88) 4-chlorotoluene	14.07	91	117003	45.53	ug/L	96
89) 1,3,5-trimethylbenzene	14.16	105	125224	44.37	ug/L	98
90) tert-butylbenzene	14.46	91	69436	44.72	ug/L	97
91) 1,2,4-trimethylbenzene	14.56	105	128156	44.18	ug/L	94
92) sec-butylbenzene	14.69	105	147595	44.89	ug/L	99
93) 1,3-dichlorobenzene	14.78	146	70989	45.09	ug/L	98

(#) = qualifier out of range (m) = manual integration

L54039.D L052211W.M

Mon Jun 20 09:35:52 2011

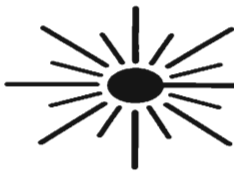
RPT1

Page 2

Data Validation Report

**WSP Environment and Energy
Former TTC – Glen Head, NY**

SDG# MC1220



ECT.CON INC.

Environmental and Computer
Technology Consultants

3531 Fox Chase Drive
Imperial, PA 15126
(724) 695-8042
FAX (724) 695-2698
e-mail: ectconinc@comcast.net



Data Validation Report

SDG#	MC1220
Validation Report Date	July 17, 2011
Validation Guidance	USEPA CLP National Functional Guidelines for Data Review
Client Name	WSP Environment and Energy
Project Name	Former TTC – Glen Head, NY
Laboratory	Accutest
Method(s) Utilized	SW 846 8260B
Analytical Fraction	Volatile Organic Compounds (VOCs)

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
6/14/2011	TB061711	MC1220-1	X	Aqueous
6/17/2011	GP-11-140	MC1220-2	X	Aqueous
6/17/2011	GP-11-130	MC1220-3	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. Laboratory calculations have been verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the Former TTC – Glen Head, NY site consists of two aqueous field samples and one trip blank. These samples were analyzed for the parameters as provided in the Table 1. The findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct.

The VOC findings are based upon the assessment of the following:

- * • Data Completeness
 - * • Holding Times
 - * • Calibration (Initial and Continuing)
 - * • Blanks
 - * • System Monitoring Compounds (Surrogate Spikes)
 - * • Matrix Spike/Matrix Spike Duplicates
 - * • Laboratory Control Sample Results
 - * • Internal Standards
 - * • Target Compound Identification
 - * • Compound Quantification and Reported Contract Quantitation Limits
 - * • System Performance
- * Criteria were met for this evaluation item.

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

All technical parameters were met. No qualifiers were assigned to the data.

NOTES

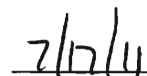
VOLATILE ORGANIC COMPOUNDS

Field Duplicates

No field duplicates were included with this sample delivery group. Data were not qualified on this basis.



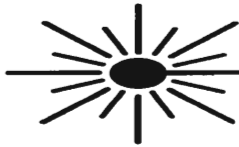
Data Reviewer



Date

Glossary of Data Qualifiers

U	Not Detected.	The associated number indicates approximate sample concentration necessary to be detected.
UJ	Not Detected.	Quantitation limit may be inaccurate or imprecise.
J	Analyte Present.	Reported value may not be accurate or precise.
N	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts.
R	Unusable Result.	Analyte may or may not be present in the sample.
UR	Unusable Result.	Analyte may or may not be present in the sample.



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Annotated Form 1's (Spreadsheet)

Accutest LabLink@114300 08:13 13-Jul-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	TB061711	Date Sampled:	06/14/11
Lab Sample ID:	MC1220-1	Date Received:	06/18/11
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54071.D	1	06/20/11	AMY	n/a	n/a	MSL1797
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%

UK
7/17/14

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:13 13-Jul-2011

Report of Analysis

Page 1 of 1

3.2

Client Sample ID:	GP-11-140	Date Sampled:	06/17/11
Lab Sample ID:	MC1220-2	Date Received:	06/18/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54073.D	1	06/20/11	AMY	n/a	n/a	MSL1797
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		70-130%
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	83%		70-130%

WJ
7/17/11

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@114300 08:13 13-Jul-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	GP-11-130	Date Sampled:	06/17/11
Lab Sample ID:	MC1220-3	Date Received:	06/18/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former Trans Technology 1 Robert Lane Glen Head, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54074.D	1	06/20/11	AMY	n/a	n/a	MSL1797
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

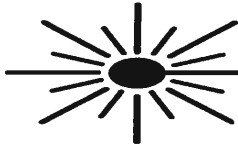
VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		70-130%
2037-26-5	Toluene-D8	90%		70-130%
460-00-4	4-Bromofluorobenzene	84%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



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Support Documentation

Laboratory Case Narrative



Sample Summary

WSP Environmental & Energy

Job No: MC1220

Former Trans Technology 1 Robert Lane Glen Head, NY
Project No: 13224/1

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
MC1220-1	06/14/11	00:00 DC	06/18/11	AQ Trip Blank Water	TB061711
MC1220-2	06/17/11	14:55 DC	06/18/11	AQ Ground Water	GP-11-140
MC1220-3	06/17/11	15:45 DC	06/18/11	AQ Ground Water	GP-11-130

SAMPLE DELIVERY GROUP CASE NARRATIVE**Client:** WSP Environmental & Energy**Job No** MC1220**Site:** Former Trans Technology | Robert Lane Glen Head, NY**Report Date** 7/12/2011 11:56:11 AM

2 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on between 06/14/2011 and 06/17/2011 and were received at Accutest on 06/18/2011 properly preserved, at 1.9 Deg. C and intact. These Samples received an Accutest job number of MC1220. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ	Batch ID: MSL1797

- ▣ All samples were analyzed within the recommended method holding time.
- ▣ All method blanks for this batch meet method specific criteria.
- ▣ Sample(s) MC1220-2MS, MC1220-2MSD were used as the QC samples indicated.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC1220).

Chain of Custody

[illegible]

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MC1220: Chain of Custody
Page 1 of 1

Worksheets

SDG NUMBER
VALIDATION REPORT DATE
VALIDATION GUIDANCE
CLIENT NAME
PROJECT NAME
LABORATORY
METHOD(S) UTILIZED
ANALYTICAL FRACTION(S)
COOLER TEMPERATURES
FIELD DUPLICATES

MC1220
7/17/2011
NFG
WSP Environmental and Energy
Former Trans Technology, 1 Robert Lane, Glen Head, NY
Accutest
8260B
VOCs
Ok
NONE

SDG	SAMPLE DATE	SAMPLE ID	LABORATORY ID	MATRIX	8260C
1	6/14/2011	TB061711	MC1220-1	Aqueous	X
2	6/17/2011	GP-11-140	MC1220-2	Aqueous	X
3	6/17/2011	GP-11-130	MC1220-3	Aqueous	X

HOLDING TIMES						
SAMPLE DATE	SAMPLE ID	LAB ID	MATRIX	PARAMETER	DATE ANALYZED	DF
6/14/2011	TB061711	MC1220-1	Aqueous	X	6/20/2011	1X
6/17/2011	GP-11-140	MC1220-2	Aqueous	X	6/20/2011	1X
6/17/2011	GP-11-130	MC1220-3	Aqueous	X	6/20/2011	1X

14 days from collection to analysis
 Sample Date 6/14/2011 Analyze by 6/28/2011
 Sample Date 6/17/2011 Analyze by 7/1/2011

TARGET COMPOUNDS AND QUANTITATION LIMITS	
Was a target compound list provided by the client?	Yes, 5 compounds only
Did Sample Form 1s match the target compound list	yes
Were required quantitation limits provided by the client?	No
Did all compounds meet the required quantitation limits?	NA

SYSTEM MONITORING COMPOUNDS				
SAMPLE	DF	SURROGATE	RECOVERY	ACTION
All OK				
Were surrogate RTs within windows established by the ICAL? Yes Were there any transcription errors between the raw data and Form 2? No Were laboratory acceptance limits used as the basis for validation? Yes Did the laboratory provide CLP Form II or equivalent? Yes				

gp-11-140	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 2
DBFM	44.63	50	89.3	89
Tol-d8	44.48	50	89.0	89
BFB	41.72	50	83.4	83

Recovery = (Amount Found/Amount Spiked)*100

MS/MSD RECOVERY and RELATIVE PERCENT DIFFERENCE						
GP-11-140 MS/MSD						
COMPOUND	MS %R	MSD %R	RPD	NATIVE	SPIKE	ACTION
All Parameters	ok	ok	ok			
Were there any transcription errors between the raw data and Form 3? No Were laboratory acceptance limits used as the basis for validation? 70-130% Did the laboratory provide CLP Form III or equivalent? No Were chromatograms and quan reports present for all MS/MSDs? Yes						

tetrachloroethene	AMOUNT FOUND	AMOUNT NATIVE	AMOUNT SPIKED	%R	Form 3
MS	224	0	250	89.6	90
MSD	203	0	250	81.2	81
RPD	9.8			9.8	10.0

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100
 RPD = ((MS-MSD)/((MS+MSD)/2))*100

LABORATORY CONTROL SAMPLES

SAMPLE	COMPOUND	LCS %R	LCSD %R	RPD	Samples	ACTION
MSL1797-BS	All Parameters	ok	ok			

Were there any transcription errors between the raw data and Form 3? No
 Were laboratory acceptance limits used as the basis for validation? 70-130%
 Did the laboratory provide CLP Form III or equivalent? Yes
 Were chromatograms and quan reports present for all LCS/LCDs? Yes

MSL1797-BS	PCE	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 3
	LCS	45.5	50	91	91%

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

BLANKS

BLANK	COMPOUND	RESULT	5X OR 10X	ACTION LEVEL	ACTION
MSL1797-MB	All Parameters	ND		#VALUE!	
TB061711	All Parameters	ND		#VALUE!	

Were Form Is provided for all blanks? Yes
 Were chromatograms and quan reports present for all blanks? Yes
 Did the laboratory provide CLP Form IVs or equivalent? No

CALIBRATION

Initial
 Are chromatograms and quan reports present for all ICAL standards? Yes
 Are CLP For VIs or equivalent present and complete? Yes
 Any transcription or calculation errors? No
 What linearity criteria was used? 30% RSD
 Are RRFs greater than 0.05? Yes
Continuing
 Are chromatograms and quan reports present for all CCV standards? Yes
 Are CLP For VIIIs or equivalent present and complete? Yes
 Any transcription or calculation errors? No
 What %D criteria was used? 30%D
 Were samples analyzed within 12 hours of the tune? Yes
 Are RRFs greater than 0.05? Yes

*Shading indicates a value outside the 12 hour criteria.

	ICAL	CCV	ICAL	CCV	CCV	CCV
Instrument	GCMSL					
Date	5/22/2011	6/20/2011				
Tune	8:30	9:37				
CCV		9:37				
Blank		10:36				
COMPOUNDS						
	All OK	All OK				
SAMPLES						

INITIAL CALIBRATION RRF

Date 5/22/2011
Instrument GCMSL
Compound tetrachloroethene
Reported RF 0.65
Calculated RF 0.64985

Compound Area (A1) 16552
Conc (C1) 25

Internal Std Area (A2) 50941
Conc (C2) 50

INITIAL CALIBRATION AVERAGE RRF

Rptd Avg RRF 0.676
Calcd Avg RRF 0.6764444

RRF1 0.739
RRF2 0.646
RRF3 0.629
RRF4 0.609
RRF5 0.728
RRF6 0.766
RRF7 0.65
RRF8 0.668
RRF9 0.653
SUM 6.088

$$RRF = (A1/A2) * (C2/C1)$$

INITIAL CALIBRATION %RSD

Reported %RSD 8
Calculated %RSD 8.036

STD DEV 0.0544

$$\%RSD = (Std Dev / Avg RRF) * 100$$

CONTINUING CALIBRATION %D

Date 6/20/2011
Time 9:37
Instrument GCMSL
Compound tetrachloroethene
Reported RRF 0.616
Calculated RF 0.616

Compound Area (A1) 33846
Conc (C1) 50

Reported %Difference 8.9
Calculated %Difference 8.95

Internal Std Area (A2) 54987
Conc (C2) 50

ICAL RRF 0.676
CCV RRF 0.6155

$$\%Difference = ((ICAL - CCV) / ICAL) * 100$$

TUNE			
Raw data and mass assignments correct?	Yes	Instrument	GCMSL
Mass listing normalized to specified m/x?	Yes	Date	6/20/2011
Were all tune reports present?	Yes	Time	9:37

m/z	Area	Calculated %	Reported %	Abundance Criteria
50	3747	15.7%	15.7	15-40% of mass 95
75	11318	47.5%	47.5	30-60% of mass 95
95	23824	100.0%	100	base peak, 100%
96	1664	7.0%	7	5-9% of mass 95
173	0	0.0%	0	<2% of mass 174
174	21448	90.0%	90	50%-120% of mass 95
175	1614	7.5%	7.5	5-9% of mass 174
176	20888	97.4%	97.4	95%-101% of mass 174
177	1225	5.9%	5.9	5-9% of mass 176

INTERNAL STANDARD CHECK

CCV Date 6/20/2011 Shading indicates a percent recovery outside the -50% to 100% criteria.
CCV Time 9:37 Shading indicates a retention time outside the +/- 0.5 minute criteria.
Instrument GCMSL

	PFB	RT	I4-DFB	RT	CB-d5	RT
UPPER	66527	8.19	96923	9.03	54987	12.26
LOWER	133054	8.69	193846	9.53	109974	12.76
	33264	7.69	48462	8.53	27494	11.76
GP-11-140	66477	8.200	94604	9.030	53847	12.270
	100%		98%		98%	

RELATIVE RETENTION TIMES - No positive sample results

FIELD DUPLICATES - None Present

SAMPLE CALCULATION

GP-11-140 MS, tetrachloroethene, 44.75 µg/L

Compound area	37119	Compound area		Compound area	
IS area	61319	IS area		IS area	
IS conc	50	IS conc		IS conc	
Compound RRF	0.676	Compound RRF		Compound RRF	
Volume	1	Volume		Volume	
DF	1	DF		DF	
Concentration ppbv	44.77	Concentration	#DIV/0!	Concentration	#DIV/0!

Concentration = (Compound area/ IS area) * (IS conc/Compound RRF) * (DF/ Volume)

Are there any transcription errors? No
Are Form 1s present for all field and quality control samples? Yes
Are chromatograms and quan reports present for all samples? Yes
Are RLs adjusted to reflect sample dilutions, percent solids, etc.? Yes
For soils, any percent solids <50%? NA
For soils, any percent solids <10%? NA

Volatile Surrogate Recovery Summary

Page 1 of 1

Job Number: MC1220

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Method: SW846 8260B

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC1220-1	L54071.D	95.0	97.0	95.0
MC1220-2	L54073.D	89.0	89.0	83.0
MC1220-3	L54074.D	89.0	90.0	84.0
MC1220-2MS	L54091.D	91.0	88.0	90.0
MC1220-2MSD	L54092.D	91.0	87.0	86.0
MSL1797-BS	L54068.D	91.0	92.0	92.0
MSL1797-MB	L54070.D	95.0	98.0	94.0

Surrogate Compounds	Recovery Limits

S1 = Dibromofluoromethane	70-130%

S2 = Toluene-D8	70-130%

S3 = 4-Bromofluorobenzene	70-130%

5.6.1



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54073.D Vial: 8
Acq On : 20 Jun 2011 12:03 pm Operator: amym
Sample : mc1220-2 Inst : MAMSL
Misc : ms23275,msl1797,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 21 08:54:51 2011 Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Sun May 22 15:35:26 2011
Response via : Initial Calibration
DataAcq Meth : L8260

GP-11-145

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.85	65	22436	500.00	ug/L	-0.01
4) pentafluorobenzene	8.20	168	66477	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.03	114	94604	50.00	ug/L	0.00
66) chlorobenzene-d5	12.27	82	53847	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	48154	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	28531	44.63	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	89.26%
60) toluene-d8 (s)	10.81	98	101992	44.48	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	88.96%
82) bromofluorobenzene (s)	13.49	95	36254	41.72	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	83.44%

Target Compounds Qvalue

6.1.2


(#) = qualifier out of range (m) = manual integration (+) = signals summed
L54073.D L052211W.M Tue Jun 21 14:53:21 2011 RPT1

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC1220

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC1220-2MS	L54091.D	5	06/20/11	AMY	n/a	n/a	MSL1797
MC1220-2MSD	L54092.D	5	06/20/11	AMY	n/a	n/a	MSL1797
MC1220-2	L54073.D	1	06/20/11	AMY	n/a	n/a	MSL1797

The QC reported here applies to the following samples:

Method: SW846 8260B

MC1220-1, MC1220-2, MC1220-3

CAS No.	Compound	MC1220-2 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethene	ND	250	249	100	233	93	7	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	229	92	215	86	6	70-130/30
127-18-4	Tetrachloroethene	ND	250	224	90	203	81	10	70-130/30
79-01-6	Trichloroethene	ND	250	243	97	222	89	9	70-130/30
75-01-4	Vinyl chloride	ND	250	276	110	213	85	26	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC1220-2	Limits
1868-53-7	Dibromofluoromethane	91%	91%	89%	70-130%
2037-26-5	Toluene-D8	88%	87%	89%	70-130%
460-00-4	4-Bromofluorobenzene	90%	86%	83%	70-130%

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54091.D Vial: 26
 Acq On : 20 Jun 2011 8:55 pm Operator: amym
 Sample : mcl220-2ms Inst : MAMSL
 Misc : ms23275,ms11797,,,5,5 Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Jun 21 08:55:45 2011 Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Sun May 22 15:35:26 2011
 Response via : Initial Calibration
 DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.85	65	21006	500.00	ug/L	-0.02
4) pentafluorobenzene	8.19	168	70057	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.03	114	106358	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	61319	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	55160	50.00	ug/L	0.00

System Monitoring Compounds						
40) dibromofluoromethane (s)	7.81	113	30815	45.74	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	91.48%		
60) toluene-d8 (s)	10.80	98	113268	43.94	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	87.88%		
82) bromofluorobenzene (s)	13.48	95	44792	44.99	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	89.98%		

Target Compounds						Qvalue
2) tertiary butyl alcohol	5.92	59	33824	570.84	ug/L	95
3) Ethanol	4.81	45	44054	3827.34	ug/L	97
5) dichlorodifluoromethane	3.73	85	39476	62.10	ug/L	96
6) chloromethane	3.95	50	32064	46.16	ug/L	96
7) vinyl chloride	4.16	62	42376	55.15	ug/L	98
8) bromomethane	4.60	96	10039	19.84	ug/L	89
9) chloroethane	4.75	64	25165	52.70	ug/L	96
10) ethyl ether	5.58	59	31001	51.52	ug/L	85
11) acetone	5.25	41	22375	90.70	ug/L	93
12) trichlorofluoromethane	5.34	101	57714	44.94	ug/L	96
13) freon-113	6.08	101	30396	51.52	ug/L	97
14) acrolein	5.33	56	11900	352.50	ug/L	95
15) 1,1-dichloroethene	5.89	96	33824	44.84	ug/L	98
16) acetone	5.45	43	17845	53.53	ug/L	91
17) Methyl Acetate	6.05	43	56254	44.24	ug/L #	90
18) methylene chloride	6.04	84	42041	47.54	ug/L	94
19) methyl tert butyl ether	6.80	73	98644	52.67	ug/L	94
20) acrylonitrile	5.93	53	14720	44.71	ug/L	97
21) allyl chloride	6.12	41	42325	56.29	ug/L	87
22) trans-1,2-dichloroethene	6.69	96	32725	45.72	ug/L	88
23) iodomethane	5.94	142	17797	30.15	ug/L	81
24) carbon disulfide	6.28	76	105782	48.05	ug/L	100
25) propionitrile	6.94	54	4947	50.73	ug/L	100
26) vinyl acetate	7.03	43	30820	62.81	ug/L	97
27) chloroprene	7.30	53	45326	56.60	ug/L	92
28) di-isopropyl ether	7.36	45	105474	57.97	ug/L	92
29) methacrylonitrile	7.44	41	21830	53.68	ug/L	83
30) 2-butanone	7.35	72	4854	51.02	ug/L #	33
31) Hexane	7.35	41	41356	50.81	ug/L	89
32) 1,1-dichloroethane	6.94	63	65799	55.64	ug/L	94
33) tert-butyl ethyl ether	7.75	59	91348	82.07	ug/L	99
34) isobutyl alcohol	7.74	43	10337	258.33	ug/L #	67
35) 2,2-dichloropropane	7.78	77	14833	43.18	ug/L	92
36) cis-1,2-dichloroethene	7.51	96	39685	49.80	ug/L	95
37) ethyl acetate	7.74	43	10720	81.66	ug/L	62

(#) = qualifier out of range (m) = manual integration

L54091.D L052211W.M Tue Jun 21 17:24:33 2011 RPT1

Page 1



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54091.D
 Acq On : 20 Jun 2011 8:55 pm
 Sample : mcl220-2ms
 Misc : ms23275,msl1797,,,,5,5
 MS Integration Params: RTEINT.P
 Quant Time: Jun 21 08:55:45 2011

Vial: 26
 Operator: amym
 Inst : MAMSL
 Multiplr: 1.00

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Sun May 22 15:35:26 2011
 Response via : Initial Calibration
 DataAcq Meth : L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	7.66	128	17980	54.40	ug/L	84
39) chloroform	7.70	83	71592	51.10	ug/L	91
41) Tetrahydrofuran	8.03	42	8880	49.26	ug/L #	65
42) 1,1,1-trichloroethane	8.44	97	51577	50.24	ug/L	96
44) Cyclohexane	8.73	56	42923	54.48	ug/L	84
45) carbon tetrachloride	8.79	117	44914	54.84	ug/L	99
46) 1,1-dichloropropene	8.62	75	43280	42.64	ug/L	98
47) benzene	8.81	78	153223	50.39	ug/L	99
48) 1,2-dichloroethane	8.33	62	51028	50.02	ug/L	96
49) tert-amyl methyl ether	8.97	73	90120	73.82	ug/L	97
50) heptane	9.34	43	25296	42.71	ug/L	86
51) trichloroethene	9.45	95	38610	48.65	ug/L	92
52) 1,2-dichloropropane	9.41	63	36798	52.01	ug/L	94
53) dibromomethane	9.38	93	25798	52.48	ug/L	96
54) bromodichloromethane	9.49	83	55264	57.20	ug/L	97
55) Methylcyclohexane	9.98	83	40020	43.91	ug/L	90
57) methyl methacrylate	9.61	69	25320	52.85	ug/L	97
58) 1,4-dioxane	9.59	88	1599	209.28	ug/L	95
59) cis-1,3-dichloropropene	10.12	75	52538	49.61	ug/L	98
61) 4-methyl-2-pentanone	10.24	43	29454	45.38	ug/L	95
62) toluene	10.87	92	94849	47.96	ug/L	95
63) trans-1,3-dichloropropene	10.54	75	48023	56.43	ug/L	86
64) 1,1,2-trichloroethane	10.70	83	30916	51.89	ug/L	97
65) ethyl methacrylate	10.93	69	46404	57.54	ug/L #	57
67) tetrachloroethene	11.63	166	37119	44.75	ug/L	95
68) 1,3-dichloropropane	10.94	76	62118	49.83	ug/L	97
69) dibromochloromethane	11.21	129	40150	48.81	ug/L	98
70) 1,2-dibromoethane	11.46	107	36140	44.35	ug/L	99
71) 2-hexanone	11.12	43	18792	39.27	ug/L	96
72) chlorobenzene	12.30	112	101460	44.04	ug/L	99
73) 1,1,1,2-tetrachloroethane	12.23	131	34880	50.87	ug/L	93
74) ethylbenzene	12.47	91	167147	42.35	ug/L	100
75) m,p-xylene	12.66	106	128537	83.71	ug/L	93
76) o-xylene	13.07	106	64631	44.14	ug/L	90
77) styrene	12.99	104	106325	42.67	ug/L	87
78) bromoform	12.80	173	32704	55.76	ug/L	91
79) trans-1,4-dichloro-2-buten	13.24	53	8859	94.01	ug/L #	84
81) isopropylbenzene	13.44	105	142038	47.67	ug/L	95
83) bromobenzene	13.71	156	42817	45.50	ug/L	86
84) 1,1,2,2-tetrachloroethane	13.09	83	52711	51.15	ug/L	96
85) 1,2,3-trichloropropane	13.23	75	53165	63.29	ug/L	99
86) n-propylbenzene	13.88	91	169133	42.76	ug/L	98
87) 2-chlorotoluene	13.99	91	111750	43.96	ug/L	98
88) 4-chlorotoluene	14.07	91	119586	46.40	ug/L	93
89) 1,3,5-trimethylbenzene	14.16	105	122888	43.42	ug/L	95
90) tert-butylbenzene	14.46	91	66746	42.86	ug/L	100
91) 1,2,4-trimethylbenzene	14.56	105	130606	44.89	ug/L	98
92) sec-butylbenzene	14.69	105	142775	43.30	ug/L	97
93) 1,3-dichlorobenzene	14.78	146	73012	46.24	ug/L	98

(#) = qualifier out of range (m) = manual integration

L54091.D L052211W.M

Tue Jun 21 17:24:33 2011

RPT1

Page 2



44.75 x 5 =
 223.7

Blank Spike Summary

Page 1 of 1

Job Number: MC1220

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1797-BS	L54068.D	1	06/20/11	AMY	n/a	n/a	MSL1797

The QC reported here applies to the following samples:

Method: SW846 8260B

MC1220-1, MC1220-2, MC1220-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethene	50	48.1	96	70-130
156-60-5	trans-1,2-Dichloroethene	50	44.9	90	70-130
127-18-4	Tetrachloroethene	50	45.5	91	70-130
79-01-6	Trichloroethene	50	49.6	99	70-130
75-01-4	Vinyl chloride	50	50.7	101	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	91%	70-130%
2037-26-5	Toluene-D8	92%	70-130%
460-00-4	4-Bromofluorobenzene	92%	70-130%

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54068.D

Vial: 3

Acq On : 20 Jun 2011 9:37 am

Operator: amym

Sample : cc1764-50

Inst : MAMSL

Misc : ms23270,msl1797,,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jun 21 08:54:34 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.84	65	18915	500.00	ug/L	-0.03
4) pentafluorobenzene	8.19	168	66527	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.03	114	96923	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	54987	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	50038	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	29127	45.53	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	91.06%
60) toluene-d8 (s)	10.80	98	107996	45.97	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	91.94%
82) bromofluorobenzene (s)	13.48	95	41697	46.17	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	92.34%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	5.92	59	30052	563.88	ug/L	98
3) Ethanol	4.80	45	40807	3937.16	ug/L	99
5) dichlorodifluoromethane	3.73	85	32468	53.79	ug/L	93
6) chloromethane	3.95	50	31963	48.26	ug/L	95
7) vinyl chloride	4.16	62	36975	50.68	ug/L	100
8) bromomethane	4.62	96	15962	31.41	ug/L	100
9) chloroethane	4.75	64	22140	48.83	ug/L	84
10) ethyl ether	5.58	59	27360	47.88	ug/L	80
11) acetone	5.25	41	19332	82.01	ug/L	93
12) trichlorofluoromethane	5.34	101	48398	40.64	ug/L	95
13) freon-113	6.08	101	24649	44.60	ug/L	96
14) acrolein	5.32	56	15520	484.12	ug/L	85
15) 1,1-dichloroethene	5.89	96	29732	41.50	ug/L	93
16) acetone	5.44	43	16683	52.62	ug/L	93
17) Methyl Acetate	6.05	43	51146	42.36	ug/L #	90
18) methylene chloride	6.04	84	36560	43.54	ug/L	96
19) methyl tert butyl ether	6.80	73	91204	51.31	ug/L	95
20) acrylonitrile	5.93	53	12239	39.15	ug/L	86
21) allyl chloride	6.12	41	38205	53.51	ug/L	86
22) trans-1,2-dichloroethene	6.69	96	30501	44.87	ug/L	92
23) iodomethane	5.95	142	28061	49.75	ug/L	84
24) carbon disulfide	6.28	76	96906	46.35	ug/L	99
25) propionitrile	6.94	54	4427	48.09	ug/L	100
26) vinyl acetate	7.03	43	26233	57.23	ug/L	97
27) chloroprene	7.30	53	43285	56.92	ug/L	91
28) di-isopropyl ether	7.36	45	94468	54.68	ug/L	89
29) methacrylonitrile	7.44	41	19369	50.15	ug/L	76
30) 2-butanone	7.35	72	4609	51.02	ug/L #	25
31) Hexane	7.35	41	36711	47.50	ug/L	96
32) 1,1-dichloroethane	6.94	63	59657	53.13	ug/L	94
33) tert-butyl ethyl ether	7.75	59	84984	80.66	ug/L	94
34) isobutyl alcohol	7.74	43	9409	250.46	ug/L	95
35) 2,2-dichloropropane	7.78	77	17517	49.18	ug/L	93
36) cis-1,2-dichloroethene	7.51	96	36377	48.07	ug/L	95
37) ethyl acetate	7.74	43	9420	75.95	ug/L	70

(#)=qualifier out of range (m)=manual integration

L54068.D L052211W.M

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RPT1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54068.D

Vial: 3

Acq On : 20 Jun 2011 9:37 am

Operator: amym

Sample : cc1764-50

Inst : MAMSL

Misc : ms23270,msl1797,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jun 21 08:54:34 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	7.66	128	16693	53.19	ug/L #	81
39) chloroform	7.70	83	64928	48.80	ug/L	98
41) Tetrahydrofuran	8.03	42	7899	46.14	ug/L	78
42) 1,1,1-trichloroethane	8.44	97	49310	50.53	ug/L	93
44) Cyclohexane	8.73	56	37226	52.07	ug/L #	82
45) carbon tetrachloride	8.79	117	42559	56.93	ug/L	97
46) 1,1-dichloropropene	8.62	75	41295	44.64	ug/L	98
47) benzene	8.81	78	141601	51.10	ug/L	98
48) 1,2-dichloroethane	8.33	62	47537	51.13	ug/L	96
49) tert-amyl methyl ether	8.97	73	84485	75.61	ug/L	98
50) heptane	9.34	43	24041	44.03	ug/L	87
51) trichloroethene	9.45	95	35902	49.64	ug/L	93
52) 1,2-dichloropropane	9.41	63	33273	51.61	ug/L	97
53) dibromomethane	9.38	93	23289	51.99	ug/L	93
54) bromodichloromethane	9.49	83	50810	57.71	ug/L	95
55) Methylcyclohexane	9.98	83	37071	44.44	ug/L	89
57) methyl methacrylate	9.61	69	23745	54.10	ug/L	98
58) 1,4-dioxane	9.59	88	1782	240.11	ug/L	92
59) cis-1,3-dichloropropene	10.12	75	50531	52.05	ug/L	95
61) 4-methyl-2-pentanone	10.23	43	26006	44.17	ug/L	98
62) toluene	10.87	92	88338	49.01	ug/L	95
63) trans-1,3-dichloropropene	10.54	75	46676	59.55	ug/L	90
64) 1,1,2-trichloroethane	10.70	83	27810	51.22	ug/L	95
65) ethyl methacrylate	10.93	69	39677	54.69	ug/L #	50
67) tetrachloroethene	11.63	166	33846	45.50	ug/L	99
68) 1,3-dichloropropane	10.94	76	55428	49.58	ug/L	96
69) dibromochloromethane	11.21	129	38134	51.33	ug/L	97
70) 1,2-dibromoethane	11.46	107	33680	45.85	ug/L	99
71) 2-hexanone	11.11	43	17518	40.54	ug/L	97
72) chlorobenzene	12.30	112	93789	45.39	ug/L	98
73) 1,1,1,2-tetrachloroethane	12.23	131	33170	53.58	ug/L	94
74) ethylbenzene	12.47	91	159816	45.16	ug/L	100
75) m,p-xylene	12.66	106	122648	89.07	ug/L	90
76) o-xylene	13.07	106	60188	45.84	ug/L	91
77) styrene	12.99	104	102320	45.79	ug/L	84
78) bromoform	12.80	173	30136	56.99	ug/L	94
79) trans-1,4-dichloro-2-buten	13.24	53	7780	92.58	ug/L #	55
81) isopropylbenzene	13.44	105	140738	52.07	ug/L	94
83) bromobenzene	13.71	156	40948	47.97	ug/L	90
84) 1,1,2,2-tetrachloroethane	13.09	83	46266	49.49	ug/L	95
85) 1,2,3-trichloropropane	13.23	75	47779	62.70	ug/L	98
86) n-propylbenzene	13.88	91	166521	46.40	ug/L	99
87) 2-chlorotoluene	13.99	91	107197	46.49	ug/L	100
88) 4-chlorotoluene	14.07	91	114030	48.77	ug/L	95
89) 1,3,5-trimethylbenzene	14.16	105	122048	47.53	ug/L	97
90) tert-butylbenzene	14.46	91	67914	48.07	ug/L	100
91) 1,2,4-trimethylbenzene	14.56	105	125085	47.39	ug/L	100
92) sec-butylbenzene	14.69	105	139909	46.77	ug/L	97
93) 1,3-dichlorobenzene	14.78	146	69144	48.27	ug/L	97

(#)=qualifier out of range (m)=manual integration

L54068.D L052211W.M

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RPT1

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Method Blank Summary

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Job Number: MC1220

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1797-MB	L54070.D	1	06/20/11	AMY	n/a	n/a	MSL1797

The QC reported here applies to the following samples:

Method: SW846 8260B

MC1220-1, MC1220-2, MC1220-3

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	70-130%
2037-26-5	Toluene-D8	98%	70-130%
460-00-4	4-Bromofluorobenzene	94%	70-130%

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC1220

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample: MSL1764-BFB

Injection Date: 05/22/11

Lab File ID: L52992.D

Injection Time: 08:30

Instrument ID: GCMSL

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	3967	18.1	Pass
75	30.0 - 60.0% of mass 95	10972	50.0	Pass
95	Base peak, 100% relative abundance	21949	100.0	Pass
96	5.0 - 9.0% of mass 95	1346	6.13	Pass
173	Less than 2.0% of mass 174	207	0.94 (1.06) ^a	Pass
174	50.0 - 150.0% of mass 95	19600	89.3	Pass
175	5.0 - 9.0% of mass 174	1274	5.80 (6.50) ^a	Pass
176	95.0 - 101.0% of mass 174	19453	88.6 (99.3) ^a	Pass
177	5.0 - 9.0% of mass 176	1259	5.74 (6.47) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSL1764-IC1764	L52995.D	05/22/11	10:13	01:43	Initial cal 0.5
MSL1765-IC1765	L52995A.D	05/22/11	10:13	01:43	Initial cal 0.5
MSL1765-IC1765	L52996A.D	05/22/11	10:42	02:12	Initial cal 1
MSL1764-IC1764	L52996.D	05/22/11	10:42	02:12	Initial cal 1
MSL1765-IC1765	L52997A.D	05/22/11	11:10	02:40	Initial cal 2
MSL1764-IC1764	L52997.D	05/22/11	11:10	02:40	Initial cal 2
MSL1765-IC1765	L52998A.D	05/22/11	11:39	03:09	Initial cal 5
MSL1764-IC1764	L52998.D	05/22/11	11:39	03:09	Initial cal 5
MSL1765-IC1765	L52999A.D	05/22/11	12:08	03:38	Initial cal 10
MSL1764-IC1764	L52999.D	05/22/11	12:08	03:38	Initial cal 10
MSL1765-IC1765	L53000A.D	05/22/11	12:36	04:06	Initial cal 25
MSL1764-IC1764	L53000.D	05/22/11	12:36	04:06	Initial cal 25
MSL1765-IC1765	L53001A.D	05/22/11	13:05	04:35	Initial cal 400
MSL1764-IC1764	L53001.D	05/22/11	13:05	04:35	Initial cal 400
MSL1765-IC1765	L53002A.D	05/22/11	13:34	05:04	Initial cal 200
MSL1764-IC1764	L53002.D	05/22/11	13:34	05:04	Initial cal 200
MSL1765-ICC1765	L53003A.D	05/22/11	14:02	05:32	Initial cal 100
MSL1764-ICC1764	L53003.D	05/22/11	14:02	05:32	Initial cal 100
MSL1765-IC1765	L53004A.D	05/22/11	14:31	06:01	Initial cal 50
MSL1764-IC1764	L53004.D	05/22/11	14:31	06:01	Initial cal 50
MSL1764-ICV1764	L53005.D	05/22/11	15:56	07:26	Initial cal verification 50
MSL1765-ICV1765	L53005A.D	05/22/11	15:56	07:26	Initial cal verification 50

Initial Calibration Summary

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Job Number: MC1220 Sample: MSL1764-ICC1764
Account: WSPNYC WSP Environmental & Energy Lab FileID: L53003.D
Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Response Factor Report MAMSL

Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Sun May 22 15:35:26 2011
Response via : Initial Calibration

Calibration Files

0.5 =L52995.D 2 =L52997.D 5 =L52998.D 50 =L53004.D
100 =L53003.D 200 =L53002.D 400 =L53001.D 25 =L53000.D
1 =L52996.D 10 =L52999.D = =

Compound

	0.5	2	5	50	100	200	400	25	1	10	Avg	%RSD
1) tert butyl alcohol-d9 -----ISTD-----												
2) tertiary butyl alcohol												
	0.638	0.905	1.364	1.406	1.430	1.543	1.245		1.148	1.210	25.12	
----- Linear regression -----									Coefficient =	0.9988		
Response Ratio =	-0.14706 + 1.53919 *A											
3) Ethanol												
	0.277	0.253	0.242	0.267	0.299	0.323	0.275		0.256	0.274	9.59	
4) I pentafluorobenzene -----ISTD-----												
5) dichlorodifluoromethane												
	0.500	0.458	0.403	0.373	0.498	0.569	0.405		0.423	0.454	14.39	
6) chloromethane												
	0.495	0.482	0.488	0.509	0.633	0.771	0.475		0.482	0.542	19.54	
----- Quadratic regression -----									Coefficient =	0.9998		
Response Ratio =	-0.00987 + 0.47167 *A + 0.03766 *A^2											
7) vinyl chloride												
	0.620	0.544	0.540	0.533	0.621	0.439	0.548	0.559	0.532	0.548	9.80	
8) bromomethane												
	0.288	0.233	0.400	0.395	0.433	0.411	0.251	0.374	0.235	0.335	24.54	
----- Linear regression -----									Coefficient =	0.9987		
Response Ratio =	-0.02237 + 0.41750 *A											
9) chloroethane												
	0.417	0.344	0.306	0.294	0.316	0.360	0.312	0.417	0.301	0.341	14.08	
10) ethyl ether												
	0.436	0.395	0.424	0.425	0.455	0.481	0.425	0.412	0.413	0.429	5.89	
11) acetonitrile												
	0.444	0.210	0.129	0.198	0.225	0.334			0.423	0.281	43.06	
----- Quadratic regression -----									Coefficient =	0.9941		
Response Ratio =	0.05425 + 0.12465 *A + 0.01185 *A^2											
12) trichlorofluoromethane												
	1.003	0.898	0.810	0.770	0.994	1.133	0.823	0.613	0.818	0.874	17.54	
----- Linear regression -----									Coefficient =	0.9921		
Response Ratio =	-0.18220 + 1.11921 *A											
13) freon-113												
	0.501	0.406	0.398	0.544	0.650	0.442			0.442	0.483	18.59	
----- Quadratic regression -----									Coefficient =	0.9990		
Response Ratio =	-0.00854 + 0.39627 *A + 0.03210 *A^2											
14) acrolein												

Initial Calibration Summary

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Job Number: MC1220

Sample: MSL1764-ICC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L53003.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

		0.023	0.025	0.024	0.024	0.026	0.024		0.023	0.024	3.54	
15)	1,1-dichloroethene	0.703	0.570	0.473	0.451	0.539	0.595	0.500	0.507	0.509	14.20	
16)	acetone	0.459	0.228	0.214	0.228	0.219	0.296		0.341	0.284	32.06	
	----- Linear regression -----								0.9992			
	Response Ratio =	0.02255							0.21687	*A		
17)	Methyl Acetate	1.050	0.889	0.891	0.897	0.946	0.925	0.828		0.834	0.908	7.76
18)	methylene chloride	0.649	0.574	0.576	0.590	0.635	0.729	0.601	0.737	0.589	0.631	9.99
19)	methyl tert butyl ether	0.959	0.857	1.132	1.191	1.195	0.719	1.000	0.998	0.909	0.996	15.91
	----- Quadratic regression -----										0.9944	
	Response Ratio =	-0.14017							1.57983	*A	+ -0.10457	*A^2
20)	acrylonitrile	0.208	0.204	0.253	0.245	0.252	0.254	0.251		0.214	0.235	9.50
21)	allyl chloride	0.578	0.482	0.498	0.521	0.531	0.600	0.562		0.522	0.537	7.50
22)	trans-1,2-dichloroethene	0.555	0.452	0.495	0.489	0.530	0.595	0.484	0.524	0.474	0.511	8.70
23)	iodomethane	0.250	0.462	0.417	0.360	0.273	0.383		0.293	0.348	22.66	
	----- Quadratic regression -----										0.9993	
	Response Ratio =	-0.01833							0.46617	*A	+ -0.02394	*A^2
24)	carbon disulfide	1.797	1.540	1.346	1.514	1.593	1.770	1.479	1.614	1.489	1.571	9.09
25)	propionitrile	0.027	0.069	0.070	0.075	0.076	0.064		0.048	0.061	29.06	
	----- Linear regression -----								0.9998			
	Response Ratio =	-0.00768							0.07717	*A		
26)	vinyl acetate	0.111	0.318	0.350	0.399	0.399	0.189		0.148	0.274	44.46	
	----- Linear regression -----								0.9991			
	Response Ratio =	-0.07353							0.40875	*A		
27)	chloroprene	0.553	0.520	0.553	0.549	0.637	0.656	0.555		0.550	0.572	8.39
28)	di-isopropyl ether	1.316	1.163	1.283	1.307	1.394	1.476	1.259	1.284	1.204	1.298	7.23
29)	methacrylonitrile	0.263	0.292	0.288	0.292	0.323	0.288		0.285	0.290	6.04	
30)	2-butanone	0.042	0.065	0.067	0.072	0.076	0.065		0.064	0.065	16.80	
	----- Linear regression -----								0.9989			
	Response Ratio =	-0.00899							0.07671	*A		
31)	Hexane	0.615	0.546	0.533	0.519	0.638	0.701	0.554		0.543	0.581	10.97
32)	1,1-dichloroethane	0.908	0.764	0.824	0.844	0.899	0.993	0.811	0.770	0.782	0.844	9.04
33)	tert-butyl ethyl ether	0.215	0.222	0.589	0.695	0.803	0.942	0.354		0.261	0.510	55.91
	----- Linear regression -----								0.9933			
	Response Ratio =	-0.24517							0.94380	*A		

5.7.1



Initial Calibration Summary

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Job Number: MC1220

Sample: MSL1764-ICC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L53003.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

34)	isobutyl alcohol	0.001	0.026	0.031	0.034	0.038	0.014	0.007	0.022	66.68
	----- Linear regression -----	Coefficient = 0.9975								
	Response Ratio =	-0.05322 + 0.03886 *A								
35)	2,2-dichloropropane	0.253	0.363	0.356	0.417	0.092	0.003	0.247	67.14	
	----- Linear regression -----	Coefficient = 0.9965								
	Response Ratio =	-0.15926 + 0.42962 *A								
36)	cis-1,2-dichloroethene	0.606	0.506	0.538	0.556	0.588	0.649	0.552	0.606	8.22
37)	ethyl acetate	0.096	0.157	0.098	0.176	0.070	0.033	0.105	50.92	
	----- Quadratic regression -----	Coefficient = 0.9832								
	Response Ratio =	0.02598 + 0.05395 *A + 0.01459 *A^2								
38)	bromochloromethane	0.245	0.236	0.223	0.233	0.253	0.282	0.234	0.192	10.32
39)	chloroform	1.055	0.943	0.926	0.952	1.011	1.127	0.926	1.144	8.95
40)	dibromofluoromethane (s)	0.437	0.460	0.457	0.511	0.564	0.459	0.477	0.481	9.01
41)	Tetrahydrofuran	0.104	0.132	0.133	0.140	0.146	0.127	0.120	0.129	10.69
42)	1,1,1-trichloroethane	0.399	0.374	0.653	0.684	0.779	0.880	0.523	0.251	37.54
	----- Linear regression -----	Coefficient = 0.9954								
	Response Ratio =	-0.14258 + 0.87453 *A								
43)	I 1,4-difluorobenzene	-----ISTD-----								
44)	Cyclohexane	0.396	0.361	0.351	0.469	0.557	0.382	0.379	0.414	17.92
	----- Quadratic regression -----	Coefficient = 0.9991								
	Response Ratio =	-0.00850 + 0.34960 *A + 0.02626 *A^2								
45)	carbon tetrachloride	0.274	0.249	0.349	0.369	0.375	0.300	0.292	0.271	15.48
	----- Quadratic regression -----	Coefficient = 0.9987								
	Response Ratio =	-0.04015 + 0.43996 *A + -0.01672 *A^2								
46)	1,1-dichloropropene	0.543	0.459	0.425	0.436	0.493	0.568	0.435	0.511	11.28
47)	benzene	1.494	1.497	1.300	1.326	1.392	1.466	1.576	1.359	7.22
48)	1,2-dichloroethane	0.544	0.457	0.460	0.457	0.473	0.508	0.471	0.484	6.12
49)	tert-amyl methyl ether	0.347	0.210	0.446	0.517	0.586	0.681	0.317	0.282	38.37
	----- Linear regression -----	Coefficient = 0.9941								
	Response Ratio =	-0.15737 + 0.68050 *A								
50)	heptane	0.281	0.261	0.261	0.344	0.385	0.286	0.268	0.298	16.04
	----- Linear regression -----	Coefficient = 0.9930								
	Response Ratio =	-0.09268 + 0.38694 *A								
51)	trichloroethene	0.404	0.347	0.356	0.366	0.402	0.440	0.364	0.320	9.65

5.7.1



Initial Calibration Summary

Page 4 of 6

Job Number: MC1220

Sample:

MSL1764-ICC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID:

L53003.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

52)	1,2-dichloropropane	0.335	0.314	0.314	0.336	0.351	0.384	0.319	0.308	0.333	7.60
53)	dibromomethane	0.262	0.234	0.208	0.211	0.217	0.245	0.238	0.234	0.231	7.92
54)	bromodichloromethane	0.459	0.389	0.463	0.487	0.497	0.535	0.442	0.410	0.406	10.57
55)	Methylcyclohexane	0.429	0.403	0.397	0.524	0.583	0.424		0.398	0.451	16.19
	----- Linear regression -----	Coefficient = 0.9935									
	Response Ratio =	-0.13844 + 0.58614 *A									
56)	2-chloroethyl vinyl ether	0.004	0.011	0.017	0.033	0.001				0.013	98.81
	----- Linear regression -----	Coefficient = 0.9553									
	Response Ratio =	-0.03915 + 0.03589 *A									
57)	methyl methacrylate	0.106	0.210	0.232	0.253	0.274	0.160		0.132	0.195	32.53
	----- Linear regression -----	Coefficient = 0.9983									
	Response Ratio =	-0.05496 + 0.27722 *A									
58)	1,4-dioxane	0.004	0.004	0.005	0.005	0.003				0.004	21.02
	----- Linear regression -----	Coefficient = 0.9997									
	Response Ratio =	-0.00772 + 0.00544 *A									
59)	cis-1,3-dichloropropene	0.221	0.221	0.449	0.500	0.541	0.555	0.355	0.188	0.274	40.09
	----- Linear regression -----	Coefficient = 0.9992									
	Response Ratio =	-0.06102 + 0.55939 *A									
60)	toluene-d8 (s)	1.035	1.152	1.181	1.343	1.468	1.107		1.197	1.212	12.14
61)	4-methyl-2-pentanone	0.227	0.310	0.316	0.326	0.355	0.281		0.233	0.293	16.39
	----- Linear regression -----	Coefficient = 0.9985									
	Response Ratio =	-0.04535 + 0.35511 *A									
62)	toluene	0.996	0.856	0.852	0.905	0.957	1.035	0.870	1.027	0.870	8.05
63)	trans-1,3-dichloropropene	0.097	0.121	0.326	0.379	0.426	0.484	0.215	0.033	0.161	64.14
	----- Linear regression -----	Coefficient = 0.9952									
	Response Ratio =	-0.09310 + 0.48253 *A									
64)	1,1,2-trichloroethane	0.264	0.258	0.274	0.286	0.298	0.323	0.275	0.277	0.266	7.12
65)	ethyl methacrylate	0.144	0.329	0.381	0.434	0.464	0.237		0.180	0.310	40.44
	----- Linear regression -----	Coefficient = 0.9983									
	Response Ratio =	-0.10681 + 0.47191 *A									
66)	I chlorobenzene-d5	-----ISTD-----									
67)	tetrachloroethene	0.739	0.646	0.629	0.609	0.728	0.766	0.650	0.668	0.653	8.00
68)	1,3-dichloropropane	1.054	0.961	0.975	0.953	1.042	1.135	1.003	1.015	1.011	5.53
69)	dibromochloromethane	0.476	0.439	0.609	0.621	0.718	0.768	0.552	0.431	0.502	21.13

5.7.1





Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L53000.D

Vial: 6

Acq On : 22 May 2011 12:36 pm

Operator: amym

Sample : ic1764-25

Inst : MAMSL

Misc : ms23036,msl1764,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: May 22 13:53:14 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 13:52:34 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.89	65	22209	500.00	ug/L	0.02
4) pentafluorobenzene	8.19	168	68737	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.02	114	97998	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	50941	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	50143	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	15768	20.34	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	40.68%#
60) toluene-d8 (s)	10.80	98	54249	18.85	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	37.70%#
82) bromofluorobenzene (s)	13.49	95	21608	21.72	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	43.44%#

Target Compounds

						Qvalue
2) tertiary butyl alcohol	5.93	59	13824	203.14	ug/L	# 56
3) Ethanol	4.83	45	30569	2279.48	ug/L	94
5) dichlorodifluoromethane	3.71	85	13913	17.79	ug/L	99
6) chloromethane	3.94	50	16328	15.41	ug/L	100
7) vinyl chloride	4.15	62	18818	31.20	ug/L	96
8) bromomethane	4.59	96	8639	15.30	ug/L	90
9) chloroethane	4.74	64	10732	21.71	ug/L	99
10) ethyl ether	5.57	59	14604	22.08	ug/L	86
11) acetonitrile	5.24	41	11489	35.64	ug/L	78
12) trichlorofluoromethane	5.34	101	28288	18.16	ug/L	95
13) freon-113	6.07	101	15201	17.00	ug/L	84
14) acrolein	5.31	56	4106	116.48	ug/L	85
15) 1,1-dichloroethene	5.89	96	17169	20.99	ug/L	89
16) acetone	5.44	43	10187	34.12	ug/L	99
17) Methyl Acetate	6.04	43	28450	21.78	ug/L	92
18) methylene chloride	6.03	84	20652	20.27	ug/L	91
19) methyl tert butyl ether	6.79	73	34355	34.74	ug/L	95
20) acrylonitrile	5.91	53	8620	24.76	ug/L	97
21) allyl chloride	6.12	41	19324	23.46	ug/L	82
22) trans-1,2-dichloroethene	6.69	96	16640	20.36	ug/L	92
23) iodomethane	5.93	142	13167	34.97	ug/L	94
24) carbon disulfide	6.27	76	50843	20.89	ug/L	100
25) propionitrile	6.93	54	2191	19.87	ug/L	100
26) vinyl acetate	7.03	43	6511	11.84	ug/L	92
27) chloroprene	7.29	53	19063	21.13	ug/L	89
28) di-isopropyl ether	7.36	45	43254	21.31	ug/L	91
29) methacrylonitrile	7.44	41	9901	22.29	ug/L	80
30) 2-butanone	7.34	72	2228	21.13	ug/L	# 10
31) Hexane	7.34	41	19032	19.88	ug/L	91
32) 1,1-dichloroethane	6.94	63	27890	20.43	ug/L	96
33) tert-butyl ethyl ether	7.74	59	12151	9.44	ug/L	91
34) isobutyl alcohol	7.74	43	2355	47.46	ug/L	79
35) 2,2-dichloropropane	7.78	77	3173	5.53	ug/L	93
36) cis-1,2-dichloroethene	7.50	96	18984	21.29	ug/L	86
37) ethyl acetate	7.74	43	2389	9.32	ug/L	71

(#) = qualifier out of range (m) = manual integration

L53000.D L052211W.M

Mon May 23 15:12:23 2011

RPT1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L53000.D

Vial: 6

Acq On : 22 May 2011 12:36 pm

Operator: amym

Sample : ic1764-25

Inst : MAMSL

Misc : ms23036,msl1764,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: May 22 13:53:14 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 13:52:34 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	7.65	128	8038	20.70	ug/L	88
39) chloroform	7.69	83	31835	20.54	ug/L	99
41) Tetrahydrofuran	8.03	42	4362	21.44	ug/L	68
42) 1,1,1-trichloroethane	8.43	97	17987	14.87	ug/L	93
44) Cyclohexane	8.73	56	18728	17.15	ug/L	86
45) carbon tetrachloride	8.79	117	14292	24.30	ug/L	99
46) 1,1-dichloropropene	8.62	75	21292	19.12	ug/L	95
47) benzene	8.81	78	66610	21.57	ug/L	99
48) 1,2-dichloroethane	8.33	62	23091	23.19	ug/L	94
49) tert-amyl methyl ether	8.98	73	15518	11.63	ug/L	92
50) heptane	9.34	43	14018	18.57	ug/L	90
51) trichloroethene	9.45	95	17839	20.70	ug/L	94
52) 1,2-dichloropropane	9.40	63	15646	20.79	ug/L	97
53) dibromomethane	9.38	93	11685	24.35	ug/L	91
54) bromodichloromethane	9.49	83	21635	20.62	ug/L	100
55) Methylcyclohexane	9.98	83	20777	18.19	ug/L	91
56) 2-chloroethyl vinyl ether	9.95	63	39m	0.60	ug/L	
57) methyl methacrylate	9.61	69	7844	14.59	ug/L	97
58) 1,4-dioxane	9.59	88	724m	70.16	ug/L	
59) cis-1,3-dichloropropene	10.12	75	17410	15.99	ug/L	95
61) 4-methyl-2-pentanone	10.24	43	13784	19.79	ug/L	96
62) toluene	10.87	92	42619	21.01	ug/L	96
63) trans-1,3-dichloropropene	10.54	75	10549	11.13	ug/L	78
64) 1,1,2-trichloroethane	10.70	83	13483	21.33	ug/L	92
65) ethyl methacrylate	10.93	69	11613	12.71	ug/L #	1
67) tetrachloroethene	11.63	166	16552	21.04	ug/L	93
68) 1,3-dichloropropane	10.94	76	25535	21.80	ug/L	97
69) dibromochloromethane	11.21	129	14059	17.83	ug/L	96
70) 1,2-dibromoethane	11.46	107	15367	19.51	ug/L	98
71) 2-hexanone	11.11	43	9207	18.96	ug/L	87
72) chlorobenzene	12.30	112	45731	21.60	ug/L	94
73) 1,1,1,2-tetrachloroethane	12.23	131	11061	16.99	ug/L	90
74) ethylbenzene	12.48	91	79550	21.46	ug/L	98
75) m,p-xylene	12.66	106	62902	42.60	ug/L	97
76) o-xylene	13.07	106	30675	20.06	ug/L	89
77) styrene	12.99	104	49959	20.31	ug/L	79
78) bromoform	12.80	173	9106	15.10	ug/L	97
79) trans-1,4-dichloro-2-buten	13.24	53	761m	7.33	ug/L	
81) isopropylbenzene	13.44	105	65629	22.46	ug/L	91
83) bromobenzene	13.71	156	20830	22.51	ug/L	90
84) 1,1,2,2-tetrachloroethane	13.09	83	23690	23.76	ug/L	100
85) 1,2,3-trichloropropane	13.23	75	18104	20.84	ug/L	100
86) n-propylbenzene	13.89	91	88050	22.35	ug/L	99
87) 2-chlorotoluene	14.00	91	55343	23.07	ug/L	95
88) 4-chlorotoluene	14.08	91	56289	23.01	ug/L	92
89) 1,3,5-trimethylbenzene	14.16	105	63402	22.61	ug/L	93
90) tert-butylbenzene	14.46	91	34500	21.38	ug/L	92
91) 1,2,4-trimethylbenzene	14.57	105	63496	22.24	ug/L	94
92) sec-butylbenzene	14.69	105	74887	21.99	ug/L	98

(#)=qualifier out of range (m)=manual integration

L53000.D L052211W.M

Mon May 23 15:12:23 2011

RPT1

Page 2

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC1220
 Account: WSPNYC WSP Environmental & Energy
 Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample: MSL1797-BFB Injection Date: 06/20/11
 Lab File ID: L54068.D Injection Time: 09:37
 Instrument ID: GCMSL

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	3747	15.7	Pass
75	30.0 - 60.0% of mass 95	11318	47.5	Pass
95	Base peak, 100% relative abundance	23824	100.0	Pass
96	5.0 - 9.0% of mass 95	1664	6.98	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	21448	90.0	Pass
175	5.0 - 9.0% of mass 174	1614	6.77 (7.53) ^a	Pass
176	95.0 - 101.0% of mass 174	20888	87.7 (97.4) ^a	Pass
177	5.0 - 9.0% of mass 176	1225	5.14 (5.86) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSL1797-CC1764	L54068.D	06/20/11	09:37	00:00	Continuing cal 50
MSL1797-BS	L54068.D	06/20/11	09:37	00:00	Blank Spike
MSL1797-MB	L54070.D	06/20/11	10:36	00:59	Method Blank
MC1220-1	L54071.D	06/20/11	11:05	01:28	TB061711
ZZZZZZ	L54072.D	06/20/11	11:34	01:57	(unrelated sample)
MC1220-2	L54073.D	06/20/11	12:03	02:26	GP-11-140
MC1220-3	L54074.D	06/20/11	12:32	02:55	GP-11-130
ZZZZZZ	L54075.D	06/20/11	13:01	03:24	(unrelated sample)
ZZZZZZ	L54076.D	06/20/11	13:33	03:56	(unrelated sample)
ZZZZZZ	L54077.D	06/20/11	14:01	04:24	(unrelated sample)
ZZZZZZ	L54078.D	06/20/11	14:30	04:53	(unrelated sample)
ZZZZZZ	L54079.D	06/20/11	14:59	05:22	(unrelated sample)
ZZZZZZ	L54080.D	06/20/11	15:28	05:51	(unrelated sample)
ZZZZZZ	L54081.D	06/20/11	15:58	06:21	(unrelated sample)
ZZZZZZ	L54082.D	06/20/11	16:26	06:49	(unrelated sample)
ZZZZZZ	L54083.D	06/20/11	16:55	07:18	(unrelated sample)
ZZZZZZ	L54084.D	06/20/11	17:27	07:50	(unrelated sample)
ZZZZZZ	L54085.D	06/20/11	17:56	08:19	(unrelated sample)
ZZZZZZ	L54086.D	06/20/11	18:25	08:48	(unrelated sample)
ZZZZZZ	L54087.D	06/20/11	18:56	09:19	(unrelated sample)
ZZZZZZ	L54088.D	06/20/11	19:26	09:49	(unrelated sample)
ZZZZZZ	L54089.D	06/20/11	19:56	10:19	(unrelated sample)
MC1220-2MS	L54091.D	06/20/11	20:55	11:18	Matrix Spike
MC1220-2MSD	L54092.D	06/20/11	21:24	11:47	Matrix Spike Duplicate

SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\L54068.D

Vial: 3

Acq On : 20 Jun 2011 9:37 am

Operator: amym

Sample : bfb

Inst : MAMSL

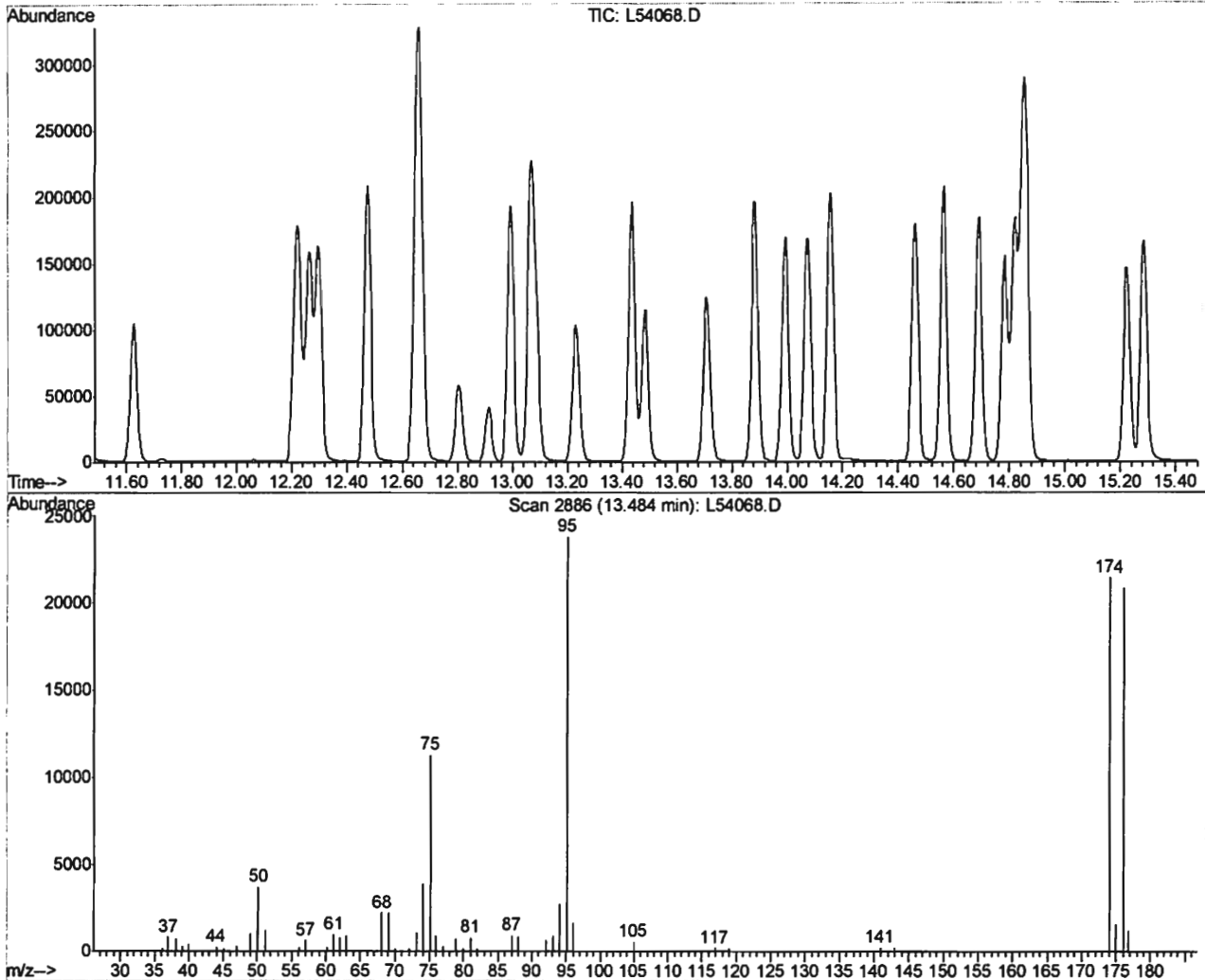
Misc : ms23270,msl1797,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260



Spectrum Information: Scan 2886

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
Mass	Mass	Limit%	Limit%	Abn%	Abn	Pass/Fail
50	95	15	40	15.7	3747	PASS
75	95	30	60	47.5	11318	PASS
95	95	100	100	100.0	23824	PASS
96	95	5	9	7.0	1664	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	90.0	21448	PASS
175	174	5	9	7.5	1614	PASS
176	174	95	101	97.4	20888	PASS
177	176	5	9	5.9	1225	PASS

Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: MC1220
Account: WSPNYC WSP Environmental & Energy
Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Check Std:	MSL1797-CC1764	Injection Date:	06/20/11
Lab File ID:	L54068.D	Injection Time:	09:37
Instrument ID:	GCMSL	Method:	SW846 8260B

	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
Check Std	66527	8.19	96923	9.03	54987	12.26	50038	14.82	18915	5.84
Upper Limit ^a	133054	8.69	193846	9.53	109974	12.76	100076	15.32	37830	6.34
Lower Limit ^b	33264	7.69	48462	8.53	27494	11.76	25019	14.32	9458	5.34

Lab	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
Sample ID	AREA		AREA		AREA		AREA		AREA	
MSL1797-BS	66527	8.19	96923	9.03	54987	12.26	50038	14.82	18915	5.84
MSL1797-MB	61106	8.20	87002	9.03	48215	12.27	43357	14.82	18533	5.86
MC1220-1	63138	8.20	89311	9.03	49497	12.27	44393	14.82	20243	5.85
ZZZZZZ	63789	8.20	90627	9.03	50999	12.27	45939	14.82	16862	5.87
MC1220-2	66477	8.20	94604	9.03	53847	12.27	48154	14.82	22436	5.85
MC1220-3	65968	8.20	93377	9.03	52233	12.27	47410	14.82	24045	5.85
ZZZZZZ	67681	8.20	97545	9.03	55042	12.27	49092	14.83	22172	5.85
ZZZZZZ	67263	8.20	96442	9.03	54026	12.27	48454	14.83	21471	5.85
ZZZZZZ	66184	8.20	94023	9.03	52540	12.27	47582	14.82	20350	5.86
ZZZZZZ	66959	8.20	95222	9.03	54337	12.27	48464	14.83	20336	5.85
ZZZZZZ	67410	8.19	96168	9.03	55893	12.27	49672	14.82	26405	5.96
ZZZZZZ	65960	8.20	96503	9.03	54488	12.27	49035	14.83	20806	5.85
ZZZZZZ	65579	8.20	94537	9.03	54287	12.27	48939	14.83	21987	5.85
ZZZZZZ	65069	8.20	94107	9.03	53690	12.27	47679	14.83	20401	5.86
ZZZZZZ	75978	8.19	109516	9.03	60302	12.27	51460	14.82	23687	6.00
ZZZZZZ	63172	8.20	93918	9.03	53865	12.27	48165	14.83	21071	5.85
ZZZZZZ	65988	8.20	96991	9.03	57978	12.27	56183	14.82	20642	5.85
ZZZZZZ	71765	8.19	103929	9.02	59812	12.26	54869	14.82	23517	5.94
ZZZZZZ	74434	8.19	103985	9.03	56982	12.26	53907	14.82	22772	5.85
ZZZZZZ	70289	8.20	96777	9.03	55678	12.27	52807	14.82	21917	5.85
ZZZZZZ	70368	8.20	99272	9.03	56161	12.27	51184	14.82	21805	5.85
MC1220-2MS	70057	8.19	106358	9.03	61319	12.26	55160	14.82	21006	5.85
MC1220-2MSD	77448	8.19	112935	9.02	65210	12.26	58972	14.82	26169	5.97

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Continuing Calibration Summary

Page 1 of 4

Job Number: MC1220

Sample: MSL1797-CC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L54068.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\L54068.D

Vial: 3

Acq On : 20 Jun 2011 9:37 am

Operator: amym

Sample : cc1764-50

Inst : MAMSL

Misc : ms23270,msl1797,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min

Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	75	-0.03	5.84
	----- True Calc. % Drift -----						
2	tertiary butyl alcohol	500.000	563.884	-12.8	88	0.00	5.92
	----- AvgRF CCRF % Dev -----						
3	Ethanol	0.274	0.216	21.2#	67	0.00	4.80
4 I	pentafluorobenzene	1.000	1.000	0.0	95	0.00	8.19
5 M	dichlorodifluoromethane	0.454	0.488	-7.5	115	0.02	3.73
	----- True Calc. % Drift -----						
6 P	chloromethane	50.000	48.258	3.5	93	0.02	3.95
	----- AvgRF CCRF % Dev -----						
7 c	vinyl chloride	0.548	0.556	-1.5	98	0.03	4.16
	----- True Calc. % Drift -----						
8 M	bromomethane	50.000	31.414	37.2#	57	0.00	4.62
	----- AvgRF CCRF % Dev -----						
9 M	chloroethane	0.341	0.333	2.3	103	0.01	4.75
10 M	ethyl ether	0.429	0.411	4.2	92	0.00	5.58
	----- True Calc. % Drift -----						
11 M	acetonitrile	50.000	82.008	-64.0#	131	0.00	5.25
12 M	trichlorofluoromethane	50.000	40.640	18.7	85	0.00	5.34
13 M	freon-113	50.000	44.604	10.8	87	0.00	6.08
	----- AvgRF CCRF % Dev -----						
14 M	acrolein	0.024	0.047	-95.8#	180	0.00	5.32
15 c	1,1-dichloroethene	0.538	0.447	16.9	90	0.00	5.89
	----- True Calc. % Drift -----						
16 M	acetone	50.000	52.618	-5.2	105	0.00	5.44
	----- AvgRF CCRF % Dev -----						
17 M	Methyl Acetate	0.908	0.769	15.3	82	0.00	6.05
18 M	methylene chloride	0.631	0.550	12.8	90	0.00	6.04
	----- True Calc. % Drift -----						
19 M	methyl tert butyl ether	50.000	51.310	-2.6	115	0.00	6.80

Continuing Calibration Summary

Page 2 of 4

Job Number: MC1220

Account: WSPNYC WSP Environmental & Energy

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

Sample:

MSL1797-CC1764

Lab FileID:

L54068.D

		AvgRF	CCRF	% Dev			
20 M	acrylonitrile	0.235	0.184	21.7#	69	0.00	5.93
21 M	allyl chloride	0.537	0.574	-6.9	110	0.00	6.12
22 M	trans-1,2-dichloroethene	0.511	0.458	10.4	88	0.00	6.69
		True	Calc.	% Drift			
23 M	iodomethane	50.000	49.749	0.5	87	0.00	5.95
		AvgRF	CCRF	% Dev			
24 M	carbon disulfide	1.571	1.457	7.3	103	0.01	6.28
		True	Calc.	% Drift			
25 M	propionitrile	50.000	48.090	3.8	91	0.00	6.94
26 M	vinyl acetate	50.000	57.230	-14.5	118	0.00	7.03
		AvgRF	CCRF	% Dev			
27 M	chloroprene	0.572	0.651	-13.8	112	0.00	7.30
28 M	di-isopropyl ether	1.298	1.420	-9.4	105	0.00	7.36
29 M	methacrylonitrile	0.290	0.291	-0.3	95	0.00	7.44
		True	Calc.	% Drift			
30 M	2-butanone	50.000	51.016	-2.0	102	0.00	7.35
		AvgRF	CCRF	% Dev			
31 M	Hexane	0.581	0.552	5.0	98	0.00	7.35
32 P	1,1-dichloroethane	0.844	0.897	-6.3	103	0.00	6.94
		True	Calc.	% Drift			
33 M	tert-butyl ethyl ether	50.000	80.664	-61.3#	206	0.00	7.75
34 M	isobutyl alcohol	250.000	250.459	-0.2	103	-0.02	7.74
35 M	2,2-dichloropropane	50.000	49.179	1.6	99	0.00	7.78
		AvgRF	CCRF	% Dev			
36 M	cis-1,2-dichloroethene	0.569	0.547	3.9	96	0.00	7.51
		True	Calc.	% Drift			
37 M	ethyl acetate	50.000	75.947	-51.9#	140	-0.02	7.74
		AvgRF	CCRF	% Dev			
38 M	bromochloromethane	0.236	0.251	-6.4	107	0.00	7.66
39 c	chloroform	1.000	0.976	2.4	100	0.00	7.70
40 S	dibromofluoromethane (s)	0.481	0.438	8.9	90	0.00	7.81
41 M	Tetrahydrofuran	0.129	0.119	7.8	85	0.00	8.03
		True	Calc.	% Drift			
42 M	1,1,1-trichloroethane	50.000	50.529	-1.1	108	0.00	8.44
		AvgRF	CCRF	% Dev			
43 I	1,4-difluorobenzene	1.000	1.000	0.0	96	0.00	9.03
		True	Calc.	% Drift			
44 M	Cyclohexane	50.000	52.074	-4.1	102	0.00	8.73
45 M	carbon tetrachloride	50.000	56.928	-13.9	121	0.00	8.79
		AvgRF	CCRF	% Dev			
46 M	1,1-dichloropropene	0.477	0.426	10.7	96	0.00	8.62
47 M	benzene	1.429	1.461	-2.2	106	0.00	8.81
48 M	1,2-dichloroethane	0.480	0.490	-2.1	102	0.00	8.33

5.7.3



Continuing Calibration Summary

Page 3 of 4

Job Number: MC1220

Sample: MSL1797-CC1764

Account: WSPNYC WSP Environmental & Energy

Lab FileID: L54068.D

Project: Former Trans Technology 1 Robert Lane Glen Head, NY

		True	Calc.	% Drift			
49 M	tert-amyl methyl ether	50.000	75.609	-51.2#	188	0.00	8.97
50 M	heptane	50.000	44.028	11.9	91	0.00	9.34
		AvgRF	CCRF	% Dev			
51 M	trichloroethene	0.373	0.370	0.8	100	0.00	9.45
52 c	1,2-dichloropropane	0.333	0.343	-3.0	105	0.00	9.41
53 M	dibromomethane	0.231	0.240	-3.9	111	0.00	9.38
54 M	bromodichloromethane	0.454	0.524	-15.4	109	0.00	9.49
		True	Calc.	% Drift			
55 M	Methylcyclohexane	50.000	44.436	11.1	91	0.00	9.98
56 M	2-chloroethyl vinyl ether			NA			
57 M	methyl methacrylate	50.000	54.100	-8.2	112	0.00	9.61
58 M	1,4-dioxane	250.000	240.108	4.0	88	0.00	9.59
59 M	cis-1,3-dichloropropene	50.000	52.054	-4.1	111	0.00	10.12
		AvgRF	CCRF	% Dev			
60 S	toluene-d8 (s)	1.212	1.114	8.1	93	0.00	10.80
		True	Calc.	% Drift			
61 M	4-methyl-2-pentanone	50.000	44.165	11.7	83	0.00	10.23
		AvgRF	CCRF	% Dev			
62 c	toluene	0.930	0.911	2.0	103	0.00	10.87
		True	Calc.	% Drift			
63 M	trans-1,3-dichloropropene	50.000	59.549	-19.1	142	0.00	10.54
		AvgRF	CCRF	% Dev			
64 M	1,1,2-trichloroethane	0.280	0.287	-2.5	100	0.00	10.70
		True	Calc.	% Drift			
65 M	ethyl methacrylate	50.000	54.690	-9.4	119	0.00	10.93
		AvgRF	CCRF	% Dev			
66 I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	12.26
67 M	tetrachloroethene	0.676	0.616	8.9	99	0.00	11.63
68 M	1,3-dichloropropane	1.017	1.008	0.9	105	0.00	10.94
		True	Calc.	% Drift			
69 M	dibromochloromethane	50.000	51.334	-2.7	116	0.00	11.21
70 M	1,2-dibromoethane	50.000	45.849	8.3	98	0.00	11.46
71 M	2-hexanone	50.000	40.537	18.9	79	0.03	11.11
		AvgRF	CCRF	% Dev			
72 P	chlorobenzene	1.879	1.706	9.2	100	0.00	12.30
		True	Calc.	% Drift			
73 M	1,1,1,2-tetrachloroethane	50.000	53.578	-7.2	122	0.00	12.23
		AvgRF	CCRF	% Dev			
74 c	ethylbenzene	3.218	2.906	9.7	98	0.00	12.47
75 M	m,p-xylene	1.252	1.115	10.9	94	0.00	12.66
76 M	o-xylene	1.194	1.095	8.3	94	0.00	13.07
77 M	styrene	2.032	1.861	8.4	96	0.00	12.99
		True	Calc.	% Drift			

5.7.3



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54068.D
 Acq On : 20 Jun 2011 9:37 am
 Sample : cc1764-50
 Misc : ms23270,msl1797,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Jun 21 08:54:34 2011

Vial: 3
 Operator: amym
 Inst : MAMSL
 Multiplr: 1.00

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Sun May 22 15:35:26 2011
 Response via : Initial Calibration
 DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	5.84	65	18915	500.00	ug/L	-0.03
4) pentafluorobenzene	8.19	168	66527	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.03	114	96923	50.00	ug/L	0.00
66) chlorobenzene-d5	12.26	82	54987	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	14.82	152	50038	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	7.81	113	29127	45.53	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	91.06%		
60) toluene-d8 (s)	10.80	98	107996	45.97	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	91.94%		
82) bromofluorobenzene (s)	13.48	95	41697	46.17	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	92.34%		

Target Compounds

						Qvalue
2) tertiary butyl alcohol	5.92	59	30052	563.88	ug/L	98
3) Ethanol	4.80	45	40807	3937.16	ug/L	99
5) dichlorodifluoromethane	3.73	85	32468	53.79	ug/L	93
6) chloromethane	3.95	50	31963	48.26	ug/L	95
7) vinyl chloride	4.16	62	36975	50.68	ug/L	100
8) bromomethane	4.62	96	15962	31.41	ug/L	100
9) chloroethane	4.75	64	22140	48.83	ug/L	84
10) ethyl ether	5.58	59	27360	47.88	ug/L	80
11) acetone	5.25	41	19332	82.01	ug/L	93
12) trichlorofluoromethane	5.34	101	48398	40.64	ug/L	95
13) freon-113	6.08	101	24649	44.60	ug/L	96
14) acrolein	5.32	56	15520	484.12	ug/L	85
15) 1,1-dichloroethene	5.89	96	29732	41.50	ug/L	93
16) acetone	5.44	43	16683	52.62	ug/L	93
17) Methyl Acetate	6.05	43	51146	42.36	ug/L #	90
18) methylene chloride	6.04	84	36560	43.54	ug/L	96
19) methyl tert butyl ether	6.80	73	91204	51.31	ug/L	95
20) acrylonitrile	5.93	53	12239	39.15	ug/L	86
21) allyl chloride	6.12	41	38205	53.51	ug/L	86
22) trans-1,2-dichloroethene	6.69	96	30501	44.87	ug/L	92
23) iodomethane	5.95	142	28061	49.75	ug/L	84
24) carbon disulfide	6.28	76	96906	46.35	ug/L	99
25) propionitrile	6.94	54	4427	48.09	ug/L	100
26) vinyl acetate	7.03	43	26233	57.23	ug/L	97
27) chloroprene	7.30	53	43285	56.92	ug/L	91
28) di-isopropyl ether	7.36	45	94468	54.68	ug/L	89
29) methacrylonitrile	7.44	41	19369	50.15	ug/L	76
30) 2-butanone	7.35	72	4609	51.02	ug/L #	25
31) Hexane	7.35	41	36711	47.50	ug/L	96
32) 1,1-dichloroethane	6.94	63	59657	53.13	ug/L	94
33) tert-butyl ethyl ether	7.75	59	84984	80.66	ug/L	94
34) isobutyl alcohol	7.74	43	9409	250.46	ug/L	95
35) 2,2-dichloropropane	7.78	77	17517	49.18	ug/L	93
36) cis-1,2-dichloroethene	7.51	96	36377	48.07	ug/L	95
37) ethyl acetate	7.74	43	9420	75.95	ug/L	70

(#) = qualifier out of range (m) = manual integration

L54068.D L052211W.M

Tue Jun 21 14:48:47 2011

RPT1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\L54068.D

Vial: 3

Acq On : 20 Jun 2011 9:37 am

Operator: amym

Sample : cc1764-50

Inst : MAMSL

Misc : ms23270,ms11797,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jun 21 08:54:34 2011

Quant Results File: L052211W.RES

Quant Method : C:\MSDCHEM\1\METHODS\L052211W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Sun May 22 15:35:26 2011

Response via : Initial Calibration

DataAcq Meth : L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	7.66	128	16693	53.19	ug/L #	81
39) chloroform	7.70	83	64928	48.80	ug/L	98
41) Tetrahydrofuran	8.03	42	7899	46.14	ug/L	78
42) 1,1,1-trichloroethane	8.44	97	49310	50.53	ug/L	93
44) Cyclohexane	8.73	56	37226	52.07	ug/L #	82
45) carbon tetrachloride	8.79	117	42559	56.93	ug/L	97
46) 1,1-dichloropropene	8.62	75	41295	44.64	ug/L	98
47) benzene	8.81	78	141601	51.10	ug/L	98
48) 1,2-dichloroethane	8.33	62	47537	51.13	ug/L	96
49) tert-amyl methyl ether	8.97	73	84485	75.61	ug/L	98
50) heptane	9.34	43	24041	44.03	ug/L	87
51) trichloroethene	9.45	95	35902	49.64	ug/L	93
52) 1,2-dichloropropane	9.41	63	33273	51.61	ug/L	97
53) dibromomethane	9.38	93	23289	51.99	ug/L	93
54) bromodichloromethane	9.49	83	50810	57.71	ug/L	95
55) Methylcyclohexane	9.98	83	37071	44.44	ug/L	89
57) methyl methacrylate	9.61	69	23745	54.10	ug/L	98
58) 1,4-dioxane	9.59	88	1782	240.11	ug/L	92
59) cis-1,3-dichloropropene	10.12	75	50531	52.05	ug/L	95
61) 4-methyl-2-pentanone	10.23	43	26006	44.17	ug/L	98
62) toluene	10.87	92	88338	49.01	ug/L	95
63) trans-1,3-dichloropropene	10.54	75	46676	59.55	ug/L	90
64) 1,1,2-trichloroethane	10.70	83	27810	51.22	ug/L	95
65) ethyl methacrylate	10.93	69	39677	54.69	ug/L #	50
67) tetrachloroethene	11.63	166	33846	45.50	ug/L	99
68) 1,3-dichloropropane	10.94	76	55428	49.58	ug/L	96
69) dibromochloromethane	11.21	129	38134	51.33	ug/L	97
70) 1,2-dibromoethane	11.46	107	33680	45.85	ug/L	99
71) 2-hexanone	11.11	43	17518	40.54	ug/L	97
72) chlorobenzene	12.30	112	93789	45.39	ug/L	98
73) 1,1,1,2-tetrachloroethane	12.23	131	33170	53.58	ug/L	94
74) ethylbenzene	12.47	91	159816	45.16	ug/L	100
75) m,p-xylene	12.66	106	122648	89.07	ug/L	90
76) o-xylene	13.07	106	60188	45.84	ug/L	91
77) styrene	12.99	104	102320	45.79	ug/L	84
78) bromoform	12.80	173	30136	56.99	ug/L	94
79) trans-1,4-dichloro-2-buten	13.24	53	7780	92.58	ug/L #	55
81) isopropylbenzene	13.44	105	140738	52.07	ug/L	94
83) bromobenzene	13.71	156	40948	47.97	ug/L	90
84) 1,1,2,2-tetrachloroethane	13.09	83	46266	49.49	ug/L	95
85) 1,2,3-trichloropropane	13.23	75	47779	62.70	ug/L	98
86) n-propylbenzene	13.88	91	166521	46.40	ug/L	99
87) 2-chlorotoluene	13.99	91	107197	46.49	ug/L	100
88) 4-chlorotoluene	14.07	91	114030	48.77	ug/L	95
89) 1,3,5-trimethylbenzene	14.16	105	122048	47.53	ug/L	97
90) tert-butylbenzene	14.46	91	67914	48.07	ug/L	100
91) 1,2,4-trimethylbenzene	14.56	105	125085	47.39	ug/L	100
92) sec-butylbenzene	14.69	105	139909	46.77	ug/L	97
93) 1,3-dichlorobenzene	14.78	146	69144	48.27	ug/L	97

(#)=qualifier out of range (m)=manual integration

L54068.D L052211W.M

Tue Jun 21 14:48:47 2011

RPT1

Page 2

March 02, 2011

Mr. David Bouchard
WSP Environment & Energy
5 Sullivan Street
Cazenovia, NY 13035

RE: Project: Former TTC-Glen Head, NY
Pace Project No.: 3041552

Dear Mr. Bouchard:

Enclosed are the analytical results for sample(s) received by the laboratory on February 16, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Penny Westrick

penny.westrick@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Page 1 of 10

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CERTIFICATIONS

Project: Former TTC-Glen Head, NY

Pace Project No.: 3041552

Pennsylvania Certification IDs

1638 Roseytown Road Suites 2,3&4, Greensburg, PA 15601

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/NELAC Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/NELAC Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/NELAC Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/NELAC Certification #: LA080002

Louisiana/NELAC Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/NELAC Certification #: 2976

New Jersey/NELAC Certification #: PA 051

New Mexico Certification

New York/NELAC Certification #: 10888

North Carolina Certification #: 42706

Oregon/NELAC Certification #: PA200002

Pennsylvania/NELAC Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/NELAC Certification #: T104704188-09 TX

Utah/NELAC Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Washington Certification #: C1941

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

REPORT OF LABORATORY ANALYSIS

Page 2 of 10

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SAMPLE ANALYTE COUNT

Project: Former TTC-Glen Head, NY

Pace Project No.: 3041552

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3041552001	EB021511	EPA 8260	MAK	8	PASI-PA
3041552002	TB021511	EPA 8260	MAK	8	PASI-PA
3041552003	GP-6-180	EPA 8260	MAK	8	PASI-PA

REPORT OF LABORATORY ANALYSIS

Page 3 of 10

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PROJECT NARRATIVE

Project: Former TTC-Glen Head, NY

Pace Project No.: 3041552

Method: EPA 8260

Description: 8260 MSV

Client: WSP Environment & Energy - Cazenovia, NY

Date: March 02, 2011

General Information:

3 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

Page 4 of 10

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ANALYTICAL RESULTS

Project: Former TTC-Glen Head, NY

Pace Project No.: 3041552

Sample: EB021511		Lab ID: 3041552001	Collected: 02/15/11 08:45	Received: 02/16/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		02/22/11 20:24	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/22/11 20:24	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		02/22/11 20:24	127-18-4	
Trichloroethene	ND ug/L		1.0	1		02/22/11 20:24	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/22/11 20:24	75-01-4	
4-Bromofluorobenzene (S)	96 %		70-130	1		02/22/11 20:24	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		70-130	1		02/22/11 20:24	17060-07-0	
Toluene-d8 (S)	99 %		70-130	1		02/22/11 20:24	2037-26-5	

ANALYTICAL RESULTS

Project: Former TTC-Glen Head, NY

Pace Project No.: 3041552

Sample: TB021511		Lab ID: 3041552002		Collected: 02/15/11 00:01		Received: 02/16/11 10:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV		Analytical Method: EPA 8260							
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/22/11 20:49	156-59-2		
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/22/11 20:49	156-60-5		
Tetrachloroethene	ND	ug/L	1.0	1		02/22/11 20:49	127-18-4		
Trichloroethene	ND	ug/L	1.0	1		02/22/11 20:49	79-01-6		
Vinyl chloride	ND	ug/L	1.0	1		02/22/11 20:49	75-01-4		
4-Bromofluorobenzene (S)	106	%	70-130	1		02/22/11 20:49	460-00-4		
1,2-Dichloroethane-d4 (S)	94	%	70-130	1		02/22/11 20:49	17060-07-0		
Toluene-d8 (S)	102	%	70-130	1		02/22/11 20:49	2037-26-5		

ANALYTICAL RESULTS

Project: Former TTC-Glen Head, NY

Pace Project No.: 3041552

Sample: GP-6-180		Lab ID: 3041552003	Collected: 02/15/11 12:45	Received: 02/16/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	15.1	ug/L	1.0	1		02/22/11 21:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/22/11 21:13	156-60-5	
Tetrachloroethene	15.5	ug/L	1.0	1		02/22/11 21:13	127-18-4	
Trichloroethene	4.0	ug/L	1.0	1		02/22/11 21:13	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/22/11 21:13	75-01-4	
4-Bromofluorobenzene (S)	101	%	70-130	1		02/22/11 21:13	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130	1		02/22/11 21:13	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		02/22/11 21:13	2037-26-5	

QUALITY CONTROL DATA

Project: Former TTC-Glen Head, NY

Pace Project No.: 3041552

QC Batch: MSV/8546 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 3041552001, 3041552002, 3041552003

METHOD BLANK: 269805 Matrix: Water

Associated Lab Samples: 3041552001, 3041552002, 3041552003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/22/11 13:08	
Tetrachloroethene	ug/L	ND	1.0	02/22/11 13:08	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/22/11 13:08	
Trichloroethene	ug/L	ND	1.0	02/22/11 13:08	
Vinyl chloride	ug/L	ND	1.0	02/22/11 13:08	
1,2-Dichloroethane-d4 (S)	%	93	70-130	02/22/11 13:08	
4-Bromofluorobenzene (S)	%	100	70-130	02/22/11 13:08	
Toluene-d8 (S)	%	100	70-130	02/22/11 13:08	

LABORATORY CONTROL SAMPLE: 269806

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	18.9	95	70-130	
Tetrachloroethene	ug/L	20	20.4	102	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.5	87	70-130	
Trichloroethene	ug/L	20	19.4	97	70-130	
Vinyl chloride	ug/L	20	14.1	70	70-130	
1,2-Dichloroethane-d4 (S)	%			92	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3041484003 3041484004

Parameter	Units	3041484002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
cis-1,2-Dichloroethene	ug/L	ND	20	20	19.5	19.7	95	96	70-130	.8	
Tetrachloroethene	ug/L	ND	20	20	18.3	21.0	89	103	70-130	14	
trans-1,2-Dichloroethene	ug/L	ND	20	20	17.9	18.2	90	91	70-130	1	
Trichloroethene	ug/L	3.5	20	20	21.5	22.7	90	96	70-130	5	
Vinyl chloride	ug/L	ND	20	20	18.2	18.0	91	90	70-130	.7	
1,2-Dichloroethane-d4 (S)	%						93	90	70-130		
4-Bromofluorobenzene (S)	%						96	102	70-130		
Toluene-d8 (S)	%						102	102	70-130		

QUALIFIERS

Project: Former TTC-Glen Head, NY

Pace Project No.: 3041552

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Former TTC-Glen Head, NY

Pace Project No.: 3041552

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3041552001	EB021511	EPA 8260	MSV/8546		
3041552002	TB021511	EPA 8260	MSV/8546		
3041552003	GP-6-180	EPA 8260	MSV/8546		

December 15, 2010

Mr. David Bouchard
WSP Environment & Energy
5 Sullivan Street
Cazenovia, NY 13035

RE: Project: 13224-01; Fmr TTC
Pace Project No.: 3038632

Dear Mr. Bouchard:

Enclosed are the analytical results for sample(s) received by the laboratory on December 14, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Penny Westrick

penny.westrick@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 13224-01; Fmr TTC

Pace Project No.: 3038632

Pennsylvania Certification IDs

1638 Roseytown Road Suites 2,3&4, Greensburg, PA 15601

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/NELAC Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/NELAC Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/NELAC Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/NELAC Certification #: LA080002

Louisiana/NELAC Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/NELAC Certification #: 2976

New Jersey/NELAC Certification #: PA 051

New Mexico Certification

New York/NELAC Certification #: 10888

North Carolina Certification #: 42706

Oregon/NELAC Certification #: PA200002

Pennsylvania/NELAC Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/NELAC Certification #: T104704188-09 TX

Utah/NELAC Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Washington Certification #: C1941

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 13224-01; Fmr TTC

Pace Project No.: 3038632

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3038632001	GP-03-150	EPA 8260	JAS	8	PASI-PA
3038632002	GP-03-140	EPA 8260	JAS	8	PASI-PA
3038632003	GP-03-300	EPA 8260	JAS	8	PASI-PA
3038632004	TB-121310	EPA 8260	JAS	8	PASI-PA

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 13224-01; Fmr TTC

Pace Project No.: 3038632

Method: EPA 8260

Description: 8260 MSV

Client: WSP Environment & Energy - Cazenovia, NY

Date: December 15, 2010

General Information:

4 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 13224-01; Fmr TTC

Pace Project No.: 3038632

Sample: GP-03-150		Lab ID: 3038632001	Collected: 12/13/10 14:50	Received: 12/14/10 12:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		12/14/10 16:17	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		12/14/10 16:17	156-60-5	
Tetrachloroethene	1.0 ug/L		1.0	1		12/14/10 16:17	127-18-4	
Trichloroethene	1.3 ug/L		1.0	1		12/14/10 16:17	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		12/14/10 16:17	75-01-4	
4-Bromofluorobenzene (S)	95 %		70-130	1		12/14/10 16:17	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		70-130	1		12/14/10 16:17	17060-07-0	
Toluene-d8 (S)	94 %		70-130	1		12/14/10 16:17	2037-26-5	

ANALYTICAL RESULTS

Project: 13224-01; Fmr TTC

Pace Project No.: 3038632

Sample: GP-03-140		Lab ID: 3038632002	Collected: 12/13/10 15:40	Received: 12/14/10 12:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		12/14/10 16:43	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		12/14/10 16:43	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		12/14/10 16:43	127-18-4	
Trichloroethene	ND ug/L		1.0	1		12/14/10 16:43	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		12/14/10 16:43	75-01-4	
4-Bromofluorobenzene (S)	97 %		70-130	1		12/14/10 16:43	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		70-130	1		12/14/10 16:43	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		12/14/10 16:43	2037-26-5	

ANALYTICAL RESULTS

Project: 13224-01; Fmr TTC

Pace Project No.: 3038632

Sample: GP-03-300		Lab ID: 3038632003	Collected: 12/13/10 16:00	Received: 12/14/10 12:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		12/14/10 15:50	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		12/14/10 15:50	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		12/14/10 15:50	127-18-4	
Trichloroethene	ND ug/L		1.0	1		12/14/10 15:50	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		12/14/10 15:50	75-01-4	
4-Bromofluorobenzene (S)	97 %		70-130	1		12/14/10 15:50	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		70-130	1		12/14/10 15:50	17060-07-0	
Toluene-d8 (S)	95 %		70-130	1		12/14/10 15:50	2037-26-5	

ANALYTICAL RESULTS

Project: 13224-01; Fmr TTC

Pace Project No.: 3038632

Sample: TB-121310		Lab ID: 3038632004	Collected: 12/13/10 00:01	Received: 12/14/10 12:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		12/14/10 15:24	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		12/14/10 15:24	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		12/14/10 15:24	127-18-4	
Trichloroethene	ND ug/L		1.0	1		12/14/10 15:24	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		12/14/10 15:24	75-01-4	
4-Bromofluorobenzene (S)	96 %		70-130	1		12/14/10 15:24	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		70-130	1		12/14/10 15:24	17060-07-0	
Toluene-d8 (S)	95 %		70-130	1		12/14/10 15:24	2037-26-5	

QUALITY CONTROL DATA

Project: 13224-01; Fmr TTC

Pace Project No.: 3038632

QC Batch:	MSV/8004	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples: 3038632001, 3038632002, 3038632003, 3038632004			

METHOD BLANK:	248480	Matrix:	Water

Associated Lab Samples: 3038632001, 3038632002, 3038632003, 3038632004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	12/14/10 14:58	
Tetrachloroethene	ug/L	ND	1.0	12/14/10 14:58	
trans-1,2-Dichloroethene	ug/L	ND	1.0	12/14/10 14:58	
Trichloroethene	ug/L	ND	1.0	12/14/10 14:58	
Vinyl chloride	ug/L	ND	1.0	12/14/10 14:58	
1,2-Dichloroethane-d4 (S)	%	100	70-130	12/14/10 14:58	
4-Bromofluorobenzene (S)	%	100	70-130	12/14/10 14:58	
Toluene-d8 (S)	%	99	70-130	12/14/10 14:58	

LABORATORY CONTROL SAMPLE: 248481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	19.4	97	70-130	
Tetrachloroethene	ug/L	20	19.4	97	70-130	
trans-1,2-Dichloroethene	ug/L	20	18.7	94	70-130	
Trichloroethene	ug/L	20	19.4	97	70-130	
Vinyl chloride	ug/L	20	21.3	107	70-130	
1,2-Dichloroethane-d4 (S)	%			98	70-130	
4-Bromofluorobenzene (S)	%			94	70-130	
Toluene-d8 (S)	%			93	70-130	

QUALIFIERS

Project: 13224-01; Fmr TTC

Pace Project No.: 3038632

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 13224-01; Fmr TTC

Pace Project No.: 3038632

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3038632001	GP-03-150	EPA 8260	MSV/8004		
3038632002	GP-03-140	EPA 8260	MSV/8004		
3038632003	GP-03-300	EPA 8260	MSV/8004		
3038632004	TB-121310	EPA 8260	MSV/8004		

December 17, 2010

Mr. David Bouchard
WSP Environment & Energy
5 Sullivan Street
Cazenovia, NY 13035

RE: Project: Fmr TTC-Glen Head, NY
Pace Project No.: 3038743

Dear Mr. Bouchard:

Enclosed are the analytical results for sample(s) received by the laboratory on December 16, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Penny Westrick

penny.westrick@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038743

Pennsylvania Certification IDs

1638 Roseytown Road Suites 2,3&4, Greensburg, PA 15601

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/NELAC Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/NELAC Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/NELAC Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/NELAC Certification #: LA080002

Louisiana/NELAC Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/NELAC Certification #: 2976

New Jersey/NELAC Certification #: PA 051

New Mexico Certification

New York/NELAC Certification #: 10888

North Carolina Certification #: 42706

Oregon/NELAC Certification #: PA200002

Pennsylvania/NELAC Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/NELAC Certification #: T104704188-09 TX

Utah/NELAC Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Washington Certification #: C1941

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

REPORT OF LABORATORY ANALYSIS

Page 2 of 10

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SAMPLE ANALYTE COUNT

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038743

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3038743001	GP-04-140	EPA 8260	JAS	8	PASI-PA
3038743002	GP-04-140 MS	EPA 8260	JAS	8	PASI-PA
3038743003	GP-04-140 MSD	EPA 8260	JAS	8	PASI-PA
3038743004	GP-04-130	EPA 8260	JAS	8	PASI-PA
3038743005	GP-04-121	EPA 8260	JAS	8	PASI-PA
3038743006	GP-04-116	EPA 8260	JAS	8	PASI-PA
3038743007	GP-04-400	EPA 8260	JAS	8	PASI-PA
3038743008	TB-121510	EPA 8260	JAS	8	PASI-PA
3038743009	EB-121510	EPA 8260	JAS	8	PASI-PA

REPORT OF LABORATORY ANALYSIS

Page 3 of 10

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PROJECT NARRATIVE

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038743

Method: EPA 8260

Description: 8260 MSV

Client: WSP Environment & Energy - Cazenovia, NY

Date: December 17, 2010

General Information:

9 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038743

Sample: GP-04-140		Lab ID: 3038743001	Collected: 12/15/10 09:00	Received: 12/16/10 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	4.5 ug/L		1.0	1		12/16/10 19:42	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		12/16/10 19:42	156-60-5	
Tetrachloroethene	2.3 ug/L		1.0	1		12/16/10 19:42	127-18-4	
Trichloroethene	34.8 ug/L		1.0	1		12/16/10 19:42	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		12/16/10 19:42	75-01-4	
4-Bromofluorobenzene (S)	86 %		70-130	1		12/16/10 19:42	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		70-130	1		12/16/10 19:42	17060-07-0	
Toluene-d8 (S)	83 %		70-130	1		12/16/10 19:42	2037-26-5	

Sample: GP-04-140 MS		Lab ID: 3038743002	Collected: 12/15/10 09:00	Received: 12/16/10 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	21.6 ug/L		1.0	1		12/16/10 20:08	156-59-2	
trans-1,2-Dichloroethene	17.2 ug/L		1.0	1		12/16/10 20:08	156-60-5	
Tetrachloroethene	19.1 ug/L		1.0	1		12/16/10 20:08	127-18-4	
Trichloroethene	51.6 ug/L		1.0	1		12/16/10 20:08	79-01-6	
Vinyl chloride	20.7 ug/L		1.0	1		12/16/10 20:08	75-01-4	
4-Bromofluorobenzene (S)	85 %		70-130	1		12/16/10 20:08	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		70-130	1		12/16/10 20:08	17060-07-0	
Toluene-d8 (S)	86 %		70-130	1		12/16/10 20:08	2037-26-5	

Sample: GP-04-140 MSD		Lab ID: 3038743003	Collected: 12/15/10 09:00	Received: 12/16/10 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	23.2 ug/L		1.0	1		12/16/10 20:34	156-59-2	
trans-1,2-Dichloroethene	18.6 ug/L		1.0	1		12/16/10 20:34	156-60-5	
Tetrachloroethene	19.1 ug/L		1.0	1		12/16/10 20:34	127-18-4	
Trichloroethene	50.3 ug/L		1.0	1		12/16/10 20:34	79-01-6	
Vinyl chloride	21.5 ug/L		1.0	1		12/16/10 20:34	75-01-4	
4-Bromofluorobenzene (S)	90 %		70-130	1		12/16/10 20:34	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		12/16/10 20:34	17060-07-0	
Toluene-d8 (S)	84 %		70-130	1		12/16/10 20:34	2037-26-5	

Sample: GP-04-130		Lab ID: 3038743004	Collected: 12/15/10 09:40	Received: 12/16/10 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		12/16/10 21:01	156-59-2	

Date: 12/17/2010 10:42 AM

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ANALYTICAL RESULTS

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038743

Sample: GP-04-130		Lab ID: 3038743004	Collected: 12/15/10 09:40	Received: 12/16/10 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/16/10 21:01	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	1		12/16/10 21:01	127-18-4	
Trichloroethene	2.1	ug/L	1.0	1		12/16/10 21:01	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		12/16/10 21:01	75-01-4	
4-Bromofluorobenzene (S)	83	%	70-130	1		12/16/10 21:01	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130	1		12/16/10 21:01	17060-07-0	
Toluene-d8 (S)	85	%	70-130	1		12/16/10 21:01	2037-26-5	

Sample: GP-04-121		Lab ID: 3038743005	Collected: 12/15/10 13:50	Received: 12/16/10 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	2.9	ug/L	1.0	1		12/16/10 21:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/16/10 21:27	156-60-5	
Tetrachloroethene	1.0	ug/L	1.0	1		12/16/10 21:27	127-18-4	
Trichloroethene	38.6	ug/L	1.0	1		12/16/10 21:27	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		12/16/10 21:27	75-01-4	
4-Bromofluorobenzene (S)	85	%	70-130	1		12/16/10 21:27	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130	1		12/16/10 21:27	17060-07-0	
Toluene-d8 (S)	84	%	70-130	1		12/16/10 21:27	2037-26-5	

Sample: GP-04-116		Lab ID: 3038743006	Collected: 12/15/10 15:00	Received: 12/16/10 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	2.2	ug/L	1.0	1		12/16/10 21:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/16/10 21:53	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	1		12/16/10 21:53	127-18-4	
Trichloroethene	19.4	ug/L	1.0	1		12/16/10 21:53	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		12/16/10 21:53	75-01-4	
4-Bromofluorobenzene (S)	85	%	70-130	1		12/16/10 21:53	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	70-130	1		12/16/10 21:53	17060-07-0	
Toluene-d8 (S)	85	%	70-130	1		12/16/10 21:53	2037-26-5	

Sample: GP-04-400		Lab ID: 3038743007	Collected: 12/15/10 11:00	Received: 12/16/10 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	2.8	ug/L	1.0	1		12/16/10 22:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/16/10 22:19	156-60-5	

Date: 12/17/2010 10:42 AM

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ANALYTICAL RESULTS

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038743

Sample: GP-04-400		Lab ID: 3038743007	Collected: 12/15/10 11:00	Received: 12/16/10 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
Tetrachloroethene	1.0 ug/L		1.0	1		12/16/10 22:19	127-18-4	
Trichloroethene	38.3 ug/L		1.0	1		12/16/10 22:19	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		12/16/10 22:19	75-01-4	
4-Bromofluorobenzene (S)	83 %		70-130	1		12/16/10 22:19	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		70-130	1		12/16/10 22:19	17060-07-0	
Toluene-d8 (S)	84 %		70-130	1		12/16/10 22:19	2037-26-5	

Sample: TB-121510		Lab ID: 3038743008	Collected: 12/15/10 00:01	Received: 12/16/10 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		12/16/10 22:45	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		12/16/10 22:45	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		12/16/10 22:45	127-18-4	
Trichloroethene	ND ug/L		1.0	1		12/16/10 22:45	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		12/16/10 22:45	75-01-4	
4-Bromofluorobenzene (S)	86 %		70-130	1		12/16/10 22:45	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		70-130	1		12/16/10 22:45	17060-07-0	
Toluene-d8 (S)	85 %		70-130	1		12/16/10 22:45	2037-26-5	

Sample: EB-121510		Lab ID: 3038743009	Collected: 12/15/10 16:00	Received: 12/16/10 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		12/16/10 23:11	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		12/16/10 23:11	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		12/16/10 23:11	127-18-4	
Trichloroethene	ND ug/L		1.0	1		12/16/10 23:11	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		12/16/10 23:11	75-01-4	
4-Bromofluorobenzene (S)	84 %		70-130	1		12/16/10 23:11	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		70-130	1		12/16/10 23:11	17060-07-0	
Toluene-d8 (S)	85 %		70-130	1		12/16/10 23:11	2037-26-5	

QUALITY CONTROL DATA

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038743

QC Batch:	MSV/8030	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	3038743001, 3038743002, 3038743003, 3038743004, 3038743005, 3038743006, 3038743007, 3038743008, 3038743009		

METHOD BLANK: 249460 Matrix: Water

Associated Lab Samples: 3038743001, 3038743002, 3038743003, 3038743004, 3038743005, 3038743006, 3038743007, 3038743008, 3038743009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	12/16/10 14:53	
Tetrachloroethene	ug/L	ND	1.0	12/16/10 14:53	
trans-1,2-Dichloroethene	ug/L	ND	1.0	12/16/10 14:53	
Trichloroethene	ug/L	ND	1.0	12/16/10 14:53	
Vinyl chloride	ug/L	ND	1.0	12/16/10 14:53	
1,2-Dichloroethane-d4 (S)	%	96	70-130	12/16/10 14:53	
4-Bromofluorobenzene (S)	%	87	70-130	12/16/10 14:53	
Toluene-d8 (S)	%	85	70-130	12/16/10 14:53	

LABORATORY CONTROL SAMPLE: 249461

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	18.7	94	70-130	
Tetrachloroethene	ug/L	20	16.8	84	70-130	
trans-1,2-Dichloroethene	ug/L	20	18.1	90	70-130	
Trichloroethene	ug/L	20	16.8	84	70-130	
Vinyl chloride	ug/L	20	19.3	97	70-130	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			86	70-130	
Toluene-d8 (S)	%			89	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 249463 249464

Parameter	Units	3038743001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
cis-1,2-Dichloroethene	ug/L	4.5	20	20	21.6	23.2	86	94	70-130	7	
Tetrachloroethene	ug/L	2.3	20	20	19.1	19.1	84	84	70-130	.1	
trans-1,2-Dichloroethene	ug/L	ND	20	20	17.2	18.6	86	93	70-130	7	
Trichloroethene	ug/L	34.8	20	20	51.6	50.3	84	77	70-130	3	
Vinyl chloride	ug/L	ND	20	20	20.7	21.5	104	107	70-130	4	
1,2-Dichloroethane-d4 (S)	%						98	101	70-130		
4-Bromofluorobenzene (S)	%						85	90	70-130		
Toluene-d8 (S)	%						86	84	70-130		

QUALIFIERS

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038743

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038743

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3038743001	GP-04-140	EPA 8260	MSV/8030		
3038743002	GP-04-140 MS	EPA 8260	MSV/8030		
3038743003	GP-04-140 MSD	EPA 8260	MSV/8030		
3038743004	GP-04-130	EPA 8260	MSV/8030		
3038743005	GP-04-121	EPA 8260	MSV/8030		
3038743006	GP-04-116	EPA 8260	MSV/8030		
3038743007	GP-04-400	EPA 8260	MSV/8030		
3038743008	TB-121510	EPA 8260	MSV/8030		
3038743009	EB-121510	EPA 8260	MSV/8030		

December 20, 2010

Mr. David Bouchard
WSP Environment & Energy
5 Sullivan Street
Cazenovia, NY 13035

RE: Project: Fmr TTC-Glen Head, NY
Pace Project No.: 3038832

Dear Mr. Bouchard:

Enclosed are the analytical results for sample(s) received by the laboratory on December 17, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Penny Westrick

penny.westrick@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038832

Pennsylvania Certification IDs

1638 Roseytown Road Suites 2,3&4, Greensburg, PA 15601

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/NELAC Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/NELAC Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/NELAC Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/NELAC Certification #: LA080002

Louisiana/NELAC Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/NELAC Certification #: 2976

New Jersey/NELAC Certification #: PA 051

New Mexico Certification

New York/NELAC Certification #: 10888

North Carolina Certification #: 42706

Oregon/NELAC Certification #: PA200002

Pennsylvania/NELAC Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/NELAC Certification #: T104704188-09 TX

Utah/NELAC Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Washington Certification #: C1941

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038832

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3038832001	GP-05-150	EPA 8260	JAS	8	PASI-PA
3038832002	GP-05-140	EPA 8260	JAS	8	PASI-PA
3038832003	GP-05-130	EPA 8260	JAS	8	PASI-PA
3038832004	GP-05-122	EPA 8260	JAS	8	PASI-PA
3038832005	GP-05-117	EPA 8260	JAS	8	PASI-PA
3038832006	EB-121610	EPA 8260	JAS	8	PASI-PA
3038832007	TB-121610	EPA 8260	JAS	8	PASI-PA

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038832

Method: EPA 8260

Description: 8260 MSV

Client: WSP Environment & Energy - Cazenovia, NY

Date: December 20, 2010

General Information:

7 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038832

Sample: GP-05-150		Lab ID: 3038832001		Collected: 12/16/10 10:50		Received: 12/17/10 11:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV		Analytical Method: EPA 8260							
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		12/17/10 19:55	156-59-2		
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/17/10 19:55	156-60-5		
Tetrachloroethene	1.3	ug/L	1.0	1		12/17/10 19:55	127-18-4		
Trichloroethene	ND	ug/L	1.0	1		12/17/10 19:55	79-01-6		
Vinyl chloride	ND	ug/L	1.0	1		12/17/10 19:55	75-01-4		
4-Bromofluorobenzene (S)	92	%	70-130	1		12/17/10 19:55	460-00-4		
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		12/17/10 19:55	17060-07-0		
Toluene-d8 (S)	89	%	70-130	1		12/17/10 19:55	2037-26-5		

Sample: GP-05-140		Lab ID: 3038832002		Collected: 12/16/10 11:35		Received: 12/17/10 11:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
cis-1,2-Dichloroethene		ND ug/L		1.0	1		12/17/10 19:29	156-59-2	
trans-1,2-Dichloroethene		ND ug/L		1.0	1		12/17/10 19:29	156-60-5	
Tetrachloroethene		ND ug/L		1.0	1		12/17/10 19:29	127-18-4	
Trichloroethene		ND ug/L		1.0	1		12/17/10 19:29	79-01-6	
Vinyl chloride		ND ug/L		1.0	1		12/17/10 19:29	75-01-4	
4-Bromofluorobenzene (S)		84 %		70-130	1		12/17/10 19:29	460-00-4	
1,2-Dichloroethane-d4 (S)		101 %		70-130	1		12/17/10 19:29	17060-07-0	
Toluene-d8 (S)		82 %		70-130	1		12/17/10 19:29	2037-26-5	

Sample: GP-05-130		Lab ID: 3038832003		Collected: 12/16/10 12:40		Received: 12/17/10 11:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
cis-1,2-Dichloroethene		ND ug/L		1.0	1		12/17/10 19:03	156-59-2	
trans-1,2-Dichloroethene		ND ug/L		1.0	1		12/17/10 19:03	156-60-5	
Tetrachloroethene		ND ug/L		1.0	1		12/17/10 19:03	127-18-4	
Trichloroethene		ND ug/L		1.0	1		12/17/10 19:03	79-01-6	
Vinyl chloride		ND ug/L		1.0	1		12/17/10 19:03	75-01-4	
4-Bromofluorobenzene (S)		84 %		70-130	1		12/17/10 19:03	460-00-4	
1,2-Dichloroethane-d4 (S)		99 %		70-130	1		12/17/10 19:03	17060-07-0	
Toluene-d8 (S)		82 %		70-130	1		12/17/10 19:03	2037-26-5	

Sample: GP-05-122		Lab ID: 3038832004		Collected: 12/16/10 13:45		Received: 12/17/10 11:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
cis-1,2-Dichloroethene		69.6	ug/L	1.0	1		12/17/10 18:37	156-59-2	

Date: 12/20/2010 03:14 PM

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ANALYTICAL RESULTS

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038832

Sample: GP-05-122		Lab ID: 3038832004	Collected: 12/16/10 13:45		Received: 12/17/10 11:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/17/10 18:37	156-60-5	
Tetrachloroethene	7.7	ug/L	1.0	1		12/17/10 18:37	127-18-4	
Trichloroethene	397	ug/L	1.0	1		12/17/10 18:37	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		12/17/10 18:37	75-01-4	
4-Bromofluorobenzene (S)	89	%	70-130	1		12/17/10 18:37	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		12/17/10 18:37	17060-07-0	
Toluene-d8 (S)	87	%	70-130	1		12/17/10 18:37	2037-26-5	

Sample: GP-05-117		Lab ID: 3038832005	Collected: 12/16/10 14:25		Received: 12/17/10 11:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	29.6	ug/L	1.0	1		12/17/10 18:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/17/10 18:10	156-60-5	
Tetrachloroethene	5.0	ug/L	1.0	1		12/17/10 18:10	127-18-4	
Trichloroethene	296	ug/L	1.0	1		12/17/10 18:10	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		12/17/10 18:10	75-01-4	
4-Bromofluorobenzene (S)	91	%	70-130	1		12/17/10 18:10	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		12/17/10 18:10	17060-07-0	
Toluene-d8 (S)	88	%	70-130	1		12/17/10 18:10	2037-26-5	

Sample: EB-121610		Lab ID: 3038832006	Collected: 12/16/10 15:30		Received: 12/17/10 11:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		12/17/10 17:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/17/10 17:44	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	1		12/17/10 17:44	127-18-4	
Trichloroethene	ND	ug/L	1.0	1		12/17/10 17:44	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		12/17/10 17:44	75-01-4	
4-Bromofluorobenzene (S)	91	%	70-130	1		12/17/10 17:44	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		12/17/10 17:44	17060-07-0	
Toluene-d8 (S)	87	%	70-130	1		12/17/10 17:44	2037-26-5	

Sample: TB-121610		Lab ID: 3038832007	Collected: 12/16/10 00:01		Received: 12/17/10 11:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		12/17/10 17:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/17/10 17:18	156-60-5	

Date: 12/20/2010 03:14 PM

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ANALYTICAL RESULTS

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038832

Sample: TB-121610		Lab ID: 3038832007	Collected: 12/16/10 00:01	Received: 12/17/10 11:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
Tetrachloroethene	ND ug/L		1.0	1		12/17/10 17:18	127-18-4	
Trichloroethene	ND ug/L		1.0	1		12/17/10 17:18	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		12/17/10 17:18	75-01-4	
4-Bromofluorobenzene (S)	89 %		70-130	1		12/17/10 17:18	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		12/17/10 17:18	17060-07-0	
Toluene-d8 (S)	86 %		70-130	1		12/17/10 17:18	2037-26-5	

QUALITY CONTROL DATA

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038832

QC Batch:	MSV/8043	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples: 3038832001, 3038832002, 3038832003, 3038832004, 3038832005, 3038832006, 3038832007			

METHOD BLANK:	250125	Matrix:	Water
Associated Lab Samples: 3038832001, 3038832002, 3038832003, 3038832004, 3038832005, 3038832006, 3038832007			

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	12/17/10 16:52	
Tetrachloroethene	ug/L	ND	1.0	12/17/10 16:52	
trans-1,2-Dichloroethene	ug/L	ND	1.0	12/17/10 16:52	
Trichloroethene	ug/L	ND	1.0	12/17/10 16:52	
Vinyl chloride	ug/L	ND	1.0	12/17/10 16:52	
1,2-Dichloroethane-d4 (S)	%	99	70-130	12/17/10 16:52	
4-Bromofluorobenzene (S)	%	84	70-130	12/17/10 16:52	
Toluene-d8 (S)	%	84	70-130	12/17/10 16:52	

LABORATORY CONTROL SAMPLE: 250126

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	20.0	100	70-130	
Tetrachloroethene	ug/L	20	18.8	94	70-130	
trans-1,2-Dichloroethene	ug/L	20	19.5	97	70-130	
Trichloroethene	ug/L	20	18.4	92	70-130	
Vinyl chloride	ug/L	20	14.9	74	70-130	
1,2-Dichloroethane-d4 (S)	%			104	70-130	
4-Bromofluorobenzene (S)	%			89	70-130	
Toluene-d8 (S)	%			88	70-130	

QUALIFIERS

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038832

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Fmr TTC-Glen Head, NY

Pace Project No.: 3038832

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3038832001	GP-05-150	EPA 8260	MSV/8043		
3038832002	GP-05-140	EPA 8260	MSV/8043		
3038832003	GP-05-130	EPA 8260	MSV/8043		
3038832004	GP-05-122	EPA 8260	MSV/8043		
3038832005	GP-05-117	EPA 8260	MSV/8043		
3038832006	EB-121610	EPA 8260	MSV/8043		
3038832007	TB-121610	EPA 8260	MSV/8043		

February 08, 2011

Mr. David Bouchard
WSP Environment & Energy
5 Sullivan Street
Cazenovia, NY 13035

RE: Project: FORMER TIC - GLEN HEAD, NY
Pace Project No.: 3041052

Dear Mr. Bouchard:

Enclosed are the analytical results for sample(s) received by the laboratory on February 05, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Penny Westrick

penny.westrick@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: FORMER TIC - GLEN HEAD, NY

Pace Project No.: 3041052

Pennsylvania Certification IDs

1638 Roseytown Road Suites 2,3&4, Greensburg, PA 15601

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/NELAC Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/NELAC Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/NELAC Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/NELAC Certification #: LA080002

Louisiana/NELAC Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/NELAC Certification #: 2976

New Jersey/NELAC Certification #: PA 051

New Mexico Certification

New York/NELAC Certification #: 10888

North Carolina Certification #: 42706

Oregon/NELAC Certification #: PA200002

Pennsylvania/NELAC Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/NELAC Certification #: T104704188-09 TX

Utah/NELAC Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Washington Certification #: C1941

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

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SAMPLE ANALYTE COUNT

Project: FORMER TIC - GLEN HEAD, NY

Pace Project No.: 3041052

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3041052001	TB020411	EPA 8260	JAS	8	PASI-PA
3041052002	GP-7-150	EPA 8260	JAS	8	PASI-PA
3041052003	GP-7-150 MS	EPA 8260	JAS	8	PASI-PA
3041052004	GP-7-150 MSD	EPA 8260	JAS	8	PASI-PA
3041052005	GP-7-140	EPA 8260	JAS	8	PASI-PA
3041052006	GP-7-130	EPA 8260	JAS	8	PASI-PA
3041052007	EB020411	EPA 8260	JAS	8	PASI-PA

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PROJECT NARRATIVE

Project: FORMER TIC - GLEN HEAD, NY

Pace Project No.: 3041052

Method: EPA 8260

Description: 8260 MSV

Client: WSP Environment & Energy - Cazenovia, NY

Date: February 08, 2011

General Information:

7 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORMER TIC - GLEN HEAD, NY

Pace Project No.: 3041052

Sample: TB020411		Lab ID: 3041052001	Collected: 01/27/11 00:01	Received: 02/05/11 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/07/11 13:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/07/11 13:36	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	1		02/07/11 13:36	127-18-4	
Trichloroethene	ND	ug/L	1.0	1		02/07/11 13:36	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/07/11 13:36	75-01-4	
4-Bromofluorobenzene (S)	100	%	70-130	1		02/07/11 13:36	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	70-130	1		02/07/11 13:36	17060-07-0	
Toluene-d8 (S)	94	%	70-130	1		02/07/11 13:36	2037-26-5	

Sample: GP-7-150		Lab ID: 3041052002	Collected: 02/04/11 11:25	Received: 02/05/11 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/07/11 14:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/07/11 14:02	156-60-5	
Tetrachloroethene	49.3	ug/L	1.0	1		02/07/11 14:02	127-18-4	
Trichloroethene	ND	ug/L	1.0	1		02/07/11 14:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/07/11 14:02	75-01-4	
4-Bromofluorobenzene (S)	100	%	70-130	1		02/07/11 14:02	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		02/07/11 14:02	17060-07-0	
Toluene-d8 (S)	96	%	70-130	1		02/07/11 14:02	2037-26-5	

Sample: GP-7-150 MS		Lab ID: 3041052003	Collected: 02/04/11 11:25	Received: 02/05/11 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	19.0	ug/L	1.0	1		02/07/11 14:29	156-59-2	
trans-1,2-Dichloroethene	17.7	ug/L	1.0	1		02/07/11 14:29	156-60-5	
Tetrachloroethene	72.8	ug/L	1.0	1		02/07/11 14:29	127-18-4	
Trichloroethene	21.0	ug/L	1.0	1		02/07/11 14:29	79-01-6	
Vinyl chloride	15.0	ug/L	1.0	1		02/07/11 14:29	75-01-4	
4-Bromofluorobenzene (S)	99	%	70-130	1		02/07/11 14:29	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		02/07/11 14:29	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		02/07/11 14:29	2037-26-5	

Sample: GP-7-150 MSD		Lab ID: 3041052004	Collected: 02/04/11 11:25	Received: 02/05/11 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	19.1	ug/L	1.0	1		02/07/11 14:55	156-59-2	

Date: 02/08/2011 03:44 PM

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ANALYTICAL RESULTS

Project: FORMER TIC - GLEN HEAD, NY

Pace Project No.: 3041052

Sample: GP-7-150 MSD		Lab ID: 3041052004	Collected: 02/04/11 11:25	Received: 02/05/11 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
trans-1,2-Dichloroethene	18.0	ug/L	1.0	1		02/07/11 14:55	156-60-5	
Tetrachloroethene	68.1	ug/L	1.0	1		02/07/11 14:55	127-18-4	
Trichloroethene	20.6	ug/L	1.0	1		02/07/11 14:55	79-01-6	
Vinyl chloride	17.6	ug/L	1.0	1		02/07/11 14:55	75-01-4	
4-Bromofluorobenzene (S)	97	%	70-130	1		02/07/11 14:55	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		02/07/11 14:55	17060-07-0	
Toluene-d8 (S)	95	%	70-130	1		02/07/11 14:55	2037-26-5	

Sample: GP-7-140		Lab ID: 3041052005	Collected: 02/04/11 12:00	Received: 02/05/11 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/07/11 15:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/07/11 15:21	156-60-5	
Tetrachloroethene	3.7	ug/L	1.0	1		02/07/11 15:21	127-18-4	
Trichloroethene	ND	ug/L	1.0	1		02/07/11 15:21	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/07/11 15:21	75-01-4	
4-Bromofluorobenzene (S)	97	%	70-130	1		02/07/11 15:21	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		02/07/11 15:21	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		02/07/11 15:21	2037-26-5	

Sample: GP-7-130		Lab ID: 3041052006	Collected: 02/04/11 12:40	Received: 02/05/11 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/07/11 15:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/07/11 15:48	156-60-5	
Tetrachloroethene	13.5	ug/L	1.0	1		02/07/11 15:48	127-18-4	
Trichloroethene	ND	ug/L	1.0	1		02/07/11 15:48	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/07/11 15:48	75-01-4	
4-Bromofluorobenzene (S)	97	%	70-130	1		02/07/11 15:48	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130	1		02/07/11 15:48	17060-07-0	
Toluene-d8 (S)	96	%	70-130	1		02/07/11 15:48	2037-26-5	

Sample: EB020411		Lab ID: 3041052007	Collected: 02/04/11 14:00	Received: 02/05/11 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/07/11 16:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/07/11 16:14	156-60-5	

Date: 02/08/2011 03:44 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORMER TIC - GLEN HEAD, NY

Pace Project No.: 3041052

Sample: EB020411		Lab ID: 3041052007		Collected: 02/04/11 14:00		Received: 02/05/11 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV		Analytical Method: EPA 8260							
Tetrachloroethene	ND ug/L		1.0	1		02/07/11 16:14	127-18-4		
Trichloroethene	ND ug/L		1.0	1		02/07/11 16:14	79-01-6		
Vinyl chloride	ND ug/L		1.0	1		02/07/11 16:14	75-01-4		
4-Bromofluorobenzene (S)	97 %		70-130	1		02/07/11 16:14	460-00-4		
1,2-Dichloroethane-d4 (S)	96 %		70-130	1		02/07/11 16:14	17060-07-0		
Toluene-d8 (S)	98 %		70-130	1		02/07/11 16:14	2037-26-5		

QUALITY CONTROL DATA

Project: FORMER TIC - GLEN HEAD, NY

Pace Project No.: 3041052

QC Batch:	MSV/8438	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	3041052001, 3041052002, 3041052003, 3041052004, 3041052005, 3041052006, 3041052007		

METHOD BLANK:	265027	Matrix:	Water
Associated Lab Samples:	3041052001, 3041052002, 3041052003, 3041052004, 3041052005, 3041052006, 3041052007		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/07/11 13:10	
Tetrachloroethene	ug/L	ND	1.0	02/07/11 13:10	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/07/11 13:10	
Trichloroethene	ug/L	ND	1.0	02/07/11 13:10	
Vinyl chloride	ug/L	ND	1.0	02/07/11 13:10	
1,2-Dichloroethane-d4 (S)	%	97	70-130	02/07/11 13:10	
4-Bromofluorobenzene (S)	%	98	70-130	02/07/11 13:10	
Toluene-d8 (S)	%	97	70-130	02/07/11 13:10	

LABORATORY CONTROL SAMPLE: 265028

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	17.2	86	70-130	
Tetrachloroethene	ug/L	20	18.6	93	70-130	
trans-1,2-Dichloroethene	ug/L	20	16.1	81	70-130	
Trichloroethene	ug/L	20	17.7	88	70-130	
Vinyl chloride	ug/L	20	16.1	81	70-130	
1,2-Dichloroethane-d4 (S)	%			102	70-130	
4-Bromofluorobenzene (S)	%			97	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 265029 265030

Parameter	Units	3041052002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
cis-1,2-Dichloroethene	ug/L	ND	20	20	19.0	19.1	95	96	70-130	.6	
Tetrachloroethene	ug/L	49.3	20	20	72.8	68.1	117	94	70-130	7	
trans-1,2-Dichloroethene	ug/L	ND	20	20	17.7	18.0	89	90	70-130	1	
Trichloroethene	ug/L	ND	20	20	21.0	20.6	102	100	70-130	2	
Vinyl chloride	ug/L	ND	20	20	15.0	17.6	75	88	70-130	16	
1,2-Dichloroethane-d4 (S)	%						103	99	70-130		
4-Bromofluorobenzene (S)	%						99	97	70-130		
Toluene-d8 (S)	%						99	95	70-130		

QUALIFIERS

Project: FORMER TIC - GLEN HEAD, NY

Pace Project No.: 3041052

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORMER TIC - GLEN HEAD, NY

Pace Project No.: 3041052

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3041052001	TB020411	EPA 8260	MSV/8438		
3041052002	GP-7-150	EPA 8260	MSV/8438		
3041052003	GP-7-150 MS	EPA 8260	MSV/8438		
3041052004	GP-7-150 MSD	EPA 8260	MSV/8438		
3041052005	GP-7-140	EPA 8260	MSV/8438		
3041052006	GP-7-130	EPA 8260	MSV/8438		
3041052007	EB020411	EPA 8260	MSV/8438		

February 09, 2011

Mr. David Bouchard
WSP Environment & Energy
5 Sullivan Street
Cazenovia, NY 13035

RE: Project: Former TTC-Glen Head NY
Pace Project No.: 3041109

Dear Mr. Bouchard:

Enclosed are the analytical results for sample(s) received by the laboratory on February 08, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Penny Westrick

penny.westrick@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Former TTC-Glen Head NY

Pace Project No.: 3041109

Pennsylvania Certification IDs

1638 Roseytown Road Suites 2,3&4, Greensburg, PA 15601

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/NELAC Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/NELAC Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/NELAC Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/NELAC Certification #: LA080002

Louisiana/NELAC Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/NELAC Certification #: 2976

New Jersey/NELAC Certification #: PA 051

New Mexico Certification

New York/NELAC Certification #: 10888

North Carolina Certification #: 42706

Oregon/NELAC Certification #: PA200002

Pennsylvania/NELAC Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/NELAC Certification #: T104704188-09 TX

Utah/NELAC Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Washington Certification #: C1941

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Former TTC-Glen Head NY

Pace Project No.: 3041109

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3041109001	TB020711	EPA 8260	JAS	8	PASI-PA
3041109002	GP-7-120	EPA 8260	JAS	8	PASI-PA
3041109003	GP-7-115	EPA 8260	JAS	8	PASI-PA
3041109004	EB020711	EPA 8260	JAS	8	PASI-PA

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Former TTC-Glen Head NY

Pace Project No.: 3041109

Method: EPA 8260

Description: 8260 MSV

Client: WSP Environment & Energy - Cazenovia, NY

Date: February 09, 2011

General Information:

4 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/8453

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Former TTC-Glen Head NY

Pace Project No.: 3041109

Sample: TB020711		Lab ID: 3041109001	Collected: 01/27/11 00:01	Received: 02/08/11 10:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/08/11 15:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/08/11 15:48	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	1		02/08/11 15:48	127-18-4	
Trichloroethene	ND	ug/L	1.0	1		02/08/11 15:48	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/08/11 15:48	75-01-4	
4-Bromofluorobenzene (S)	100 %		70-130	1		02/08/11 15:48	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		70-130	1		02/08/11 15:48	17060-07-0	
Toluene-d8 (S)	94 %		70-130	1		02/08/11 15:48	2037-26-5	

Sample: GP-7-120		Lab ID: 3041109002	Collected: 02/07/11 13:35	Received: 02/08/11 10:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	8.7	ug/L	1.0	1		02/08/11 16:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/08/11 16:14	156-60-5	
Tetrachloroethene	26.1	ug/L	1.0	1		02/08/11 16:14	127-18-4	
Trichloroethene	29.4	ug/L	1.0	1		02/08/11 16:14	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/08/11 16:14	75-01-4	
4-Bromofluorobenzene (S)	97 %		70-130	1		02/08/11 16:14	460-00-4	
1,2-Dichloroethane-d4 (S)	92 %		70-130	1		02/08/11 16:14	17060-07-0	
Toluene-d8 (S)	98 %		70-130	1		02/08/11 16:14	2037-26-5	

Sample: GP-7-115		Lab ID: 3041109003	Collected: 02/07/11 14:00	Received: 02/08/11 10:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	3.6	ug/L	1.0	1		02/08/11 16:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/08/11 16:40	156-60-5	
Tetrachloroethene	10.4	ug/L	1.0	1		02/08/11 16:40	127-18-4	
Trichloroethene	23.0	ug/L	1.0	1		02/08/11 16:40	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/08/11 16:40	75-01-4	
4-Bromofluorobenzene (S)	97 %		70-130	1		02/08/11 16:40	460-00-4	
1,2-Dichloroethane-d4 (S)	94 %		70-130	1		02/08/11 16:40	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/08/11 16:40	2037-26-5	

Sample: EB020711		Lab ID: 3041109004	Collected: 02/07/11 14:30	Received: 02/08/11 10:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/08/11 17:07	156-59-2	

Date: 02/09/2011 03:11 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Former TTC-Glen Head NY

Pace Project No.: 3041109

Sample: EB020711		Lab ID: 3041109004	Collected: 02/07/11 14:30	Received: 02/08/11 10:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/08/11 17:07	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		02/08/11 17:07	127-18-4	
Trichloroethene	ND ug/L		1.0	1		02/08/11 17:07	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/08/11 17:07	75-01-4	
4-Bromofluorobenzene (S)	95 %		70-130	1		02/08/11 17:07	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		70-130	1		02/08/11 17:07	17060-07-0	
Toluene-d8 (S)	95 %		70-130	1		02/08/11 17:07	2037-26-5	

QUALITY CONTROL DATA

Project: Former TTC-Glen Head NY

Pace Project No.: 3041109

QC Batch:	MSV/8453	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	3041109001, 3041109002, 3041109003, 3041109004		

METHOD BLANK:	265329	Matrix:	Water

Associated Lab Samples: 3041109001, 3041109002, 3041109003, 3041109004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/08/11 15:22	
Tetrachloroethene	ug/L	ND	1.0	02/08/11 15:22	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/08/11 15:22	
Trichloroethene	ug/L	ND	1.0	02/08/11 15:22	
Vinyl chloride	ug/L	ND	1.0	02/08/11 15:22	
1,2-Dichloroethane-d4 (S)	%	98	70-130	02/08/11 15:22	
4-Bromofluorobenzene (S)	%	93	70-130	02/08/11 15:22	
Toluene-d8 (S)	%	96	70-130	02/08/11 15:22	

LABORATORY CONTROL SAMPLE: 265330

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	18.2	91	70-130	
Tetrachloroethene	ug/L	20	19.9	100	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.7	88	70-130	
Trichloroethene	ug/L	20	18.8	94	70-130	
Vinyl chloride	ug/L	20	15.6	78	70-130	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			97	70-130	
Toluene-d8 (S)	%			91	70-130	

QUALIFIERS

Project: Former TTC-Glen Head NY

Pace Project No.: 3041109

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

BATCH QUALIFIERS

Batch: MSV/8453

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Former TTC-Glen Head NY

Pace Project No.: 3041109

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3041109001	TB020711	EPA 8260	MSV/8453		
3041109002	GP-7-120	EPA 8260	MSV/8453		
3041109003	GP-7-115	EPA 8260	MSV/8453		
3041109004	EB020711	EPA 8260	MSV/8453		

February 10, 2011

Mr. David Bouchard
WSP Environment & Energy
5 Sullivan Street
Cazenovia, NY 13035

RE: Project: FORMER TTC-GLEN HEAD, NY
Pace Project No.: 3041163

Dear Mr. Bouchard:

Enclosed are the analytical results for sample(s) received by the laboratory on February 09, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Penny Westrick

penny.westrick@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Page 1 of 9

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CERTIFICATIONS

Project: FORMER TTC-GLEN HEAD, NY
Pace Project No.: 3041163

Pennsylvania Certification IDs

1638 Roseytown Road Suites 2,3&4, Greensburg, PA 15601

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/NELAC Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/NELAC Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/NELAC Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/NELAC Certification #: LA080002

Louisiana/NELAC Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/NELAC Certification #: 2976

New Jersey/NELAC Certification #: PA 051

New Mexico Certification

New York/NELAC Certification #: 10888

North Carolina Certification #: 42706

Oregon/NELAC Certification #: PA200002

Pennsylvania/NELAC Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/NELAC Certification #: T104704188-09 TX

Utah/NELAC Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Washington Certification #: C1941

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FORMER TTC-GLEN HEAD, NY

Pace Project No.: 3041163

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3041163001	TB020811	EPA 8260	JAS	8	PASI-PA
3041163002	GP-8-180	EPA 8260	JAS	8	PASI-PA
3041163003	GP-8-170	EPA 8260	JAS	8	PASI-PA
3041163004	GP-8-160	EPA 8260	JAS	8	PASI-PA
3041163005	GP-8-150	EPA 8260	JAS	8	PASI-PA
3041163006	GP-8-140	EPA 8260	JAS	8	PASI-PA

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FORMER TTC-GLEN HEAD, NY

Pace Project No.: 3041163

Method: EPA 8260

Description: 8260 MSV

Client: WSP Environment & Energy - Cazenovia, NY

Date: February 10, 2011

General Information:

6 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

Page 4 of 9

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ANALYTICAL RESULTS

Project: FORMER TTC-GLEN HEAD, NY

Pace Project No.: 3041163

Sample: TB020811		Lab ID: 3041163001	Collected: 12/04/10 00:01	Received: 02/09/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/09/11 15:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/09/11 15:19	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	1		02/09/11 15:19	127-18-4	
Trichloroethene	ND	ug/L	1.0	1		02/09/11 15:19	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/09/11 15:19	75-01-4	
4-Bromofluorobenzene (S)	95 %		70-130	1		02/09/11 15:19	460-00-4	
1,2-Dichloroethane-d4 (S)	93 %		70-130	1		02/09/11 15:19	17060-07-0	
Toluene-d8 (S)	93 %		70-130	1		02/09/11 15:19	2037-26-5	

Sample: GP-8-180		Lab ID: 3041163002	Collected: 02/08/11 12:00	Received: 02/09/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	45.8	ug/L	1.0	1		02/09/11 15:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/09/11 15:45	156-60-5	
Tetrachloroethene	59.5	ug/L	1.0	1		02/09/11 15:45	127-18-4	
Trichloroethene	61.8	ug/L	1.0	1		02/09/11 15:45	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/09/11 15:45	75-01-4	
4-Bromofluorobenzene (S)	95 %		70-130	1		02/09/11 15:45	460-00-4	
1,2-Dichloroethane-d4 (S)	96 %		70-130	1		02/09/11 15:45	17060-07-0	
Toluene-d8 (S)	93 %		70-130	1		02/09/11 15:45	2037-26-5	

Sample: GP-8-170		Lab ID: 3041163003	Collected: 02/08/11 13:30	Received: 02/09/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	51.5	ug/L	1.0	1		02/09/11 16:12	156-59-2	
trans-1,2-Dichloroethene	1.3	ug/L	1.0	1		02/09/11 16:12	156-60-5	
Tetrachloroethene	774	ug/L	10.0	10		02/10/11 14:19	127-18-4	
Trichloroethene	41.8	ug/L	1.0	1		02/09/11 16:12	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/09/11 16:12	75-01-4	
4-Bromofluorobenzene (S)	95 %		70-130	1		02/09/11 16:12	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		70-130	1		02/09/11 16:12	17060-07-0	
Toluene-d8 (S)	95 %		70-130	1		02/09/11 16:12	2037-26-5	

Sample: GP-8-160		Lab ID: 3041163004	Collected: 02/08/11 14:30	Received: 02/09/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	20.1	ug/L	1.0	1		02/09/11 16:38	156-59-2	

Date: 02/10/2011 04:01 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORMER TTC-GLEN HEAD, NY

Pace Project No.: 3041163

Sample: GP-8-160		Lab ID: 3041163004	Collected: 02/08/11 14:30	Received: 02/09/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/09/11 16:38	156-60-5	
Tetrachloroethene	54.0	ug/L	1.0	1		02/09/11 16:38	127-18-4	
Trichloroethene	111	ug/L	1.0	1		02/09/11 16:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/09/11 16:38	75-01-4	
4-Bromofluorobenzene (S)	94 %		70-130	1		02/09/11 16:38	460-00-4	
1,2-Dichloroethane-d4 (S)	96 %		70-130	1		02/09/11 16:38	17060-07-0	
Toluene-d8 (S)	94 %		70-130	1		02/09/11 16:38	2037-26-5	

Sample: GP-8-150		Lab ID: 3041163005	Collected: 02/08/11 15:30	Received: 02/09/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	1.3	ug/L	1.0	1		02/09/11 17:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/09/11 17:04	156-60-5	
Tetrachloroethene	5.3	ug/L	1.0	1		02/09/11 17:04	127-18-4	
Trichloroethene	3.3	ug/L	1.0	1		02/09/11 17:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/09/11 17:04	75-01-4	
4-Bromofluorobenzene (S)	90 %		70-130	1		02/09/11 17:04	460-00-4	
1,2-Dichloroethane-d4 (S)	96 %		70-130	1		02/09/11 17:04	17060-07-0	
Toluene-d8 (S)	91 %		70-130	1		02/09/11 17:04	2037-26-5	

Sample: GP-8-140		Lab ID: 3041163006	Collected: 02/08/11 16:40	Received: 02/09/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	5.1	ug/L	1.0	1		02/09/11 17:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/09/11 17:30	156-60-5	
Tetrachloroethene	5.5	ug/L	1.0	1		02/09/11 17:30	127-18-4	
Trichloroethene	14.8	ug/L	1.0	1		02/09/11 17:30	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/09/11 17:30	75-01-4	
4-Bromofluorobenzene (S)	97 %		70-130	1		02/09/11 17:30	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		70-130	1		02/09/11 17:30	17060-07-0	
Toluene-d8 (S)	95 %		70-130	1		02/09/11 17:30	2037-26-5	

QUALITY CONTROL DATA

Project: FORMER TTC-GLEN HEAD, NY

Pace Project No.: 3041163

QC Batch: MSV/8465 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 3041163001, 3041163002, 3041163003, 3041163004, 3041163005, 3041163006

METHOD BLANK: 265692 Matrix: Water
Associated Lab Samples: 3041163001, 3041163002, 3041163003, 3041163004, 3041163005, 3041163006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/09/11 14:53	
Tetrachloroethene	ug/L	ND	1.0	02/09/11 14:53	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/09/11 14:53	
Trichloroethene	ug/L	ND	1.0	02/09/11 14:53	
Vinyl chloride	ug/L	ND	1.0	02/09/11 14:53	
1,2-Dichloroethane-d4 (S)	%	98	70-130	02/09/11 14:53	
4-Bromofluorobenzene (S)	%	93	70-130	02/09/11 14:53	
Toluene-d8 (S)	%	94	70-130	02/09/11 14:53	

LABORATORY CONTROL SAMPLE: 265693

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	19.0	95	70-130	
Tetrachloroethene	ug/L	20	20.9	104	70-130	
trans-1,2-Dichloroethene	ug/L	20	18.0	90	70-130	
Trichloroethene	ug/L	20	20.7	104	70-130	
Vinyl chloride	ug/L	20	16.8	84	70-130	
1,2-Dichloroethane-d4 (S)	%			98	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			96	70-130	

QUALIFIERS

Project: FORMER TTC-GLEN HEAD, NY

Pace Project No.: 3041163

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORMER TTC-GLEN HEAD, NY

Pace Project No.: 3041163

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3041163001	TB020811	EPA 8260	MSV/8465		
3041163002	GP-8-180	EPA 8260	MSV/8465		
3041163003	GP-8-170	EPA 8260	MSV/8465		
3041163004	GP-8-160	EPA 8260	MSV/8465		
3041163005	GP-8-150	EPA 8260	MSV/8465		
3041163006	GP-8-140	EPA 8260	MSV/8465		

February 24, 2011

Mr. David Bouchard
WSP Environment & Energy
5 Sullivan Street
Cazenovia, NY 13035

RE: Project: FORMER TTC-GLEN HEAD, NY
Pace Project No.: 3041246

Dear Mr. Bouchard:

Enclosed are the analytical results for sample(s) received by the laboratory on February 10, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Penny Westrick

penny.westrick@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: FORMER TTC-GLEN HEAD, NY
Pace Project No.: 3041246

Pennsylvania Certification IDs

1638 Roseytown Road Suites 2,3&4, Greensburg, PA 15601

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/NELAC Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/NELAC Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/NELAC Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/NELAC Certification #: LA080002

Louisiana/NELAC Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/NELAC Certification #: 2976

New Jersey/NELAC Certification #: PA 051

New Mexico Certification

New York/NELAC Certification #: 10888

North Carolina Certification #: 42706

Oregon/NELAC Certification #: PA200002

Pennsylvania/NELAC Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/NELAC Certification #: T104704188-09 TX

Utah/NELAC Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Washington Certification #: C1941

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

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SAMPLE ANALYTE COUNT

Project: FORMER TTC-GLEN HEAD, NY

Pace Project No.: 3041246

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3041246001	TB020911	EPA 8260	JHC	8	PASI-PA
3041246002	GP-8-130	EPA 8260	JHC	8	PASI-PA
3041246003	GP-8-120	EPA 8260	JHC	8	PASI-PA
3041246004	GP-8-115	EPA 8260	JHC	8	PASI-PA
3041246005	GP-8-110	EPA 8260	JHC	8	PASI-PA
3041246006	EB020911	EPA 8260	JHC	8	PASI-PA
3041246007	GP-9-180	EPA 8260	JHC	8	PASI-PA

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FORMER TTC-GLEN HEAD, NY

Pace Project No.: 3041246

Method: EPA 8260

Description: 8260 MSV

Client: WSP Environment & Energy - Cazenovia, NY

Date: February 24, 2011

General Information:

7 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORMER TTC-GLEN HEAD, NY

Pace Project No.: 3041246

Sample: TB020911		Lab ID: 3041246001	Collected: 11/30/10 00:01	Received: 02/10/11 12:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/11/11 18:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/11/11 18:04	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	1		02/11/11 18:04	127-18-4	
Trichloroethene	ND	ug/L	1.0	1		02/11/11 18:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/11/11 18:04	75-01-4	
4-Bromofluorobenzene (S)	95 %		70-130	1		02/11/11 18:04	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		70-130	1		02/11/11 18:04	17060-07-0	
Toluene-d8 (S)	99 %		70-130	1		02/11/11 18:04	2037-26-5	

Sample: GP-8-130		Lab ID: 3041246002	Collected: 02/09/11 09:05	Received: 02/10/11 12:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	60.6	ug/L	1.0	1		02/11/11 15:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/11/11 15:06	156-60-5	
Tetrachloroethene	7.7	ug/L	1.0	1		02/11/11 15:06	127-18-4	
Trichloroethene	365	ug/L	1.0	1		02/11/11 15:06	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/11/11 15:06	75-01-4	
4-Bromofluorobenzene (S)	96 %		70-130	1		02/11/11 15:06	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		70-130	1		02/11/11 15:06	17060-07-0	
Toluene-d8 (S)	99 %		70-130	1		02/11/11 15:06	2037-26-5	

Sample: GP-8-120		Lab ID: 3041246003	Collected: 02/09/11 09:35	Received: 02/10/11 12:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	2.2	ug/L	1.0	1		02/11/11 15:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/11/11 15:32	156-60-5	
Tetrachloroethene	4.1	ug/L	1.0	1		02/11/11 15:32	127-18-4	
Trichloroethene	16.5	ug/L	1.0	1		02/11/11 15:32	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/11/11 15:32	75-01-4	
4-Bromofluorobenzene (S)	94 %		70-130	1		02/11/11 15:32	460-00-4	
1,2-Dichloroethane-d4 (S)	92 %		70-130	1		02/11/11 15:32	17060-07-0	
Toluene-d8 (S)	99 %		70-130	1		02/11/11 15:32	2037-26-5	

Sample: GP-8-115		Lab ID: 3041246004	Collected: 02/09/11 10:15	Received: 02/10/11 12:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/11/11 15:57	156-59-2	

Date: 02/24/2011 08:32 AM

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ANALYTICAL RESULTS

Project: FORMER TTC-GLEN HEAD, NY

Pace Project No.: 3041246

Sample: GP-8-115		Lab ID: 3041246004	Collected: 02/09/11 10:15	Received: 02/10/11 12:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/11/11 15:57	156-60-5	
Tetrachloroethene	1.7 ug/L		1.0	1		02/11/11 15:57	127-18-4	
Trichloroethene	6.9 ug/L		1.0	1		02/11/11 15:57	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/11/11 15:57	75-01-4	
4-Bromofluorobenzene (S)	94 %		70-130	1		02/11/11 15:57	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		70-130	1		02/11/11 15:57	17060-07-0	
Toluene-d8 (S)	100 %		70-130	1		02/11/11 15:57	2037-26-5	

Sample: GP-8-110		Lab ID: 3041246005	Collected: 02/09/11 10:40	Received: 02/10/11 12:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		02/11/11 16:23	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/11/11 16:23	156-60-5	
Tetrachloroethene	1.9 ug/L		1.0	1		02/11/11 16:23	127-18-4	
Trichloroethene	4.1 ug/L		1.0	1		02/11/11 16:23	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/11/11 16:23	75-01-4	
4-Bromofluorobenzene (S)	93 %		70-130	1		02/11/11 16:23	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		70-130	1		02/11/11 16:23	17060-07-0	
Toluene-d8 (S)	98 %		70-130	1		02/11/11 16:23	2037-26-5	

Sample: EB020911		Lab ID: 3041246006	Collected: 02/09/11 11:00	Received: 02/10/11 12:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		02/11/11 16:48	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/11/11 16:48	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		02/11/11 16:48	127-18-4	
Trichloroethene	ND ug/L		1.0	1		02/11/11 16:48	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/11/11 16:48	75-01-4	
4-Bromofluorobenzene (S)	95 %		70-130	1		02/11/11 16:48	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		70-130	1		02/11/11 16:48	17060-07-0	
Toluene-d8 (S)	100 %		70-130	1		02/11/11 16:48	2037-26-5	

Sample: GP-9-180		Lab ID: 3041246007	Collected: 02/09/11 16:40	Received: 02/10/11 12:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		02/11/11 17:13	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/11/11 17:13	156-60-5	

Date: 02/24/2011 08:32 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORMER TTC-GLEN HEAD, NY

Pace Project No.: 3041246

Sample: GP-9-180		Lab ID: 3041246007	Collected: 02/09/11 16:40	Received: 02/10/11 12:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
Tetrachloroethene	ND ug/L		1.0	1		02/11/11 17:13	127-18-4	
Trichloroethene	ND ug/L		1.0	1		02/11/11 17:13	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/11/11 17:13	75-01-4	
4-Bromofluorobenzene (S)	94 %		70-130	1		02/11/11 17:13	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		70-130	1		02/11/11 17:13	17060-07-0	
Toluene-d8 (S)	100 %		70-130	1		02/11/11 17:13	2037-26-5	

QUALITY CONTROL DATA

Project: FORMER TTC-GLEN HEAD, NY

Pace Project No.: 3041246

QC Batch:	MSV/8481	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples: 3041246001, 3041246002, 3041246003, 3041246004, 3041246005, 3041246006, 3041246007			

METHOD BLANK:	266500	Matrix:	Water
Associated Lab Samples: 3041246001, 3041246002, 3041246003, 3041246004, 3041246005, 3041246006, 3041246007			

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/11/11 09:19	
Tetrachloroethene	ug/L	ND	1.0	02/11/11 09:19	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/11/11 09:19	
Trichloroethene	ug/L	ND	1.0	02/11/11 09:19	
Vinyl chloride	ug/L	ND	1.0	02/11/11 09:19	
1,2-Dichloroethane-d4 (S)	%	98	70-130	02/11/11 09:19	
4-Bromofluorobenzene (S)	%	96	70-130	02/11/11 09:19	
Toluene-d8 (S)	%	97	70-130	02/11/11 09:19	

LABORATORY CONTROL SAMPLE: 266501

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	17.8	89	70-130	
Tetrachloroethene	ug/L	20	18.1	90	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.3	87	70-130	
Trichloroethene	ug/L	20	16.8	84	70-130	
Vinyl chloride	ug/L	20	17.4	87	70-130	
1,2-Dichloroethane-d4 (S)	%			103	70-130	
4-Bromofluorobenzene (S)	%			93	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 266502 266503

Parameter	Units	3041248009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
cis-1,2-Dichloroethene	ug/L	ND	20	20	20.4	19.0	102	95	70-130	7	
Tetrachloroethene	ug/L	ND	20	20	20.7	19.3	104	97	70-130	7	
trans-1,2-Dichloroethene	ug/L	ND	20	20	19.2	18.3	96	91	70-130	5	
Trichloroethene	ug/L	ND	20	20	19.0	18.0	95	90	70-130	5	
Vinyl chloride	ug/L	ND	20	20	16.9	16.2	85	81	70-130	4	
1,2-Dichloroethane-d4 (S)	%						107	100	70-130		
4-Bromofluorobenzene (S)	%						94	93	70-130		
Toluene-d8 (S)	%						98	101	70-130		

QUALIFIERS

Project: FORMER TTC-GLEN HEAD, NY

Pace Project No.: 3041246

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORMER TTC-GLEN HEAD, NY

Pace Project No.: 3041246

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3041246001	TB020911	EPA 8260	MSV/8481		
3041246002	GP-8-130	EPA 8260	MSV/8481		
3041246003	GP-8-120	EPA 8260	MSV/8481		
3041246004	GP-8-115	EPA 8260	MSV/8481		
3041246005	GP-8-110	EPA 8260	MSV/8481		
3041246006	EB020911	EPA 8260	MSV/8481		
3041246007	GP-9-180	EPA 8260	MSV/8481		

February 25, 2011

Mr. David Bouchard
WSP Environment & Energy
5 Sullivan Street
Cazenovia, NY 13035

RE: Project: FORMER TTC-GLEN HEAD NY
Pace Project No.: 3041317

Dear Mr. Bouchard:

Enclosed are the analytical results for sample(s) received by the laboratory on February 11, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Penny Westrick

penny.westrick@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: FORMER TTC-GLEN HEAD NY
Pace Project No.: 3041317

Pennsylvania Certification IDs

1638 Roseytown Road Suites 2,3&4, Greensburg, PA 15601

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/NELAC Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/NELAC Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/NELAC Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/NELAC Certification #: LA080002

Louisiana/NELAC Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/NELAC Certification #: 2976

New Jersey/NELAC Certification #: PA 051

New Mexico Certification

New York/NELAC Certification #: 10888

North Carolina Certification #: 42706

Oregon/NELAC Certification #: PA200002

Pennsylvania/NELAC Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/NELAC Certification #: T104704188-09 TX

Utah/NELAC Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Washington Certification #: C1941

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

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SAMPLE ANALYTE COUNT

Project: FORMER TTC-GLEN HEAD NY

Pace Project No.: 3041317

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3041317001	TB021011	EPA 8260	JAS	8	PASI-PA
3041317002	GP-9-170	EPA 8260	JAS	8	PASI-PA
3041317003	GP-9-160	EPA 8260	JAS	8	PASI-PA
3041317004	GP-9-150	EPA 8260	JAS	8	PASI-PA
3041317005	GP-9-140	EPA 8260	JAS	8	PASI-PA
3041317006	GP-9-130	EPA 8260	JAS	8	PASI-PA
3041317007	GP-9-200	EPA 8260	JAS	8	PASI-PA
3041317008	GP-9-120	EPA 8260	JAS	8	PASI-PA
3041317009	EB021011	EPA 8260	JAS	8	PASI-PA

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PROJECT NARRATIVE

Project: FORMER TTC-GLEN HEAD NY

Pace Project No.: 3041317

Method: EPA 8260

Description: 8260 MSV

Client: WSP Environment & Energy - Cazenovia, NY

Date: February 25, 2011

General Information:

9 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Sample Comments:

The pH of the vial use for 8260 VOA analysis was 7.

- GP-9-120 (Lab ID: 3041317008)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORMER TTC-GLEN HEAD NY

Pace Project No.: 3041317

Sample: TB021011		Lab ID: 3041317001	Collected: 02/08/11 00:01	Received: 02/11/11 09:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/18/11 15:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/18/11 15:08	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	1		02/18/11 15:08	127-18-4	
Trichloroethene	ND	ug/L	1.0	1		02/18/11 15:08	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/18/11 15:08	75-01-4	
4-Bromofluorobenzene (S)	96	%	70-130	1		02/18/11 15:08	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130	1		02/18/11 15:08	17060-07-0	
Toluene-d8 (S)	90	%	70-130	1		02/18/11 15:08	2037-26-5	

Sample: GP-9-170		Lab ID: 3041317002	Collected: 02/10/11 09:40	Received: 02/11/11 09:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	5.9	ug/L	1.0	1		02/18/11 15:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/18/11 15:34	156-60-5	
Tetrachloroethene	244	ug/L	1.0	1		02/18/11 15:34	127-18-4	
Trichloroethene	4.5	ug/L	1.0	1		02/18/11 15:34	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/18/11 15:34	75-01-4	
4-Bromofluorobenzene (S)	98	%	70-130	1		02/18/11 15:34	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130	1		02/18/11 15:34	17060-07-0	
Toluene-d8 (S)	91	%	70-130	1		02/18/11 15:34	2037-26-5	

Sample: GP-9-160		Lab ID: 3041317003	Collected: 02/10/11 10:50	Received: 02/11/11 09:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	9.8	ug/L	1.0	1		02/18/11 16:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/18/11 16:01	156-60-5	
Tetrachloroethene	247	ug/L	1.0	1		02/18/11 16:01	127-18-4	
Trichloroethene	6.3	ug/L	1.0	1		02/18/11 16:01	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/18/11 16:01	75-01-4	
4-Bromofluorobenzene (S)	101	%	70-130	1		02/18/11 16:01	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130	1		02/18/11 16:01	17060-07-0	
Toluene-d8 (S)	89	%	70-130	1		02/18/11 16:01	2037-26-5	

Sample: GP-9-150		Lab ID: 3041317004	Collected: 02/10/11 12:00	Received: 02/11/11 09:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	9.2	ug/L	1.0	1		02/18/11 16:27	156-59-2	

Date: 02/25/2011 01:44 PM

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ANALYTICAL RESULTS

Project: FORMER TTC-GLEN HEAD NY

Pace Project No.: 3041317

Sample: GP-9-150		Lab ID: 3041317004		Collected: 02/10/11 12:00		Received: 02/11/11 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV		Analytical Method: EPA 8260							
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/18/11 16:27	156-60-5		
Tetrachloroethene	211	ug/L	1.0	1		02/18/11 16:27	127-18-4		
Trichloroethene	5.9	ug/L	1.0	1		02/18/11 16:27	79-01-6		
Vinyl chloride	ND	ug/L	1.0	1		02/18/11 16:27	75-01-4		
4-Bromofluorobenzene (S)	96	%	70-130	1		02/18/11 16:27	460-00-4		
1,2-Dichloroethane-d4 (S)	93	%	70-130	1		02/18/11 16:27	17060-07-0		
Toluene-d8 (S)	91	%	70-130	1		02/18/11 16:27	2037-26-5		

Sample: GP-9-140		Lab ID: 3041317005		Collected: 02/10/11 12:40		Received: 02/11/11 09:45		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
cis-1,2-Dichloroethene		10.5	ug/L	1.0	1		02/18/11 16:53	156-59-2	
trans-1,2-Dichloroethene		ND	ug/L	1.0	1		02/18/11 16:53	156-60-5	
Tetrachloroethene		140	ug/L	1.0	1		02/18/11 16:53	127-18-4	
Trichloroethene		5.4	ug/L	1.0	1		02/18/11 16:53	79-01-6	
Vinyl chloride		ND	ug/L	1.0	1		02/18/11 16:53	75-01-4	
4-Bromofluorobenzene (S)		95	%	70-130	1		02/18/11 16:53	460-00-4	
1,2-Dichloroethane-d4 (S)		96	%	70-130	1		02/18/11 16:53	17060-07-0	
Toluene-d8 (S)		88	%	70-130	1		02/18/11 16:53	2037-26-5	

Sample: GP-9-130		Lab ID: 3041317006		Collected: 02/10/11 13:45		Received: 02/11/11 09:45		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
cis-1,2-Dichloroethene		4.7	ug/L	1.0	1		02/18/11 17:19	156-59-2	
trans-1,2-Dichloroethene		ND	ug/L	1.0	1		02/18/11 17:19	156-60-5	
Tetrachloroethene		146	ug/L	1.0	1		02/18/11 17:19	127-18-4	
Trichloroethene		3.4	ug/L	1.0	1		02/18/11 17:19	79-01-6	
Vinyl chloride		ND	ug/L	1.0	1		02/18/11 17:19	75-01-4	
4-Bromofluorobenzene (S)		99	%	70-130	1		02/18/11 17:19	460-00-4	
1,2-Dichloroethane-d4 (S)		94	%	70-130	1		02/18/11 17:19	17060-07-0	
Toluene-d8 (S)		87	%	70-130	1		02/18/11 17:19	2037-26-5	

Sample: GP-9-200		Lab ID: 3041317007		Collected: 02/10/11 14:00		Received: 02/11/11 09:45		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
cis-1,2-Dichloroethene		4.4 ug/L		1.0	1		02/18/11 17:46	156-59-2	
trans-1,2-Dichloroethene		ND ug/L		1.0	1		02/18/11 17:46	156-60-5	

Date: 02/25/2011 01:44 PM

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ANALYTICAL RESULTS

Project: FORMER TTC-GLEN HEAD NY

Pace Project No.: 3041317

Sample: GP-9-200		Lab ID: 3041317007	Collected: 02/10/11 14:00	Received: 02/11/11 09:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
Tetrachloroethene	150 ug/L		1.0	1		02/18/11 17:46	127-18-4	
Trichloroethene	3.5 ug/L		1.0	1		02/18/11 17:46	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/18/11 17:46	75-01-4	
4-Bromofluorobenzene (S)	95 %		70-130	1		02/18/11 17:46	460-00-4	
1,2-Dichloroethane-d4 (S)	92 %		70-130	1		02/18/11 17:46	17060-07-0	
Toluene-d8 (S)	87 %		70-130	1		02/18/11 17:46	2037-26-5	

Sample: GP-9-120		Lab ID: 3041317008	Collected: 02/10/11 14:30	Received: 02/11/11 09:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		02/18/11 18:12	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/18/11 18:12	156-60-5	
Tetrachloroethene	14.4 ug/L		1.0	1		02/18/11 18:12	127-18-4	
Trichloroethene	ND ug/L		1.0	1		02/18/11 18:12	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/18/11 18:12	75-01-4	
4-Bromofluorobenzene (S)	96 %		70-130	1		02/18/11 18:12	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		70-130	1		02/18/11 18:12	17060-07-0	
Toluene-d8 (S)	89 %		70-130	1		02/18/11 18:12	2037-26-5	

Sample: EB021011		Lab ID: 3041317009	Collected: 02/10/11 15:30	Received: 02/11/11 09:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		02/18/11 18:38	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/18/11 18:38	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		02/18/11 18:38	127-18-4	
Trichloroethene	ND ug/L		1.0	1		02/18/11 18:38	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/18/11 18:38	75-01-4	
4-Bromofluorobenzene (S)	97 %		70-130	1		02/18/11 18:38	460-00-4	
1,2-Dichloroethane-d4 (S)	94 %		70-130	1		02/18/11 18:38	17060-07-0	
Toluene-d8 (S)	91 %		70-130	1		02/18/11 18:38	2037-26-5	

QUALITY CONTROL DATA

Project: FORMER TTC-GLEN HEAD NY
Pace Project No.: 3041317

QC Batch: MSV/8524 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 3041317001, 3041317002, 3041317003, 3041317004, 3041317005, 3041317006, 3041317007, 3041317008, 3041317009

METHOD BLANK: 268787 Matrix: Water
Associated Lab Samples: 3041317001, 3041317002, 3041317003, 3041317004, 3041317005, 3041317006, 3041317007, 3041317008, 3041317009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/18/11 12:04	
Tetrachloroethene	ug/L	ND	1.0	02/18/11 12:04	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/18/11 12:04	
Trichloroethene	ug/L	ND	1.0	02/18/11 12:04	
Vinyl chloride	ug/L	ND	1.0	02/18/11 12:04	
1,2-Dichloroethane-d4 (S)	%	90	70-130	02/18/11 12:04	
4-Bromofluorobenzene (S)	%	96	70-130	02/18/11 12:04	
Toluene-d8 (S)	%	89	70-130	02/18/11 12:04	

LABORATORY CONTROL SAMPLE: 268788

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	18.9	94	70-130	
Tetrachloroethene	ug/L	20	19.0	95	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.8	89	70-130	
Trichloroethene	ug/L	20	18.8	94	70-130	
Vinyl chloride	ug/L	20	14.8	74	70-130	
1,2-Dichloroethane-d4 (S)	%			96	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Toluene-d8 (S)	%			88	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 268789 268790

Parameter	Units	3041249001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
cis-1,2-Dichloroethene	ug/L	ND	20	20	22.5	23.3	113	117	70-130	3	
Tetrachloroethene	ug/L	ND	20	20	24.0	24.7	120	123	70-130	3	
trans-1,2-Dichloroethene	ug/L	ND	20	20	22.3	22.1	111	110	70-130	.8	
Trichloroethene	ug/L	ND	20	20	22.4	23.8	112	119	70-130	6	
Vinyl chloride	ug/L	ND	20	20	19.6	18.0	98	90	70-130	8	
1,2-Dichloroethane-d4 (S)	%						99	95	70-130		
4-Bromofluorobenzene (S)	%						99	102	70-130		
Toluene-d8 (S)	%						91	94	70-130		

QUALIFIERS

Project: FORMER TTC-GLEN HEAD NY

Pace Project No.: 3041317

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

SAMPLE QUALIFIERS

Sample: 3041317008

[1] The pH of the vial use for 8260 VOA analysis was 7.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORMER TTC-GLEN HEAD NY

Pace Project No.: 3041317

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3041317001	TB021011	EPA 8260	MSV/8524		
3041317002	GP-9-170	EPA 8260	MSV/8524		
3041317003	GP-9-160	EPA 8260	MSV/8524		
3041317004	GP-9-150	EPA 8260	MSV/8524		
3041317005	GP-9-140	EPA 8260	MSV/8524		
3041317006	GP-9-130	EPA 8260	MSV/8524		
3041317007	GP-9-200	EPA 8260	MSV/8524		
3041317008	GP-9-120	EPA 8260	MSV/8524		
3041317009	EB021011	EPA 8260	MSV/8524		

February 26, 2011

Mr. David Bouchard
WSP Environment & Energy
5 Sullivan Street
Cazenovia, NY 13035

RE: Project: Former TTC Glen Head NY
Pace Project No.: 3041411

Dear Mr. Bouchard:

Enclosed are the analytical results for sample(s) received by the laboratory on February 12, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Penny Westrick

penny.westrick@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Former TTC Glen Head NY

Pace Project No.: 3041411

Pennsylvania Certification IDs

1638 Roseytown Road Suites 2,3&4, Greensburg, PA 15601

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/NELAC Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/NELAC Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/NELAC Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/NELAC Certification #: LA080002

Louisiana/NELAC Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/NELAC Certification #: 2976

New Jersey/NELAC Certification #: PA 051

New Mexico Certification

New York/NELAC Certification #: 10888

North Carolina Certification #: 42706

Oregon/NELAC Certification #: PA200002

Pennsylvania/NELAC Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/NELAC Certification #: T104704188-09 TX

Utah/NELAC Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Washington Certification #: C1941

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Former TTC Glen Head NY

Pace Project No.: 3041411

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3041411001	TB021111	EPA 8260	JAS	8	PASI-PA
3041411002	GP-9-115	EPA 8260	JAS	8	PASI-PA
3041411003	GP-10-170	EPA 8260	JAS	8	PASI-PA

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Former TTC Glen Head NY

Pace Project No.: 3041411

Method: EPA 8260

Description: 8260 MSV

Client: WSP Environment & Energy - Cazenovia, NY

Date: February 26, 2011

General Information:

3 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

Page 4 of 8

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ANALYTICAL RESULTS

Project: Former TTC Glen Head NY

Pace Project No.: 3041411

Sample: TB021111		Lab ID: 3041411001	Collected: 11/30/10 00:01	Received: 02/12/11 11:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		02/18/11 19:04	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/18/11 19:04	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		02/18/11 19:04	127-18-4	
Trichloroethene	ND ug/L		1.0	1		02/18/11 19:04	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/18/11 19:04	75-01-4	
4-Bromofluorobenzene (S)	98 %		70-130	1		02/18/11 19:04	460-00-4	
1,2-Dichloroethane-d4 (S)	91 %		70-130	1		02/18/11 19:04	17060-07-0	
Toluene-d8 (S)	87 %		70-130	1		02/18/11 19:04	2037-26-5	

Sample: GP-9-115		Lab ID: 3041411002	Collected: 02/11/11 09:45	Received: 02/12/11 11:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		02/18/11 19:31	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/18/11 19:31	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		02/18/11 19:31	127-18-4	
Trichloroethene	ND ug/L		1.0	1		02/18/11 19:31	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/18/11 19:31	75-01-4	
4-Bromofluorobenzene (S)	103 %		70-130	1		02/18/11 19:31	460-00-4	
1,2-Dichloroethane-d4 (S)	94 %		70-130	1		02/18/11 19:31	17060-07-0	
Toluene-d8 (S)	88 %		70-130	1		02/18/11 19:31	2037-26-5	

Sample: GP-10-170		Lab ID: 3041411003	Collected: 02/11/11 15:15	Received: 02/12/11 11:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		02/18/11 19:57	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/18/11 19:57	156-60-5	
Tetrachloroethene	1.3 ug/L		1.0	1		02/18/11 19:57	127-18-4	
Trichloroethene	ND ug/L		1.0	1		02/18/11 19:57	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/18/11 19:57	75-01-4	
4-Bromofluorobenzene (S)	96 %		70-130	1		02/18/11 19:57	460-00-4	
1,2-Dichloroethane-d4 (S)	90 %		70-130	1		02/18/11 19:57	17060-07-0	
Toluene-d8 (S)	87 %		70-130	1		02/18/11 19:57	2037-26-5	

QUALITY CONTROL DATA

Project: Former TTC Glen Head NY

Pace Project No.: 3041411

QC Batch: MSV/8524 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 3041411001, 3041411002, 3041411003

METHOD BLANK: 268787 Matrix: Water

Associated Lab Samples: 3041411001, 3041411002, 3041411003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/18/11 12:04	
Tetrachloroethene	ug/L	ND	1.0	02/18/11 12:04	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/18/11 12:04	
Trichloroethene	ug/L	ND	1.0	02/18/11 12:04	
Vinyl chloride	ug/L	ND	1.0	02/18/11 12:04	
1,2-Dichloroethane-d4 (S)	%	90	70-130	02/18/11 12:04	
4-Bromofluorobenzene (S)	%	96	70-130	02/18/11 12:04	
Toluene-d8 (S)	%	89	70-130	02/18/11 12:04	

LABORATORY CONTROL SAMPLE: 268788

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	18.9	94	70-130	
Tetrachloroethene	ug/L	20	19.0	95	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.8	89	70-130	
Trichloroethene	ug/L	20	18.8	94	70-130	
Vinyl chloride	ug/L	20	14.8	74	70-130	
1,2-Dichloroethane-d4 (S)	%			96	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Toluene-d8 (S)	%			88	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 268789 268790

Parameter	Units	3041249001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
cis-1,2-Dichloroethene	ug/L	ND	20	20	22.5	23.3	113	117	70-130	3	
Tetrachloroethene	ug/L	ND	20	20	24.0	24.7	120	123	70-130	3	
trans-1,2-Dichloroethene	ug/L	ND	20	20	22.3	22.1	111	110	70-130	.8	
Trichloroethene	ug/L	ND	20	20	22.4	23.8	112	119	70-130	6	
Vinyl chloride	ug/L	ND	20	20	19.6	18.0	98	90	70-130	8	
1,2-Dichloroethane-d4 (S)	%						99	95	70-130		
4-Bromofluorobenzene (S)	%						99	102	70-130		
Toluene-d8 (S)	%						91	94	70-130		

QUALIFIERS

Project: Former TTC Glen Head NY

Pace Project No.: 3041411

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Former TTC Glen Head NY

Pace Project No.: 3041411

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3041411001	TB021111	EPA 8260	MSV/8524		
3041411002	GP-9-115	EPA 8260	MSV/8524		
3041411003	GP-10-170	EPA 8260	MSV/8524		

March 01, 2011

Mr. David Bouchard
WSP Environment & Energy
5 Sullivan Street
Cazenovia, NY 13035

RE: Project: Former TTC-Glen Head NY
Pace Project No.: 3041484

Dear Mr. Bouchard:

Enclosed are the analytical results for sample(s) received by the laboratory on February 15, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Penny Westrick

penny.westrick@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Former TTC-Glen Head NY

Pace Project No.: 3041484

Pennsylvania Certification IDs

1638 Roseytown Road Suites 2,3&4, Greensburg, PA 15601

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/NELAC Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/NELAC Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/NELAC Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/NELAC Certification #: LA080002

Louisiana/NELAC Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/NELAC Certification #: 2976

New Jersey/NELAC Certification #: PA 051

New Mexico Certification

New York/NELAC Certification #: 10888

North Carolina Certification #: 42706

Oregon/NELAC Certification #: PA200002

Pennsylvania/NELAC Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/NELAC Certification #: T104704188-09 TX

Utah/NELAC Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Washington Certification #: C1941

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Former TTC-Glen Head NY

Pace Project No.: 3041484

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3041484001	TB021411	EPA 8260	MAK	8	PASI-PA
3041484002	GP-10-160	EPA 8260	MAK	8	PASI-PA
3041484003	GP-10-160 MS	EPA 8260	MAK	8	PASI-PA
3041484004	GP-10-160 MSD	EPA 8260	MAK	8	PASI-PA
3041484005	GP-10-150	EPA 8260	MAK	8	PASI-PA
3041484006	GP-10-140	EPA 8260	MAK	8	PASI-PA
3041484007	GP-10-130	EPA 8260	MAK	8	PASI-PA
3041484008	GP-10-120	EPA 8260	MAK	8	PASI-PA
3041484009	GP-10-115	EPA 8260	MAK	8	PASI-PA
3041484010	GP-10-110	EPA 8260	MAK	8	PASI-PA

REPORT OF LABORATORY ANALYSIS

Page 3 of 17

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PROJECT NARRATIVE

Project: Former TTC-Glen Head NY

Pace Project No.: 3041484

Method: EPA 8260

Description: 8260 MSV

Client: WSP Environment & Energy - Cazenovia, NY

Date: March 01, 2011

General Information:

10 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Former TTC-Glen Head NY

Pace Project No.: 3041484

Sample: TB021411		Lab ID: 3041484001	Collected: 01/23/11 00:01	Received: 02/15/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		02/22/11 14:45	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/22/11 14:45	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		02/22/11 14:45	127-18-4	
Trichloroethene	ND ug/L		1.0	1		02/22/11 14:45	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/22/11 14:45	75-01-4	
4-Bromofluorobenzene (S)	101 %		70-130	1		02/22/11 14:45	460-00-4	
1,2-Dichloroethane-d4 (S)	90 %		70-130	1		02/22/11 14:45	17060-07-0	
Toluene-d8 (S)	100 %		70-130	1		02/22/11 14:45	2037-26-5	

ANALYTICAL RESULTS

Project: Former TTC-Glen Head NY

Pace Project No.: 3041484

Sample: GP-10-160		Lab ID: 3041484002	Collected: 02/14/11 12:30	Received: 02/15/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/22/11 15:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/22/11 15:09	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	1		02/22/11 15:09	127-18-4	
Trichloroethene	3.5	ug/L	1.0	1		02/22/11 15:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/22/11 15:09	75-01-4	
4-Bromofluorobenzene (S)	101	%	70-130	1		02/22/11 15:09	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130	1		02/22/11 15:09	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		02/22/11 15:09	2037-26-5	

ANALYTICAL RESULTS

Project: Former TTC-Glen Head NY

Pace Project No.: 3041484

Sample: GP-10-160 MS		Lab ID: 3041484003	Collected: 02/14/11 12:30	Received: 02/15/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	19.5 ug/L		1.0	1		02/22/11 15:34	156-59-2	
trans-1,2-Dichloroethene	17.9 ug/L		1.0	1		02/22/11 15:34	156-60-5	
Tetrachloroethene	18.3 ug/L		1.0	1		02/22/11 15:34	127-18-4	
Trichloroethene	21.5 ug/L		1.0	1		02/22/11 15:34	79-01-6	
Vinyl chloride	18.2 ug/L		1.0	1		02/22/11 15:34	75-01-4	
4-Bromofluorobenzene (S)	96 %		70-130	1		02/22/11 15:34	460-00-4	
1,2-Dichloroethane-d4 (S)	93 %		70-130	1		02/22/11 15:34	17060-07-0	
Toluene-d8 (S)	102 %		70-130	1		02/22/11 15:34	2037-26-5	

ANALYTICAL RESULTS

Project: Former TTC-Glen Head NY

Pace Project No.: 3041484

Sample: GP-10-160 MSD		Lab ID: 3041484004	Collected: 02/14/11 12:30	Received: 02/15/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	19.7	ug/L	1.0	1		02/22/11 15:58	156-59-2	
trans-1,2-Dichloroethene	18.2	ug/L	1.0	1		02/22/11 15:58	156-60-5	
Tetrachloroethene	21.0	ug/L	1.0	1		02/22/11 15:58	127-18-4	
Trichloroethene	22.7	ug/L	1.0	1		02/22/11 15:58	79-01-6	
Vinyl chloride	18.0	ug/L	1.0	1		02/22/11 15:58	75-01-4	
4-Bromofluorobenzene (S)	102	%	70-130	1		02/22/11 15:58	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	70-130	1		02/22/11 15:58	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		02/22/11 15:58	2037-26-5	

ANALYTICAL RESULTS

Project: Former TTC-Glen Head NY

Pace Project No.: 3041484

Sample: GP-10-150		Lab ID: 3041484005	Collected: 02/14/11 13:45	Received: 02/15/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/22/11 16:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/22/11 16:22	156-60-5	
Tetrachloroethene	1.2	ug/L	1.0	1		02/22/11 16:22	127-18-4	
Trichloroethene	ND	ug/L	1.0	1		02/22/11 16:22	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/22/11 16:22	75-01-4	
4-Bromofluorobenzene (S)	101	%	70-130	1		02/22/11 16:22	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130	1		02/22/11 16:22	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		02/22/11 16:22	2037-26-5	

ANALYTICAL RESULTS

Project: Former TTC-Glen Head NY

Pace Project No.: 3041484

Sample: GP-10-140		Lab ID: 3041484006	Collected: 02/14/11 14:35	Received: 02/15/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/22/11 16:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/22/11 16:46	156-60-5	
Tetrachloroethene	1.0	ug/L	1.0	1		02/22/11 16:46	127-18-4	
Trichloroethene	ND	ug/L	1.0	1		02/22/11 16:46	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		02/22/11 16:46	75-01-4	
4-Bromofluorobenzene (S)	102	%	70-130	1		02/22/11 16:46	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130	1		02/22/11 16:46	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		02/22/11 16:46	2037-26-5	

ANALYTICAL RESULTS

Project: Former TTC-Glen Head NY

Pace Project No.: 3041484

Sample: GP-10-130		Lab ID: 3041484007	Collected: 02/14/11 15:30	Received: 02/15/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		02/22/11 17:11	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/22/11 17:11	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		02/22/11 17:11	127-18-4	
Trichloroethene	ND ug/L		1.0	1		02/22/11 17:11	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/22/11 17:11	75-01-4	
4-Bromofluorobenzene (S)	102 %		70-130	1		02/22/11 17:11	460-00-4	
1,2-Dichloroethane-d4 (S)	92 %		70-130	1		02/22/11 17:11	17060-07-0	
Toluene-d8 (S)	102 %		70-130	1		02/22/11 17:11	2037-26-5	

ANALYTICAL RESULTS

Project: Former TTC-Glen Head NY

Pace Project No.: 3041484

Sample: GP-10-120		Lab ID: 3041484008	Collected: 02/14/11 16:10	Received: 02/15/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		02/22/11 17:35	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/22/11 17:35	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		02/22/11 17:35	127-18-4	
Trichloroethene	ND ug/L		1.0	1		02/22/11 17:35	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/22/11 17:35	75-01-4	
4-Bromofluorobenzene (S)	102 %		70-130	1		02/22/11 17:35	460-00-4	
1,2-Dichloroethane-d4 (S)	90 %		70-130	1		02/22/11 17:35	17060-07-0	
Toluene-d8 (S)	101 %		70-130	1		02/22/11 17:35	2037-26-5	

ANALYTICAL RESULTS

Project: Former TTC-Glen Head NY

Pace Project No.: 3041484

Sample: GP-10-115		Lab ID: 3041484009	Collected: 02/14/11 16:30	Received: 02/15/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		02/22/11 17:59	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/22/11 17:59	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		02/22/11 17:59	127-18-4	
Trichloroethene	ND ug/L		1.0	1		02/22/11 17:59	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/22/11 17:59	75-01-4	
4-Bromofluorobenzene (S)	100 %		70-130	1		02/22/11 17:59	460-00-4	
1,2-Dichloroethane-d4 (S)	91 %		70-130	1		02/22/11 17:59	17060-07-0	
Toluene-d8 (S)	102 %		70-130	1		02/22/11 17:59	2037-26-5	

ANALYTICAL RESULTS

Project: Former TTC-Glen Head NY

Pace Project No.: 3041484

Sample: GP-10-110		Lab ID: 3041484010	Collected: 02/14/11 17:00	Received: 02/15/11 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		02/22/11 18:23	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		02/22/11 18:23	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		02/22/11 18:23	127-18-4	
Trichloroethene	ND ug/L		1.0	1		02/22/11 18:23	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		02/22/11 18:23	75-01-4	
4-Bromofluorobenzene (S)	102 %		70-130	1		02/22/11 18:23	460-00-4	
1,2-Dichloroethane-d4 (S)	94 %		70-130	1		02/22/11 18:23	17060-07-0	
Toluene-d8 (S)	102 %		70-130	1		02/22/11 18:23	2037-26-5	

QUALITY CONTROL DATA

Project: Former TTC-Glen Head NY

Pace Project No.: 3041484

QC Batch:	MSV/8546	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	3041484001, 3041484002, 3041484003, 3041484004, 3041484005, 3041484006, 3041484007, 3041484008, 3041484009, 3041484010		

METHOD BLANK: 269805 Matrix: Water
Associated Lab Samples: 3041484001, 3041484002, 3041484005, 3041484006, 3041484007, 3041484008, 3041484009, 3041484010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/22/11 13:08	
Tetrachloroethene	ug/L	ND	1.0	02/22/11 13:08	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/22/11 13:08	
Trichloroethene	ug/L	ND	1.0	02/22/11 13:08	
Vinyl chloride	ug/L	ND	1.0	02/22/11 13:08	
1,2-Dichloroethane-d4 (S)	%	93	70-130	02/22/11 13:08	
4-Bromofluorobenzene (S)	%	100	70-130	02/22/11 13:08	
Toluene-d8 (S)	%	100	70-130	02/22/11 13:08	

LABORATORY CONTROL SAMPLE: 269806

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	18.9	95	70-130	
Tetrachloroethene	ug/L	20	20.4	102	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.5	87	70-130	
Trichloroethene	ug/L	20	19.4	97	70-130	
Vinyl chloride	ug/L	20	14.1	70	70-130	
1,2-Dichloroethane-d4 (S)	%			92	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3041484003 3041484004

Parameter	Units	3041484002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
cis-1,2-Dichloroethene	ug/L	ND	20	20	19.5	19.7	95	96	70-130	.8	
trans-1,2-Dichloroethene	ug/L	ND	20	20	17.9	18.2	90	91	70-130	1	
Tetrachloroethene	ug/L	ND	20	20	18.3	21.0	89	103	70-130	14	
Trichloroethene	ug/L	3.5	20	20	21.5	22.7	90	96	70-130	5	
Vinyl chloride	ug/L	ND	20	20	18.2	18.0	91	90	70-130	.7	
4-Bromofluorobenzene (S)	%						96	102	70-130		
1,2-Dichloroethane-d4 (S)	%						93	90	70-130		
Toluene-d8 (S)	%						102	102	70-130		

QUALIFIERS

Project: Former TTC-Glen Head NY
Pace Project No.: 3041484

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Former TTC-Glen Head NY

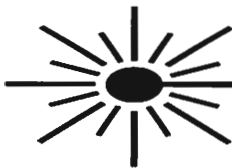
Pace Project No.: 3041484

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3041484001	TB021411	EPA 8260	MSV/8546		
3041484002	GP-10-160	EPA 8260	MSV/8546		
3041484003	GP-10-160 MS	EPA 8260	MSV/8546		
3041484004	GP-10-160 MSD	EPA 8260	MSV/8546		
3041484005	GP-10-150	EPA 8260	MSV/8546		
3041484006	GP-10-140	EPA 8260	MSV/8546		
3041484007	GP-10-130	EPA 8260	MSV/8546		
3041484008	GP-10-120	EPA 8260	MSV/8546		
3041484009	GP-10-115	EPA 8260	MSV/8546		
3041484010	GP-10-110	EPA 8260	MSV/8546		

Data Validation Report

**WSP Environment and Energy
Former TTC – Glen Head, NY**

SDG# C1203005



ECT.CON INC.

Environmental and Computer
Technology Consultants

3531 Fox Chase Drive
Imperial, PA 15126
(724) 695-8042
FAX (724) 695-2698
e-mail: ectconinc@comcast.net



ECT.CON INC.

Environmental and Computer
Technology Consultants

Data Validation Report

SDG#	C1203005
Validation Report Date	March 30, 2012
Validation Guidance	USEPA CLP National Functional Guidelines for Data Review
Client Name	WSP Environmental Strategies Consulting, LLC
Project Name	Former TTC-Glen Head, NY
Laboratory	Centek Laboratories, LLC
Method(s) Utilized	EPA TO-15
Analytical Fraction	Volatile organic compounds (VOCs)

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
02/28/12	SG-26	C1203005-001	X	Air
02/28/12	SG-25	C1203005-002	X	Air
02/28/12	SG-24	C1203005-003	X	Air
02/28/12	SG-23	C1203005-004	X	Air
02/28/12	SG-22	C1203005-005	X	Air
02/28/12	SG-21	C1203005-006	X	Air
02/28/12	SG-20	C1203005-007	X	Air
02/28/12	SG-19	C1203005-008	X	Air
02/28/12	SG-18	C1203005-009	X	Air
02/29/12	SG-17	C1203005-010	X	Air
02/29/12	SG-16	C1203005-011	X	Air
02/29/12	SG-160	C1203005-012	X	Air
02/29/12	SG-15	C1203005-013	X	Air
02/29/12	TB-022912	C1203005-014	X	Air

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. Laboratory calculations have been verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for the sample reviewed is included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the Former TTC-Glen Head NY site consists of 13 air field samples and one trip blank. The air samples were analyzed for the parameters as listed above.

The organic findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct.

The VOC findings are based upon the assessment of the following:

- * • Data Completeness
- * • Holding Times
- * • Calibration (Initial and Continuing)
- Blanks
- * • System Monitoring Compounds (Surrogate Spikes)
- Laboratory Control Sample (LCS)
- Matrix Spike/Matrix Spike Duplicates
- Internal Standards
- * • Target Compound Identification
- Compound Quantification and Reported Contract Quantitation Limits
- * • System Performance
- * Criteria were met for this evaluation item

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

1. Matrix Spike

For SG-26 matrix spike/matrix spike duplicate, the percent recovery of tetrachloroethene (55%, 59%) was less than the low control limit. For the following sample, qualify positive results of this constituent as estimated biased low "J" and nondetected results as estimated "UJ".

SG-26

2. Laboratory Control Sample

For 3/8/12 laboratory control sample, the percent recovery of tetrachloroethene (PCE) (-10%) and trichloroethene (TCE) (3%) was less than the low control limit and less than 20%. For the following samples, qualify positive results of these constituents as estimated biased low "J" and nondetcted results as estimated biased low "UJ".

SG-25 5x (PCE only)	SG-22 90x (PCE only)	SG-20 90x (PCE only)	SG-19 90x (PCE only)
SG-17 90x	SG-16 90x (PCE only)	SG-160 90x (PCE only)	

3. Blanks

The laboratory method blank exhibited contamination for the following compound:

Samples	Compound	Maximum Concentration (ppbV)	Action
3/8/12	Trichloroethene	1.05	SR<RL; RL U SR> RL< Blk; U
	Tetrachloroethene	0.95	SR<RL; RL U SR> RL< Blk; U

SR – Sample Result; RL – Reporting Limit; BLK – Blank Result

4. Internal Standards

Internal standards chlorobenzene-d5 and 1,4-difluorobenzene area counts were greater than the high control limit for samples SG-20 (1x) and SG-19 (1x). For the following samples, qualify positive results as estimated "J".

SG-20 (1x) SG-19 (1x)

Internal standards bromochloromethane, chlorobenzene-d5 and 1,4-difluorobenzene area counts were greater than the high control limit for sample SG-160 (1x). For the following sample, qualify positive results as estimated "J".

SG-160 (1x)

Internal standard bromochloromethane area count was greater than the high control limit for sample SG-15 (1x). For the following sample, qualify positive results as estimated "J".

SG-15 (1x)

5. Compound Quantitation

Positive results less than the reporting limit were qualified as estimated "J" due to uncertainty near the detection limit.

NOTES

VOLATILE ORGANIC COMPOUNDS

Data Completeness

The canisters 210, 351 and 234 could not be located on the clean log. Data are not qualified on this basis. Data for SG-26, SG-16 and SG-160 should be used with caution.

Matrix Spike

For SG-26 matrix spike/matrix spike duplicate, the percent recovery is not applicable because the original sample amount was at least 2x greater than the spike amount. Data are not qualified on this basis.

Laboratory Control Sample

For 3/8/12 laboratory control sample, the percent recovery of 1,1-dichloroethene (3%), cis-1,2-dichloroethene (0%), trans-1,2-dichloroethene (8%) and vinyl chloride (2%) was less than the low control limit. No results of these constituents were taken from the 3/8/12 analyses. Data are not qualified on this basis.

Field Duplicates

Calculate RPD for positive results only.

Sample ID	Duplicate ID	Parameter	RPD
SG-16	SG-160		
140	74	Tetrachloroethene	61.7
12	11	Trichloroethene	8.7

Internal Standards

No retention time summary information for the internal standards was presented in the laboratory data package. The raw data were used to assess the retention times. All retention times were within control limits. Data are not qualified on the basis of no internal standard summary forms. This is a continual deficiency of the data package. The laboratory was contacted and will not correct this deficiency. Therefore, the validator must summarize the information from the raw data and evaluate. The laboratory has provided no information as to how they evaluate system performance of the retention times.

Blanks

Nothing was detected in the trip blank associated with this sample delivery group. 1,1-Dichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene and vinyl chloride were detected in the 3/8/12 laboratory blank. No results of these constituents were taken from the 3/8/12 analyses. Data are not qualified on this basis.

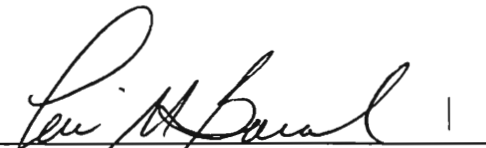
Compound Quantitation

The following samples were analyzed at the noted dilution for the listed parameters:

Sample ID	Parameter(s)	Dilution Factor
SG-26	tetrachloroethene	5x
SG-25, SG-24, SG-23, SG-18, SG-15	tetrachloroethene	40x
SG-22, SG-20, SG-19, SG-17, SG-16, SG-160	tetrachloroethene	90x
SG-21	tetrachloroethene	20x
SG-17	trichloroethene	90x
SG-16, SG-160	trichloroethene	10x
SG-15	cis-1,2-dichloroethene	10x
SG-15	trichloroethene	810x

The dilutions account for the elevated reporting limits. Data are not qualified on this basis.

The conversion of results from ppbv to $\mu\text{g}/\text{m}^3$ could not be exactly replicated for every result. The results were similar. Data are not qualified on this basis.


Data Reviewer


Date

Glossary of Data Qualifiers

U	Not Detected.	The associated number indicates approximate sample concentration necessary to be detected.
UJ	Not Detected.	Quantitation limit may be inaccurate or imprecise.
J	Analyte Present.	Reported value may not be accurate or precise.
N	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts.
R	Unusable Result.	Analyte may or may not be present in the sample.
UR	Unusable Result.	Analyte may or may not be present in the sample.
NJ	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts. Reported value may not be accurate or precise.



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Annotated Form 1's *(Spreadsheet)*

Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT:	WSP Environment and Energy	Client Sample ID:	SG-26
Lab Order:	C1203005	Tag Number:	210,302
Project:	28873/03 TTC - GLEN HEAD, NY	Collection Date:	2/28/2012
Lab ID:	C1203005-001A	Matrix:	ATR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-2			"Hg		3/2/2012
Lab Vacuum Out	-30			"Hg		3/2/2012
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 10:40:00 AM
cis-1,2-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 10:40:00 AM
Tetrachloroethylene	4.4 <i>3 up</i>	0.75		ppbV	5	3/8/2012 8:27:00 AM
trans-1,2-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 10:40:00 AM
Trichloroethane	2.1	0.15		ppbV	1	3/7/2012 10:40:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	3/7/2012 10:40:00 AM
Sum: Bromofluorobenzene	107	70-130		%REC	1	3/7/2012 10:40:00 AM

MB
3/31/12

Qualifiers:	** Reporting Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	P	Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S Spike Recovery outside accepted recovery limits		

Page 1 of 14

Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT: WSP Environment and Energy
 Lab Order: C1203005
 Project: 28873/03 TTC - GLEN HEAD, NY
 Lab ID: C1203005-001A

Client Sample ID: SG-26
 Tag Number: 210,302
 Collection Date: 2/28/2012
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 10:40:00 AM
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 10:40:00 AM
Tetrachloroethylene	30 <i>DU</i>	5.2		ug/m3	5	3/8/2012 8:27:00 AM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 10:40:00 AM
Trichloroethene	11	0.82		ug/m3	1	3/7/2012 10:40:00 AM
Vinyl chloride	< 0.39	0.39		ug/m3	1	3/7/2012 10:40:00 AM

OMB
 3/30/12

Qualifiers:	**	Reporting Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT: WSP Environment and Energy
 Lab Order: C1203005
 Project: 28873/03 TTC - GLEN HEAD, NY
 Lab ID: C1203005-002A

Client Sample ID: SG-25
 Tag Number: 233,118
 Collection Date: 2/28/2012
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-2			"Hg		3/2/2012
Lab Vacuum Out	-30			"Hg		3/2/2012
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 3:58:00 AM
cis-1,2-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 3:58:00 AM
Tetrachloroethylene	91 J	5.0		ppbV	40	3/7/2012 6:42:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 3:58:00 AM
Trichloroethane	0.47	0.15		ppbV	1	3/7/2012 3:58:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	3/7/2012 3:58:00 AM
Surr: Bromofluorobenzene	114	70-130		%REC	1	3/7/2012 3:58:00 AM

OMB
3/30/12

Qualifiers:	**	Reporting Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT:	WSP Environment and Energy	Client Sample ID:	SG-25
Lab Order:	C1203005	Tag Number:	233,118
Project:	28873/03 TTC - GLEN HEAD, NY	Collection Date:	2/28/2012
Lab ID:	C1203005-002A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15						Analyst: RJP
1,1-Dichloroethane	< 0.60	0.60		ug/m3	1	3/7/2012 3:58:00 AM
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 3:58:00 AM
Tetrachloroethylene	630	41		ug/m3	40	3/7/2012 8:42:00 PM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 3:58:00 AM
Trichloroethene	2.6	0.82		ug/m3	1	3/7/2012 3:58:00 AM
Vinyl chloride	< 0.39	0.39		ug/m3	1	3/7/2012 3:58:00 AM

MA
3/30/12

Qualifiers:	** Reporting Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT: WSP Environment and Energy
 Lab Order: C1203005
 Project: 28873/03 TTC - GLEN HEAD, NY
 Lab ID: C1203005-003A

Client Sample ID: SG-24
 Tag Number: 328,113
 Collection Date: 2/28/2012
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-3			"Hg		3/2/2012
Lab Vacuum Out	-29			"Hg		3/2/2012
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 4:32:00 AM
cis-1,2-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 4:32:00 AM
Tetrachloroethylene	87	6.0		ppbV	40	3/7/2012 7:18:00 PM
trans-1,2-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 4:32:00 AM
Trichloroethane	1.3	0.15		ppbV	1	3/7/2012 4:32:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	3/7/2012 4:32:00 AM
Surr: Bromofluorobenzene	106	70-130		%REC	1	3/7/2012 4:32:00 AM

Handwritten: JMB
3/30/12

Qualifiers:	**	Reporting Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT: WSP Environment and Energy
 Lab Order: C1203005
 Project: 28873/03 TTC - GLEN HEAD, NY
 Lab ID: C1203005-003A

Client Sample ID: SG-24
 Tag Number: 328,113
 Collection Date: 2/28/2012
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO16		TO-15		Analyst: RJP		
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 4:32:00 AM
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 4:32:00 AM
Tetrachloroethylene	600	41		ug/m3	40	3/7/2012 7:15:00 PM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 4:32:00 AM
Trichloroethene	7.2	0.82		ug/m3	1	3/7/2012 4:32:00 AM
Vinyl chloride	< 0.39	0.39		ug/m3	1	3/7/2012 4:32:00 AM

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 3/30/12

Qualifiers:	** Reporting Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT: WSP Environment and Energy
 Lab Order: C1203005
 Project: 28873/03 TTC - GLEN HEAD, NY
 Lab ID: C1203005-004A

Client Sample ID: SG-23
 Tag Number: 495,42
 Collection Date: 2/28/2012
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD			Analyst:	
Lab Vacuum In	-2			"Hg		3/2/2012
Lab Vacuum Out	-30			"Hg		3/2/2012
1UG/M3 BY METHOD TO16		TO-15			Analyst: RJP	
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 5:06:00 AM
cis-1,2-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 5:06:00 AM
Tetrachloroethylene	71	6.0		ppbV	40	3/7/2012 7:48:00 PM
trans-1,2-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 5:06:00 AM
Trichloroethene	0.45	0.15		ppbV	1	3/7/2012 5:06:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	3/7/2012 5:06:00 AM
Surr: Bromofluorobenzene	112	70-130		%REC	1	3/7/2012 5:06:00 AM

MSB
3/30/12

Qualifiers:	**	Reporting Limit	.	Results reported are not blank corrected
	D	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT:	WSP Environment and Energy	Client Sample ID:	SG-23
Lab Order:	C1203005	Tag Number:	495,42
Project:	28873/03 TTC - GLEN HEAD, NY	Collection Date:	2/28/2012
Lab ID:	C1203005-004A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
1,1-Dichloroethane	< 0.60	0.60		ug/m3	1	3/7/2012 5:08:00 AM
cis-1,2-Dichloroethane	< 0.60	0.60		ug/m3	1	3/7/2012 5:08:00 AM
Tetrachloroethylene	460	41		ug/m3	40	3/7/2012 7:48:00 PM
trans-1,2-Dichloroethane	< 0.60	0.60		ug/m3	1	3/7/2012 5:08:00 AM
Trichloroethane	2.5	0.82		ug/m3	1	3/7/2012 5:06:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	3/7/2012 5:08:00 AM

Qualifiers:	** Reporting Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected at or below quantitation limits
JN	Non-routine analytic, Quantitation estimated.	ND Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT:	WSP Environment and Energy	Client Sample ID:	SG-22
Lab Order:	C1203005	Tag Number:	332,296
Project:	28873/03 TTC - GLEN HEAD, NY	Collection Date:	2/28/2012
Lab ID:	C1203005-005A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-3			*Hg		3/2/2012
Lab Vacuum Out	-30			*Hg		3/2/2012
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 5:40:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 6:40:00 AM
Tetrachloroethylene	84 <i>us</i>	14		ppbV	80	3/8/2012 2:16:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 6:40:00 AM
Trichloroethene	0.20	0.15		ppbV	1	3/7/2012 6:40:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	3/7/2012 6:40:00 AM
Surr: Bromofluorobenzene	115	70-130		%REC	1	3/7/2012 5:40:00 AM

MB
3/30/12

Qualifiers:	** Reporting Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT:	WSP Environment and Energy	Client Sample ID:	SG-22
Lab Order:	C1203005	Tag Number:	332,296
Project:	28873/03 TTC - GLEN HEAD, NY	Collection Date:	2/28/2012
Lab ID:	C1203005-005A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 8:40:00 AM
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 5:40:00 AM
Tetrachloroethylene	650 <i>us</i>	97		ug/m3	90	3/8/2012 2:16:00 PM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 5:40:00 AM
Trichloroethene	1.1	0.82		ug/m3	1	3/7/2012 5:40:00 AM
Vinyl chloride	< 0.39	0.39		ug/m3	1	3/7/2012 5:40:00 AM

DMB
3/30/12

Qualifiers:	** Reporting Limit	. Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected at or below quantitation limits
	JN Non-routine analyte. Quantitation estimated.	ND Not Detected at the Reporting Limit
	S Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT:	WSP Environment and Energy	Client Sample ID:	SG-21
Lab Order:	C1203005	Tag Number:	139,111
Project:	28873/03 TTC - GLEN HEAD, NY	Collection Date:	2/28/2012
Lab ID:	C1203005-006A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-2			"Hg		3/2/2012
Lab Vacuum Out	-30			"Hg		3/2/2012
1UG/M3 BY METHOD TO16		TO-15		Analyst: RJP		
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 6:14:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 6:14:00 AM
Tetrachloroethylene	42	3.0		ppbV	20	3/7/2012 8:54:00 PM
trans-1,2-Dichloroethene	< 0.16	0.15		ppbV	1	3/7/2012 6:14:00 AM
Trichloroethene	0.11	0.15	J	ppbV	1	3/7/2012 6:14:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	3/7/2012 6:14:00 AM
Sum: Bromofluorobenzene	109	70-130		%REC	1	3/7/2012 6:14:00 AM

mb
3/30/12

Qualifiers:	** Reporting Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT:	WSP Environment and Energy	Client Sample ID:	SG-21
Lab Order:	C1203005	Tag Number:	139,111
Project:	28873/03 TTC - GLEN HEAD, NY	Collection Date:	2/28/2012
Lab ID:	C1203005-006A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 8:14:00 AM
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 6:14:00 AM
Tetrachloroethylene	290	21		ug/m3	20	3/7/2012 8:54:00 PM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 6:14:00 AM
Trichloroethene	0.60	0.82	J	ug/m3	1	3/7/2012 6:14:00 AM
Vinyl chloride	< 0.39	0.39		ug/m3	1	3/7/2012 6:14:00 AM

Qualifiers:	**	Reporting Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT: WSP Environment and Energy
 Lab Order: C1203005
 Project: 28873/03 TTC - GLEN HEAD, NY
 Lab ID: C1203005-007A

Client Sample ID: SG-20
 Tag Number: 192,155
 Collection Date: 2/28/2012
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-2			"Hg		3/2/2012
Lab Vacuum Out	-29			"Hg		3/2/2012
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 6:48:00 AM
cis-1,2-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 6:48:00 AM
Tetrachloroethylene	180 J	14		ppbV	80	3/8/2012 2:48:00 PM
trans-1,2-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 6:48:00 AM
Trichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 6:48:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	3/7/2012 6:48:00 AM
Surr: Bromofluorobenzene	128	70-130		%REC	1	3/7/2012 6:48:00 AM

MB
3/30/12

Qualifiers:	** Reporting Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT:	WSP Environment and Energy	Client Sample ID:	SG-20
Lab Order:	C1203005	Tag Number:	192,155
Project:	28873/03 TTC - GLEN HEAD, NY	Collection Date:	2/28/2012
Lab ID:	C1203005-007A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15						Analyst: RJP
		TO-15				
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 6:48:00 AM
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 6:48:00 AM
Tetrachloroethylene	1200	97		ug/m3	80	3/8/2012 2:48:00 PM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 6:48:00 AM
Trichloroethene	< 0.82	0.82		ug/m3	1	3/7/2012 6:48:00 AM
Vinyl chloride	< 0.39	0.39		ug/m3	1	3/7/2012 6:48:00 AM

JMB
3/30/12

Qualifiers:	** Reporting Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected at or below quantitation limits
JN	Non-routine analyte, Quantitation estimated.	ND Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT: WSP Environment and Energy
 Lab Order: C1203005
 Project: 28873/03 TTC - GLEN HEAD, NY
 Lab ID: C1203005-008A

Client Sample ID: SG-19
 Tag Number: 416,54
 Collection Date: 2/28/2012
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DP	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-2			"Hg		3/2/2012
Lab Vacuum Out	-30			"Hg		3/2/2012
1UG/M3 BY METHOD TO16		TO-16		Analyst: RJP		
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 7:22:00 AM
cis-1,2-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 7:22:00 AM
Tetrachloroethylene	85 <i>us</i>	14		ppbV	90	3/8/2012 3:21:00 PM
trans-1,2-Dichloroethane	< 0.15	0.15		ppbV	1	3/7/2012 7:22:00 AM
Trichloroethene	0.28 <i>J</i>	0.15		ppbV	1	3/7/2012 7:22:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	3/7/2012 7:22:00 AM
Sum: Bromofluorobenzene	111	70-130		%REC	1	3/7/2012 7:22:00 AM

DMB
3/30/12

Qualifiers:	** Reporting Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT: WSP Environment and Energy
 Lab Order: C1203005
 Project: 28873/03 TTC - GLEN HEAD, NY
 Lab ID: C1203005-008A

Client Sample ID: SG-19
 Tag Number: 416,54
 Collection Date: 2/28/2012
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15			Analyst: RJP
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 7:22:00 AM
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 7:22:00 AM
Tetrachloroethylene	580 u/s	97		ug/m3	90	3/8/2012 3:21:00 PM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 7:22:00 AM
Trichloroethene	1.5 J	0.82		ug/m3	1	3/7/2012 7:22:00 AM
Vinyl chloride	< 0.39	0.39		ug/m3	1	3/7/2012 7:22:00 AM

DNB
3/30/12

Qualifiers:	** Reporting Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT: WSP Environment and Energy
Lab Order: C1203005
Project: 28873/03 TTC - GLEN HEAD, NY
Lab ID: C1203005-009A

Client Sample ID: SG-18
Tag Number: 231,174
Collection Date: 2/28/2012
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-2			Hg		3/2/2012
Lab Vacuum Out	-29			Hg		3/2/2012
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 7:57:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 7:57:00 AM
Tetrachloroethylene	74	6.0		ppbV	40	3/7/2012 10:32:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 7:57:00 AM
Trichloroethene	0.64	0.15		ppbV	1	3/7/2012 7:57:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	3/7/2012 7:57:00 AM
Surr. Bromofluorobenzene	120	70-130		%REC	1	3/7/2012 7:57:00 AM


 3/28/12

Qualifiers:	** Reporting Limit	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected at or below quantitation limits
	JN Non-routine analyte. Quantitation estimated.	ND Not Detected at the Reporting Limit
	S Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT: WSP Environment and Energy
 Lab Order: C1203005
 Project: 28873/03 TTC - GLEN HEAD, NY
 Lab ID: C1203005-009A

Client Sample ID: SG-18
 Tag Number: 231,174
 Collection Date: 2/28/2012
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 7:57:00 AM
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 7:57:00 AM
Tetrachloroethylene	510	41		ug/m3	40	3/7/2012 10:32:00 PM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 7:57:00 AM
Trichloroethene	3.8	0.82		ug/m3	1	3/7/2012 7:57:00 AM
Vinyl chloride	< 0.39	0.39		ug/m3	1	3/7/2012 7:57:00 AM

DMB
3/30/12

Qualifiers:	**	Reporting Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT:	WSP Environment and Energy	Client Sample ID:	SG-17
Lab Order:	C1203005	Tag Number:	539,253
Project:	28873/03 TTC - GLEN HEAD, NY	Collection Date:	2/29/2012
Lab ID:	C1203005-010A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-2			"Hg		3/2/2012
Lab Vacuum Out	-30			"Hg		3/2/2012
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 8:30:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 8:30:00 AM
Tetrachloroethylene	110 J	14		ppbV	90	3/8/2012 3:53:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 8:30:00 AM
Trichloroethene	32 US	14		ppbV	90	3/8/2012 3:53:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	3/7/2012 8:30:00 AM
Surf: Bromofluorobenzene	111	70-130		%REC	1	3/7/2012 8:30:00 AM

DMB
3/30/12

Qualifiers:	** Reporting Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected at or below quantitation limits
JN	Non-routine analyte, Quantitation estimated.	ND Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT:	WSP Environment and Energy	Client Sample ID:	SG-17
Lab Order:	C1203005	Tag Number:	539,253
Project:	28873/03 TTC - GLEN HEAD, NY	Collection Date:	2/29/2012
Lab ID:	C1203005-010A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1-Dichloroethane	< 0.60	0.60		ug/m3	1	3/7/2012 8:30:00 AM
cis-1,2-Dichloroethane	< 0.60	0.60		ug/m3	1	3/7/2012 8:30:00 AM
Tetrachloroethylene	740 J	97		ug/m3	90	3/8/2012 3:53:00 PM
trans-1,2-Dichloroethane	< 0.60	0.60		ug/m3	1	3/7/2012 8:30:00 AM
Trichloroethane	180 u	76		ug/m3	90	3/8/2012 3:53:00 PM
Vinyl chloride	< 0.39	0.39		ug/m3	1	3/7/2012 8:30:00 AM

DMB
3/30/12

Qualifiers:	** Reporting Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT: WSP Environment and Energy
 Lab Order: C1203005
 Project: 28873/03 TTC - GLEN HEAD, NY
 Lab ID: C1203005-011A

Client Sample ID: SG-16
 Tag Number: 351,41
 Collection Date: 2/29/2012
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-3			"Hg		3/2/2012
Lab Vacuum Out	-30			"Hg		3/2/2012
1UG/M3 BY METHOD TO16		TO-15		Analyst: RJP		
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 8:03:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 8:03:00 AM
Tetrachloroethylene	140	14		ppbV	90	3/8/2012 4:25:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 8:03:00 AM
Trichloroethene	12	1.5		ppbV	10	3/7/2012 11:37:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	3/7/2012 8:03:00 AM
Surr: Bromofluorobenzene	118	70-130		%REC	1	3/7/2012 8:03:00 AM

DMB
3/30/12

Qualifiers:	** Reporting Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT: WSP Environment and Energy
 Lab Order: C1203005
 Project: 28873/03 TTC - GLEN HEAD, NY
 Lab ID: C1203005-011A

Client Sample ID: SG-16
 Tag Number: 351,41
 Collection Date: 2/29/2012
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO18		TO-15		Analyst: RJP		
1,1-Dichloroethane	< 0.60	0.60		ug/m3	1	3/7/2012 9:03:00 AM
cis-1,2-Dichloroethane	< 0.60	0.60		ug/m3	1	3/7/2012 9:03:00 AM
Tetrachloroethylene	980	97		ug/m3	90	3/8/2012 4:26:00 PM
trans-1,2-Dichloroethane	< 0.60	0.60		ug/m3	1	3/7/2012 9:03:00 AM
Trichloroethane	67	8.2		ug/m3	10	3/7/2012 11:37:00 PM
Vinyl chloride	< 0.39	0.39		ug/m3	1	3/7/2012 9:03:00 AM

Handwritten: MB
3/24/12

Qualifiers:	** Reporting Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT:	WSP Environment and Energy	Client Sample ID:	SG-160
Lab Order:	C1203005	Tag Number:	234,41
Project:	28873/03 TTC - GLEN HEAD, NY	Collection Date:	2/29/2012
Lab ID:	C1203005-012A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-2			"Hg		3/2/2012
Lab Vacuum Out	-30			"Hg		3/2/2012
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 9:34:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 9:34:00 AM
Tetrachloroethylene	74	14		ppbV	90	3/8/2012 4:58:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 9:34:00 AM
Trichloroethene	11	1.5		ppbV	10	3/8/2012 12:42:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	3/7/2012 9:34:00 AM
Surr: Bromofluorobenzene	110	70-130		%REC	1	3/7/2012 9:34:00 AM

Qualifiers:	** Reporting Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected at or below quantitation limits
JN	Non-routine analyte, Quantitation estimated.	ND Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT: WSP Environment and Energy
 Lab Order: C1203005
 Project: 28873/03 TTC - GLEN HEAD, NY
 Lab ID: C1203005-012A

Client Sample ID: SG-160
 Tag Number: 234,41
 Collection Date: 2/29/2012
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO16		TO-16				Analyst: RJP
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 9:34:00 AM
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 9:34:00 AM
Tetrachloroethylene	510	97		ug/m3	90	3/8/2012 4:58:00 PM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 9:34:00 AM
Trichloroethene	62	8.2		ug/m3	10	3/8/2012 12:42:00 AM
Vinyl chloride	< 0.39	0.39		ug/m3	1	3/7/2012 9:34:00 AM

Handwritten signature: JMB
 3/31/12

Qualifiers:	** Reporting Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT:	WSP Environment and Energy	Client Sample ID:	SG-15
Lab Order:	C1203005	Tag Number:	200,53
Project:	28873/03 TTC - GLEN HEAD, NY	Collection Date:	2/29/2012
Lab ID:	C1203005-013A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-3			"Hg		3/2/2012
Lab Vacuum Out	-30			"Hg		3/2/2012
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1-Dichloroethene	8.8 ✓	0.15		ppbV	1	3/7/2012 10:07:00 AM
cis-1,2-Dichloroethene	6.8	1.5		ppbV	10	3/7/2012 4:28:00 PM
Tetrachloroethylene	100	6.0		ppbV	40	3/7/2012 5:01:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 10:07:00 AM
Trichloroethene	390	120		ppbV	810	3/7/2012 5:36:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	3/7/2012 10:07:00 AM
Surr: Bromofluorobenzene	107	70-130		%REC	1	3/7/2012 10:07:00 AM

MB
3/30/12

Qualifiers:	**	Reporting Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT:	WSP Environment and Energy	Client Sample ID:	SG-15
Lab Order:	C1203005	Tag Number:	200,53
Project:	28873/03 TTC - GLEN HEAD, NY	Collection Date:	2/29/2012
Lab ID:	C1203005-013A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-16				Analyst: RJP
1,1-Dichloroethene	36 J	0.60		ug/m3	1	3/7/2012 10:07:00 AM
cis-1,2-Dichloroethene	27	6.0		ug/m3	10	3/7/2012 4:28:00 PM
Tetrachloroethylene	710	41		ug/m3	40	3/7/2012 5:01:00 PM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/7/2012 10:07:00 AM
Trichloroethene	2100	690		ug/m3	810	3/7/2012 5:36:00 PM
Vinyl chloride	< 0.39	0.39		ug/m3	1	3/7/2012 10:07:00 AM

DMB
3/30/12

Qualifiers:	** Reporting Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT:	WSP Environment and Energy	Client Sample ID:	TB-022912
Lab Order:	C1203005	Tag Number:	165
Project:	28873/03 TTC - GLEN HEAD, NY	Collection Date:	2/29/2012
Lab ID:	C1203005-014A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	+15			"Hg		3/2/2012
Lab Vacuum Out	+1B			"Hg		3/2/2012
1UG/M3 BY METHOD TO15		TD-15		Analyst: RJP		
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 12:32:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 12:32:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	3/7/2012 12:32:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 12:32:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	3/7/2012 12:32:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	3/7/2012 12:32:00 AM
Sum: Bromofluorobenzene	90.0	70-130		%REC	1	3/7/2012 12:32:00 AM

Handwritten signature: JMB
3/26/12

Qualifiers:	** Reporting Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 15-Mar-12

CLIENT:	WSP Environment and Energy	Client Sample ID:	TB-022912
Lab Order:	C1203005	Tag Number:	165
Project:	28873/03 TTC - GLEN HEAD, NY	Collection Date:	2/29/2012
Lab ID:	C1203005-014A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1-Dichloroethane	< 0.60	0.60		ug/m3	1	3/7/2012 12:32:00 AM
cis-1,2-Dichloroethane	< 0.60	0.60		ug/m3	1	3/7/2012 12:32:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/7/2012 12:32:00 AM
trans-1,2-Dichloroethane	< 0.60	0.60		ug/m3	1	3/7/2012 12:32:00 AM
Trichloroethane	< 0.82	0.82		ug/m3	1	3/7/2012 12:32:00 AM
Vinyl chloride	< 0.39	0.39		ug/m3	1	3/7/2012 12:32:00 AM

DMB
3/30/12

Qualifiers:	** Reporting Limit	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits	

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ECT.CON INC.

Environmental and Computer
Technology Consultants

Support Documentation

COC

CHAIN OF CUSTODY RECORD

Page 1 of 1

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Project Number: 25813/03		Site and Location: TTC - GLEN HEAD, NY		Matrices: S = Soil: Aq = Water: A = Air; Bu = Bulk: W = Wipe: Sl = Sludge: OW = Oily Waste: O = Other		Number of Containers		10-15 (see list)		No 01316 FULL CLP - DELIVERABLE, PLUS EDD IN NYSDEC FORMAT	
Contact Name: DAVE BOUCHARD		Contact Email: dave.boucard@wspgroup.com		Sampler's Name: DAVE CARSTENS		Sampler's Signature: <i>[Signature]</i>					
Sample Identification:		Depth	Date	Time	Matrix	Remarks					
SG-26 [CAN: 210, REG: 302]			2/28/12	810 910	A	1	X				INCLUDE MS/MSD
SG-25 [CAN: 233, REG: 118]				858 958	A	1	X				
SG-24 [CAN: 328, REG: 113]				920 1020	A	1	X				
SG-23 [CAN: 495, REG: 42]				940 1040	A	1	X				
SG-22 [CAN: 332, REG: 296]				1020 1120	A	1	X				
SG-21 [CAN: 139, REG: 111]				1050 1150	A	1	X				
SG-20 [CAN: 192, REG: 155]				1120 1220	A	1	X				
SG-19 [CAN: 416, REG: 54]				1185 1285	A	1	X				
SG-18 [CAN: 231, REG: 174]				1200 1300	A	1	X				
SG-17 [CAN: 539, REG: 253]			2/29/12	1200 1300	A	1	X				
SG-16 [CAN: 351, REG: 41]				1220 1320	A	1	X				
SG-160 [CAN: 234, REG: 41]				1220 1320	A	1	X				COMPOUND LIST
SG-15 [CAN: 200, REG: 53]				1230 1330	A	1	X				PCE, TCE, CIS-1,2-DCE, trans-1,2-DCE,
TB-022912 (M) 165			2/29/12				X				vinyl chloride, 1,1-DCE
Relinquished by (Signature): <i>[Signature]</i>		2/29/12 1400 Date Time		Received by (Signature): <i>Nick MANDARINO</i>		Laboratory Name: CENTEK		C1203005  WSP Environment & Energy			
Relinquished by (Signature):		3/2/12 Date Time		Received by (Signature): <i>[Signature]</i>		Laboratory Location: NY					
Turn-Around Time: STANDARD				Tracking Number: 6560438 15009526		Custody Seal Numbers:					
						Method of Shipment: FEDEX					
☐ Reston Office: 11190 Sunrise Valley Dr., #300, Reston, VA 20191 / Tel: 703-709-6500 ☐ Pittsburgh Office: 750 Holiday Dr., #410, Pittsburgh, PA 15220 / Tel: 412-604-1040 ☐ San Jose Office: 2025 Gateway Place, #435, San Jose, CA 95110 / Tel: 408-453-6100 ☐ New Jersey Office: 334 Elizabeth Ave., Somerset, NJ 08873 / Tel: 732-564-0888											
☐ Denver Office: 4600 South Ulster, #930, Denver, CO 80237 / Tel: 303-850-9200 ☐ Minneapolis Office: 123 North 3rd St., #808, Minneapolis, MN 55401 / Tel: 612-343-0510 ☐ Boxborough Office: 1740 Massachusetts Ave., Boxborough, MA 01719 / Tel: 978-635-9600 ☒ Cazenovia Office: 5 Sullivan St., Cazenovia, NY 13035 / Tel: 315-655-3900											

Centek Laboratories, LLC



CENTEK LABORATORIES, LLC

Sample Receipt Checklist

Client Name: WSP - CAZENOVIA

Date and Time Received

3/2/2012

Work Order Number C1203008

Received by: NM

Checklist completed by

Signature

Date

Reviewed by

Initials

Date

Matrix:

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☒	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☒	Yes ☐	No ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☒	

Adjusted? _____

Checked by _____

Any No and/or NA (not applicable) responses must be detailed in the comments section below

Client contacted: YES

Date contacted: 3-5-12

Person contacted: DAVE CARSTENS

Contacted by: NICK MANDARINO

Regarding: TRIP BLANK DID NOT APPEAR ON COC,

Comments:

CONTACTED CLIENT DAVE CARSTENS INFORMED DAVE TRIP BLANK

DOES NOT APPEAR ON COC, DAVE ADVISED PLEASE ADD TO COC AND TEST. CLIENT REQUESTS TRIP BLANK ID AS "TB-022912"

Corrective Action:

ADDED TRIP BLANK TO COC AS CLIENT ID "TB-022912" SCHEDULED TESTS AS REQUESTED BY CLIENT.

Laboratory Case Narrative



CEN TEK LABORATORIES, LLC

143 Midler Park Drive • Syracuse, NY 13206

Phone (315) 431-9730 • Emergency 24/7 (315) 416-2752

NYSDOH ELAP

Certificate No. 11830

Analytical Report

Dave Bouchard
WSP Environment and Energy
5 Sullivan Street
Cazenovia, NY 13035

Thursday, March 08, 2012
Order No.: C1203005

TEL: (315) 655-3900

FAX (315) 655-3907

RE: 28873/03 TTC - GLEN HEAD, NY

Dear Dave Bouchard:

Centek Laboratories, LLC received 14 sample(s) on 3/2/2012 for the analyses presented in the following report.

I certify that this data package is in compliance with the terms and conditions of the Contract, both technically and for completeness. Release of the data contained in this hardcopy data package and/or in the computer readable data submitted has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the case narrative. All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

Centek Laboratories is distinctively qualified to meet your needs for precise and timely volatile organic compound analysis. We perform all analyses according to EPA, NIOSH or OSHA-approved analytical methods. Centek Laboratories is dedicated to providing quality analyses and exceptional customer service. Samples were analyzed using the methods outlined in the following references:

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

Analytical results relate to samples as received at laboratory. We do our best to make our reporting format clear and understandable and hope you are thoroughly satisfied with our services.

Please contact your client service representative at (315) 431-9730 or myself, if you would like any additional information regarding this report.

Thank you for using Centek Laboratories. This report can not be reproduced except in its entirety, without prior written authorization.

Sincerely,



William Dobbin
Lead Technical Director

Disclaimer: The test results and procedures utilized, and laboratory interpretations of the data obtained by Centek as contained in this report are believed by Centek to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of Centek for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

Centek Laboratories, LLC Terms and Conditions

Sample Submission

All samples sent to Centek Laboratories should be accompanied by our Request for Analysis Form or Chain of Custody Form. A Chain of Custody will be provided with each order shipped for all sampling events, or if needed, one is available at our website www.CentekLabs.com. Samples received after 3:00pm are considered to be a part of the next day's business.

Sample Media

Samples can be collected in an canister or a Tedlar bag. Depending on your analytical needs, Centek Laboratories may receive a bulk, liquid, soil or other matrix sample for headspace analysis.

Blanks

Every sample is run with a surrogate or tracer compound at a pre-established concentration. The surrogate compound run with each sample is used as a standard to measure the performance of each run of the instrument. If required, a Minican can be provided containing nitrogen to be run as a trip blank with your samples.

Sampling Equipment

Centek Laboratories will be happy to provide the canisters to carry-out your sampling event at no charge. The necessary accessories, such as regulators, tubing or personal sampling belts, are also provided to meet your sampling needs. The customer is responsible for all shipping charges to the client's destination and return shipping to the laboratory. Client assumes all responsibility for lost, stolen and any damages of equipment.

Turn Around time (TAT)

Centek Laboratories will provide results to its clients in one business-week by 6:00pm EST after receipt of samples. For example, if samples are received on a Monday they are due on the following Monday by 6:00pm EST. Results are faxed or emailed to the requested location indicated on the Chain of Custody. Non-routine analysis may require more than the one business-week turnaround time. Please confirm non-routine sample turnaround times.

Reporting

Results are emailed or faxed at no additional charge. A hard copy of the result report is mailed within 24 hours of the faxing or emailing of your results. Cat "B" like packages are within 3-4



CEN TEK LABORATORIES, LLC

Date: 27-Mar-12

CLIENT: WSP Environment and Energy
Project: 28873/03 TTC - GLEN HEAD, NY
Lab Order: C1203005

CASE NARRATIVE

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the corrective action report(s). All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination. Samples were analyzed using the methods outlined in the following references:

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

Misc charges reflect Level IV CAT B Pkg, outbound freight, and return shipping labels be sure to add to invoice. Trip blank not on coc contacted dave and advised to add to coc and test as sample TB-022912

See Corrective Action: [2406] WO # C1203005 Trip blank did not appear on COC

See Corrective Action: [2435] MS/MSD did not meet criteria.

See Corrective Action: [2436] IS did not meet criteria.

Centek Laboratories, LLC

Corrective Action Report

Date Initiated: 05-Mar-12

Corrective Action Report ID: 2406

Initiated By: Nick Mandarino

Department: LOGIN

Corrective Action Description

CAR Summary: WO # C1203005 Trip blank did not appear on COC

Description of Nonconformance: Trip blank did not appear on COC but client wanted tests ran on sample.

Description of Corrective Action: added trip blank to COC sample ID TB-022912

Performed By: Nick Mandarino

Completion Date: 05-Mar-12

Client Notification

Client Notification Required: No

Notified By: Nick Mandarino

Comment:

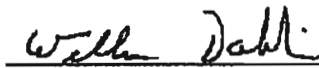
Quality Assurance Review

Nonconformance Type: Anomaly

Further Action required by QA: no further action required

Approval and Closure

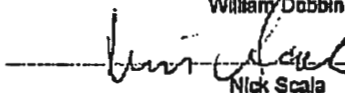
Technical Director /
Deputy Tech. Dir.:



William Dobbin

Close Date: 05-Mar-12

QA Officer Approval:


Nick Scala

QA Date: 05-Mar-12

Last Updated BY: rusa2

Updated: 27-Mar-2012 3:36 PM

Reported: 27-Mar-2012 3:35 PM

Centek Laboratories, LLC

Corrective Action Report

Date Initiated: 06-Mar-12

Corrective Action Report ID: 2436

Initiated By: Russell Pellegrino

Department: MSVOA

Corrective Action Description

CAR Summary: IS did not meet criteria.

Description of Nonconformance: IS was high and did not meet criteria for samples C1203005-007, 008, 012 & 013. Based on the chromatographic evidence this is most likely due to matrix interference.

Description of Corrective Action: Samples were analyzed further as a dilution with result meeting criteria. All other QC met criteria.

Performed By: Russell Pellegrino

Completion Date: 06-Mar-12

Client Notification

Client Notification Required: No

Notified By:

Comment:

Quality Assurance Review

Nonconformance Type: Deficiency

Further Action required by QA: No further corrective action taken. All sets of data submitted

Approval and Closure

Technical Director /
Deputy Tech. Dir.:



William Dobbin

Close Date: 08-Mar-12

QA Officer Approval:


Nick Scala

QA Date: 08-Mar-12

Last Updated BY russ2

Updated: 27-Mar-2012 3:31 PM

Reported: 27-Mar-2012 3:31 PM

Centek Laboratories, LLC

Corrective Action Report

Date Initiated: 06-Mar-12

Corrective Action Report ID: 2435

Initiated By: Russell Pellegrino

Department: MSVOA

Corrective Action Description

CAR Summary: MS/MSD did not meet criteria.

Description of Nonconformance: MS/MSD did not meet criteria for samples C1203005-001 MS/MSD. Based on the chromatographic evidence this is most likely due to matrix interference.

Description of Corrective Action: Since MS/MSD show similar results at this time no further corrective action taken. All other QC meets criteria. The samples show many hits in the matrix which will interfere with spike results. All sets of data submitted

Performed By: Russell Pellegrino

Completion Date: 06-Mar-12

Client Notification

Client Notification Required: No

Notified By:

Comment:

Quality Assurance Review

Nonconformance Type: Deficiency

Further Action required by QA: No further corrective action taken. All sets of data submitted

Approval and Closure

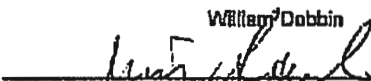
Technical Director /
Deputy Tech. Dir.:



Close Date: 10-Mar-12

William Dobbin

QA Officer Approval:


Nick Scala

QA Date: 10-Mar-12

Last Updated BY russ2

Updated: 27-Mar-2012 3:31 PM

Reported: 27-Mar-2012 3:31 PM

**CEN TEK LABORATORIES, LLC**

Date: 37-Mar-12

CLIENT: WSP Environment and Energy
Project: 28873/03 TTC - GLEN HEAD, NY
Lab Order: C1203005

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C1203005-001A	SG-26	210,302	2/28/2012	3/2/2012
C1203005-002A	SG-25	233,118	2/28/2012	3/2/2012
C1203005-003A	SG-24	328,113	2/28/2012	3/2/2012
C1203005-004A	SG-23	495,42	2/28/2012	3/2/2012
C1203005-005A	SG-22	332,296	2/28/2012	3/2/2012
C1203005-006A	SG-21	139,111	2/28/2012	3/2/2012
C1203005-007A	SG-20	192,155	2/28/2012	3/2/2012

CLIENT: WSP Environment and Energy
Project: 28873/03 TTC - GLEN HEAD, NY
Lab Order: C1203005

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C1203005-008A	SG-19	416,54	2/28/2012	3/2/2012
C1203005-009A	SG-18	231,174	2/28/2012	3/2/2012
C1203005-010A	SG-17	539,253	2/29/2012	3/2/2012
C1203005-011A	SG-16	351,41	2/29/2012	3/2/2012
C1203005-012A	SG-160	234,41	2/29/2012	3/2/2012
C1203005-013A	SG-15	200,53	2/29/2012	3/2/2012
C1203005-014A	TB-022912	165	2/29/2012	3/2/2012

**CEN TEK LABORATORIES, LLC***Air Quality Testing...It's a Gas*

143 Midler Park Drive * Syracuse, NY 13206

TEL: 315-431-9730 * FAX: 315-431-9731

CANISTER ORDER**2862**

27-Mar-12

SHIPPED TO:

Company: WSP Environment and Energy
 Contact: Dave Bouchard
 Address: 5 Sullivan Street
 Cazenovia, NY 13035
 Phone: (315) 655-3900
 Quote ID: 1557
 Project:

Submitted By:

MadeBy:

Ship Date: 2/23/2012

VIA: FedEx

Due Date: 2/24/2012

Bottle Code	Bottle Type	TEST(s)	QTY
MC1400CC	1.4L Mini-Can	1ug/M3 by Method TO15	1
MC1000CC	1L Mini-Can	1ug/M3 by Method TO15	13

Can / Reg ID	Description
54	Time-Set Reg - 535
174	Time-Set Reg - 859
288	Time-Set Reg - 719
302	Time-Set Reg - 728
253	Time-Set Reg - 891
347	1L Mini-Can - 1259
109	Time-Set Reg - 584
233	1L Mini-Can - 1164
165	1L Mini-Can - 1135
231	1L Mini-Can - 1193
42	Time-Set Reg - 532
53	Time-Set Reg - 650
418	1L Mini-Can - 1340
471	1L Mini-Can - 1368
485	1L Mini-Can - 1387
539	1L Mini-Can - 107
327	1L Mini-Can - 1280
328	1L Mini-Can - 1291
332	1L Mini-Can - 1295
188	Time-Set Reg - 657
192	1L Mini-Can - 1147
200	1L Mini-Can - 1155
210	1.4L Mini-Can - 1118
111	Time-Set Reg - 585
113	Time-Set Reg - 587
118	Time-Set Reg - 622
139	1L Mini-Can - 1113
165	Time-Set Reg - 650

Comments: (12) 1L @ 1hr + (1) Trip Blank + (1) MS/MSD - FULL He SET-UP - MUST DELIVER FRIDAY 2/24 TO: FEDEX
 (Hold For Nathaniel Goodhue) 300 Trade Ctr WAC 020812A-F, 012812 A-BSuite 4590 Woburn, MA 01801 781-933-7340 x304 (client requests return labels included)

1 of 1

Worksheets

EPA TO-16

Ambient

Sample Temp:
HOLDING TIMES

30

Sample Date

days from collection to prep and analysis

02/28/12

Analyze by

3/29/12

	SAMPLE DATE	SAMPLE ID	LABORATORY ID	ANALYZED	MATRIX	ANALYSIS DATE	DF
1	02/28/12	SG-26	C1203005-001	X	AIR	3/7-8/12	1/5 PCE
2	02/28/12	SG-25	C1203005-002	X	AIR	3/7/12	1/40PCE
3	02/28/12	SG-24	C1203005-003	X	AIR	3/7/12	1/40PCE
4	02/28/12	SG-23	C1203005-004	X	AIR	3/7/12	1/40PCE
5	02/28/12	SG-22	C1203005-005	X	AIR	3/7-8/12	1/90 PCE
6	02/28/12	SG-21	C1203005-006	X	AIR	3/7/12	1/20 PCE
7	02/28/12	SG-20	C1203005-007	X	AIR	3/7-8/12	1/90 PCE
8	02/28/12	SG-19	C1203005-008	X	AIR	3/7-8/12	1/90 PCE
9	02/28/12	SG-18	C1203005-009	X	AIR	3/7/12	1/40PCE
10	02/29/12	SG-17	C1203005-010	X	AIR	3/7-8/12	1/90 PCE, TCE
11	02/29/12	SG-16	C1203005-011	X	AIR	3/7-8/12	1/90 PCE/10 TCE
12	02/29/12	SG-160	C1203005-012	X	AIR	3/7-8/12	1/90 PCE/10 TCE
13	02/29/12	SG-15	C1203005-013	X	AIR	3/7/12	1/10 CIS, 40 PCE, 810 TCE
14	02/29/12	TB-022912	C1203005-014	X	AIR	3/7/12	1.00

TARGET COMPOUNDS AND QUANTITATION LIMITS

Was a target compound list provided by the client?
 Did Sample Form 1s match the target compound list
 Were required quantitation limits provided by the client?
 Did all compounds meet the required quantitation limits?

YES
 YES
 No
 Limited List

SYSTEM MONITORING COMPOUNDS

SAMPLE	SURROGATE	RECOVERY	DF	ACTION
ALL	ALL	OK	1	

Were surrogate RTs within windows established by the ICAL?
 Were there any transcription errors between the raw data and Form 2?
 Were laboratory acceptance limits used as the basis for validation?
 Did the laboratory provide CLP Form II or equivalent?

Yes
 No
 Yes
 Yes

SAMPLE

SG-26

SURR	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 2
BFB	1.07	1	107.00%	107

Recovery = (Amount Found/Amount Spiked)*100

MS/MSD RECOVERY and RELATIVE PERCENT DIFFERENCE

PARAMETER	MS	MSD	RPD	ACTION
PCE	56	59	OK	
TCE	-8	185	84.6	

2X

4X

Were there any transcription errors between the raw data and Form 3?
 Were laboratory acceptance limits used as the basis for validation?
 Did the laboratory provide CLP Form III or equivalent?
 Were chromatograms and quan reports present for all MS/MSDs?

No
 Yes
 Yes
 Yes

SAMPLE	SG-26	COMPOUND	VC		
	AMOUNT FOUND	NATIVE AMOUNT	AMOUNT SPIKED	%R	FORM 3
MS	0.96	0	1	96	96
MSD	0.85	0	1	85	85
RPD	12.15			12.15	12.2

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

RPD = ((MS-MSD)/((MS+MSD)/2))*100

LABORATORY CONTROL SAMPLES

SAMPLE	COMPOUND	LCS %R	LCSD %R	RPD
30612	ALL	OK	OK	OK
30712	ALL	OK	OK	OK
30812	1,1-DCE	3	NA	NA
	CIS-1,2-DCE	0	NA	NA
	PCE	-10	NA	NA
	TRANS-1,2-DCE	8	NA	NA
	TCE	3	NA	NA
	VC	2	NA	NA

Were there any transcription errors between the raw data and Form 3?

No

Were laboratory acceptance limits used as the basis for validation?

Yes

Did the laboratory provide CLP Form III or equivalent?

Yes

Were chromatograms and quan reports present for all LCS/LCDs?

Yes

SAMPLE	30612	COMPOUND	1,1-DCE	
	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 3
LCS	0.92	1	92	92
LCSD	0.9	1	90	90
RPD	2.197802198		2.197802198	2.2

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

RPD = ((LCS-LCD)/((LCS+LCSD)/2))*100

BLANKS

Were Form Is provided for all blanks?

Yes

Were chromatograms and quan reports present for all blanks?

Yes

Did the laboratory provide CLP Form IVs or equivalent?

Yes

BLANK	COMPOUND	RESULT	5X OR 10X	ACTION LEVEL	AFFECTED SAMPLES	ACTION
3/6/12	ALL	ND	5	#VALUE!		
3/7/12	ALL	ND	5	#VALUE!		
3/8/12	1,1-DCE	0.87	5	4.35		
	CIS-1,2-DCE	1.11	5	5.55		
	PCE	1.05	5	5.25		
	TRANS-1,2-DCE	1.02	5	5.1		
	TCE	0.95	5	4.75		
	VC	1	5	5		
TB	ALL	ND	5	#VALUE!		

CALIBRATION

	ICAL	CCV	CCV	CCV
Instrument	MSD	MSD	MSD	MSD
Date	3/5/12	3/6/12	3/7/12	3/8/12
CCV		12:39	2:13	11:55
CCV Bonus				

COMPOUNDS	All OK	All OK
SAMPLES	All OK	All OK

Are chromatograms and quan reports present for all ICAL standards?

Yes

Are CLP Form VIs or equivalent present and complete?

Yes

Any transcription or calculation errors?

No

What linearity criteria was used?

%RSD 30

Are RRFs greater than 0.05?

Yes

INITIAL CALIBRATION RRF

Date	3/5/12
Instrument	MSD
Compound	VC
Reported RRF	1.179
Calculated RRF	1.1791

Compound	Area (A1)	3982
	Conc (C1)	0.15
Internal Std	Area (A2)	22514
	Conc (C2)	1

RRF = (A1/A2) * (C2/C1)

ICV

Percent Recovery within limits for target parameters?

Yes

Were laboratory acceptance limits used as the basis for validation?

Yes

INITIAL CALIBRATION AVERAGE RRF

Date		3/5/12
Instrument		MSD
Compound		BENZENE
Reported Average RRF		1.335
Calculated Average RRF		1.3356
Reported RSD		27.4400
Calculated RSD		27.4446
		(RRF-(avg)RRF)^2
RRF1	2.217	0.777924
RRF2	1.179	0.024336
RRF3	0.986	0.121801
RRF4	1.212	0.015129
RRF5	1.129	0.042436
RRF6	1.451	0.013456
RRF7	1.4753	0.01968409
RRF8	1.1006	0.05494336
RRF9	1.2702	0.00419804
SUM	12.0201	1.07390849
	(Sum/N-1)^.5	0.366385809
	((Sum/N-1)^.5)/Average RRF	0.274446299
	N	9
	N-1	8

	1.5	1	2
	VC	VC	VC
	1.4753	1.2702	1.1006
Area (A1)	50051	29923	47881
Conc (C1)	1.5	1	2
Area (A2)	22818	23557	21744
Conc (C2)	1	1	1

CCVs

Are chromatograms and quan reports present for all CCV standards?
 Are CLP Form Vils or equivalent present and complete?
 Any transcription or calculation errors?
 What %D criteria was used?
 Were samples analyzed within 12 hours of the tune?

Yes
 Yes
 No
 30%
 Yes

CONTINUING CALIBRATION RRF

Date		3/6/12
Time		12:39 PM
Instrument		MSD
Compound		VC
Reported RRF		1.09
Calculated RRF		1.0898
Compound	Area (A1)	24591
	Conc (C1)	1
Internal Std	Area (A2)	22565
	Conc (C2)	1

$$RRF = (A1/A2) * (C2/C1)$$

TUNE

Raw data and mass assignments correct?
 Mass listing normalized to specified m/z?
 Were all tune reports present?

Yes
 Yes
 Yes

Instrument
 Date
 Time

MSD
 3/6/12
 11:24 AM

CONTINUING CALIBRATION %D

Date	3/6/12
Time	12:39:00 PM
Instrument	MSD
Compound	benzene
Reported %Difference	18.4
Calculated %Difference	18.35

ICAL RRF 1.335
 CCV RRF 1.0900

$$\%Difference \text{ (or \%Drift)} = ((ICAL - CCV)/ICAL)*100$$

m/z	Area	Calculated %	Reported %	Abundance Criteria TO-15
50	2188	18.4%	184	8-40% of mass 95
75	6525	54.7%	54.7	30-66% of mass 95
95	11920	100.0%	100	base peak, 100%
96	601	5.0%	5	5-9% of mass 95
173	25	0.2%	0.2	<2% of mass 174
174	14249	119.5%	119.5	50-120% of mass 95
175	809	5.7%	5.7	4-9% of mass 174
176	13596	95.4%	95.4	>95 but <101% of mass 174
177	932	6.9%	6.9	5-9% of mass 176

INTERNAL STANDARD CHECK

CCV Date
 CCV Time
 Instrument

3/6/12
 12:39:00 PM
 MSD

Shading indicates a percent recovery outside the -40% to 40% criteria.
 Shading indicates a retention time outside the +/- 0.33 minute criteria.

	BCMA	RT	CBZ-D5	RT	14-DFBZ	RT
UPPER	22585	7.49	63490	14.74	90580	9.81
LOWER	31591	7.82	88886	15.07	126812	10.14
	13539	7.16	38094	14.41	54348	9.48
NOTE: calculated area counts are slightly different than laboratory levels.						
SG-26	23937	7.49	72885	14.74	102808	9.81
SG-25	23791	7.48	79112	14.74	109511	9.8
SG-24	26974	7.48	79008	14.73	116460	9.8
SG-23	25766	7.48	79608	14.74	107301	9.8
SG-22	26663	7.48	83718	14.74	112121	9.8
SG-21	26830	7.48	85986	14.74	118169	9.8
SG-20	30228	7.49	102897	14.74	145878	9.81
SG-19	30363	7.49	84276	14.74	135122	9.81
SG-18	27709	7.49	86103	14.74	123160	9.81
SG-17	26918	7.48	88321	14.74	119814	9.81
SG-16	28330	7.52	86674	14.74	123086	9.83
SG-160	33829	7.32	108810	14.72	163193	9.7
SG-15	12292	7.55	53025	14.75	67777	9.85
TB-022912	21672	7.48	52253	14.74	73702	9.81

CCV Date	3/7/12					
CCV Time	2:13:00 PM					
Instrument	MSD					
	BCMA	RT	CBZ-D5	RT	14-DFBZ	RT
	24103	7.48	66281	14.74	90492	9.8
UPPER	33744	7.81	92793	15.07	126689	10.13
LOWER	14462	7.15	39769	14.41	54295	9.47
SG-26 5x	21720	7.49	60110	14.75	84992	9.82
SG-25 40x	24304	7.50	74493	14.74	99038	9.81
SG-24 40x	24573	7.50	69979	14.74	96231	9.82
SG-23 40x	22725	7.50	64763	14.74	85026	9.81
SG-21 20x	23450	7.49	64791	14.74	90391	9.81
SG-18 40x	26117	7.50	79712	14.74	104527	9.82
SG-16 10x	24020	7.51	75178	14.74	104794	9.82
SG-160 10x	23418	7.53	72923	14.74	97877	9.83
SG-15 10x	23369	7.49	73131	14.74	96667	9.81
SG-15 40x	23706	7.50	66375	14.74	89325	9.82
SG-15 810x	29622	7.49	78935	14.74	117895	9.81

CCV Date	3/8/12					
CCV Time	11:55:00 AM					
Instrument	MSD					
	BCMA	RT	CBZ-D5	RT	14-DFBZ	RT
	22335	7.49	61984	14.74	81586	9.81
UPPER	31269	7.82	86778	15.07	114220	10.14
LOWER	13401	7.16	37190	14.41	48952	9.48
SG-22 90x	20592	7.49	57398	14.74	77552	9.81
SG-20 90x	21743	7.49	57894	14.75	83167	9.81
SG-19 90x	21869	7.50	57046	14.74	79749	9.82
SG-17 90x	20841	7.49	55103	14.75	77898	9.82
SG-16 90x	21733	7.49	56057	14.75	83606	9.81
SG-160 90x	20957	7.49	57166	14.75	81614	9.81

RELATIVE RETENTION TIMES

Shading indicates a relative retention time outside the +/- 0.06 RRT unit criteria.

SAMPLE		SG-26	
Compound	Compound RT	CCV RT	Difference
BFB	16.3	16.3	0.000

FIELD DUPLICATES

Sample ID	Duplicate ID	Parameter	RPD
SG-16	SG-160		
140	74	Tetrachloroethene	61.7
12	11	Trichloroethene	8.7

SAMPLE CALCULATION

SAMPLE		SG-26	
sample	parameter	lab value ppb (v/v)	PCE
SG-26	tce	2.1	4.4
Compound area		126316	49526
IS area		102808	60110
IS conc		1	1
Compound ICAL RRF		0.596	0.939
DF		1	5
Default Cal vol		200	200
Default Sample vol		200	200
Concentration		2.0615	4.3872
MW		131.4000	165.8500
Constant		24.4500	24.4500
ug/m3		11.0790	29.7596
lab value		11.0000	30.0000

Concentration = (Compound area * IS conc. * Dil. factor)/(IS area * ICAL Compound RRF)

Are there any transcription errors?	No
Are Form1s present for all field and quality control samples?	Yes
Are chromatograms and quan reports present for all samples?	Yes
Are RLs adjusted to reflect sample dilutions, percent solids, etc.?	Yes

Center Laboratories, LLC Report

Tune File : C:\HPCHEM\1\DATA\AJ030603.D

Tune Time : 6 Mar 2012 12:39 pm

Daily Calibration File : C:\HPCHEM\1\DATA\AJ030603.D

(BFB)

(IS1)

(IS2)

(IS3)

22565

90580

63490

File	Sample	DL	Surrogate Recovery %	Internal Standard Responses		
AJ030604.D	AMBLUG-030612	83		23815	94547	64365
AJ030606.D	ALCS1UG-030612	100		22927	86818	66850
AJ030622.D	C1203005-014A	90		21672	73702	52253
AJ030624.D	C1203005-001A MS	110		22647	82009	70370
AJ030625.D	C1203005-001A MSD	113		22835	83726	72320
AJ030626.D	ALCS1UGD-030612	106		22743	82887	60501
AJ030628.D	C1203005-002A	114		23791	109511	79112
AJ030629.D	C1203005-003A	106		26974	116460	79006
AJ030630.D	C1203005-004A	112		25766	107301	79608
AJ030631.D	C1203005-005A	115		26663	112121	83718
AJ030632.D	C1203005-006A	109		26830	118169	85986
AJ030633.D	C1203005-007A	128		30228	145875*	102607*
AJ030634.D	C1203005-008A	111		30363	135122*	94276*
AJ030635.D	C1203005-009A	120		27709	123160	86103
AJ030636.D	C1203005-010A	111		26918	119814	88321
AJ030637.D	C1203005-011A	118		28330	123086	86674
AJ030638.D	C1203005-012A	110		33929*	153193*	108910*
AJ030639.D	C1203005-013A	107		12292*	67777	53025
AJ030640.D	C1203005-001A	107		23937	102808	72865
AJ030641.D	C1202052-002A	99		30220	124242	88697

t - fails 24hr time check * - fails criteria

Created: Thu Mar 15 13:38:10 2012 MSD #1/

Center Laboratories, LLC

Tune File : C:\HPCHEM\1\DATA\AJ030702.D

Tune Time : 7 Mar 2012 2:13 pm

Daily Calibration File : C:\HPCHEM\1\DATA\AJ030702.D

		(BFB)	(IS1) 24103	(IS2) 90492	(IS3) 66281
File	Sample	DL	Surrogate Recovery %	Internal Standard Responses	
AJ030703.D	ALCS1UG-030712		98	23906	90529 62861
AJ030704.D	AMB1UG-030712		89	22537	86270 61880
AJ030705.D	C1203005-013A 10x	122		23369	96667 73131
AJ030706.D	C1203005-013A 40x	96		23706	89325 66375
AJ030707.D	C1203005-013A 810x	89		29622	117895 78935
AJ030709.D	C1203005-002A 40x	94		24304	99038 74493
AJ030710.D	C1203005-003A 40x	100		24573	96231 69979
AJ030711.D	C1203005-004A 40x	94		22725	85026 64763
AJ030713.D	C1203005-006A 20x	94		23450	90391 64791
AJ030716.D	C1203005-009A 40x	100		26117	104527 79712
AJ030718.D	C1203005-011A 10x	104		24020	104794 75178
AJ030720.D	C1203005-012A 10x	100		23418	97877 72923
AJ030722.D	ALCS1UGD-030712		97	21883	87958 62691
AJ030725.D	C1203005-001A 5x	93		21720	84992 60110

t - fails 24hr time check * - fails criteria

Created: Thu Mar 15 13:41:26 2012 MSD #1/

Centex Laboratories, LLC Report

Tune File : C:\HPCHEM\1\DATA\AJ030801.D

Tune Time : 8 Mar 2012 11:19 am

Daily Calibration File : C:\HPCHEM\1\DATA\AJ030802.D

		(BFB)	(IS1)	(IS2)	(IS3)
			22335	81586	61984
File	Sample	DL	Surrogate Recovery %	Internal Standard Responses	
AJ030801.D	BFB / AMB1UG-030812	91		21738	82878 57807
AJ030803.D	ALCS1UG-030812	104		21761	78714 57719
AJ030806.D	C1203005-005A 90X	95		20592	77552 57398
AJ030807.D	C1203005-007A 90X	97		21743	83167 57894
AJ030808.D	C1203005-008A 90X	104		21869	79749 57046
AJ030809.D	C1203005-010A 90X	87		20841	77898 55103
AJ030810.D	C1203005-011A 90X	96		21733	83606 56057
AJ030811.D	C1203005-012A 90X	91		20957	81614 57166
AJ030821.D	ALCS1UGD-030812	102		19403	74083 55149

t - fails 24hr time check * - fails criteria

Created: Thu Mar 15 13:45:38 2012 MSD #1/



CENTEK LABORATORIES, LLC

Date: 27-Mar-12

ANALYTICAL QC SUMMARY REPORT

CLIENT: WSP Environment and Energy
 Work Order: C1203005
 Project: 28873/03 TTC - GLEN HEAD, NY

TestCode: 1ugM3_TO15

Sample ID	C1203005-001A MS	SampType:	MS	TestCode:	1ugM3_TO15	Units:	ppbV	Prep Date:		RunNo:	5535
Client ID:	SG-26	Batch ID:	R5535	TestNo:	TO-15			Analysis Date:	3/7/2012	SeqNo:	64818
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	0.9000	0.15	1	0	90.0	70	130				
cis-1,2-Dichloroethane	1.140	0.15	1	0	114	70	130				
Tetrachloroethylene	4.020	0.15	1	3.47	55.0	70	130				S
trans-1,2-Dichloroethane	1.120	0.15	1	0	112	70	130				
Trichloroethane	2.000	0.15	1	2.08	-8.00	70	130				S
Vinyl chloride	0.9600	0.15	1	0	96.0	70	130				
Surr: Bromofluorobenzene	1.100	0	1	0	110	70	130				

Sample ID	C1203005-001A MS	SampType:	MSD	TestCode:	1ugM3_TO15	Units:	ppbV	Prep Date:		RunNo:	6536
Client ID:	SG-26	Batch ID:	R5535	TestNo:	TO-15			Analysis Date:	3/7/2012	SeqNo:	64817
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	0.7500	0.15	1	0	75.0	70	130	0.9	18.2	30	
cis-1,2-Dichloroethane	1.020	0.15	1	0	102	70	130	1.14	11.1	30	
Tetrachloroethylene	4.060	0.15	1	3.47	59.0	70	130	4.02	0.990	30	S
trans-1,2-Dichloroethane	0.9200	0.15	1	0	92.0	70	130	1.12	19.6	30	
Trichloroethane	3.910	0.15	1	2.08	185	70	130	2	64.6	30	SR
Vinyl chloride	0.8500	0.15	1	0	85.0	70	130	0.95	12.2	30	
Surr: Bromofluorobenzene	1.130	0	1	0	113	70	130	0	0	30	

Qualifiers: . Results reported are not blank corrected
 J Analyte detected at or below quantitation limits
 S Spike Recovery outside accepted recovery limits

E Value above quantitation range
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

Data File : C:\HPCHEM\1\DATA\AJ030624.D

Vial: 29

Acq On : 7 Mar 2012 1:41 am

Operator: RJP

Sample : C1203005-001A MS

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 07 02:02:36 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.47	128	22647	1.00	ppb	0.00
30) 1,4-difluorobenzene	9.79	114	82009	1.00	ppb	0.00
44) Chlorobenzene-d5	14.73	117	70370	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	51793	1.10	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	110.00%

Target Compounds

						Qvalue
6) Vinyl Chloride	3.14	62	28906	0.96	ppb	97
14) 1,1-dichloroethene	4.59	96	30990	0.90	ppb	98
19) trans-1,2-dichloroethene	5.80	61	40894	1.12	ppb	98
24) cis-1,2-dichloroethene	7.05	61	37255	1.14	ppb	92
38) Trichloroethene	10.49	130	98020	2.00	ppb	95
50) Tetrachloroethylene	13.83	164	265480	4.02	ppb	97

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030624.D A305_1UG.M Thu Mar 15 13:26:43 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030625.D

Vial: 30

Acq On : 7 Mar 2012 2:16 am

Operator: RJF

Sample : C1203005-001A MSD

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 07 02:38:04 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.47	128	22835	1.00	ppb	0.00
30) 1,4-difluorobenzene	9.80	114	83726	1.00	ppb	0.00
44) Chlorobenzene-d5	14.74	117	72320	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	55097	1.13	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	113.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
6) Vinyl Chloride	3.13	62	25812	0.85	ppb	100
14) 1,1-dichloroethene	4.58	96	25995	0.75	ppb	96
19) trans-1,2-dichloroethene	5.80	61	33925	0.92	ppb	93
24) cis-1,2-dichloroethene	7.06	61	33765	1.02	ppb	93
38) Trichloroethene	10.49	130	195292	3.91	ppb	94
50) Tetrachloroethylene	13.83	164	276081	4.06	ppb	97

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030625.D A305_1UG.M Thu Mar 15 13:26:46 2012 MSD1



Date: 15-Mar-12

ANALYTICAL QC SUMMARY REPORT

CLIENT: WSP Environment and Energy
 Work Order: C1203005
 Project: 28873/03 TTC - GLEN HEAD, NY

TestCode: 1ugM3_TO15

Sample ID	ALCS1UG-030812	SampType:	LCS	TestCode:	1ugM3_TO15	Units:	ppbV	Prep Date:		RunNo:	5535
Client ID:	ZZZZ	Batch ID:	R5535	TestNo:	TO-15			Analysis Date:	3/6/2012	SeqNo:	84800
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	0.9200	0.15	1	0	92.0	70	130				
cis-1,2-Dichloroethene	0.9100	0.15	1	0	91.0	70	130				
Tetrachloroethylene	0.8800	0.15	1	0	88.0	70	130				
trans-1,2-Dichloroethene	0.9200	0.15	1	0	92.0	70	130				
Trichloroethene	0.9100	0.15	1	0	91.0	70	130				
Vinyl chloride	0.8300	0.15	1	0	83.0	70	130				

Sample ID	ALCS1UG-030712	SampType:	LCS	TestCode:	1ugM3_TO15	Units:	ppbV	Prep Date:		RunNo:	5536
Client ID:	ZZZZZ	Batch ID:	R5536	TestNo:	TO-15			Analysis Date:	3/7/2012	SeqNo:	84819
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	0.8700	0.15	1	0	87.0	70	130				
cis-1,2-Dichloroethene	1.080	0.15	1	0	108	70	130				
Tetrachloroethylene	1.080	0.15	1	0	108	70	130				
trans-1,2-Dichloroethene	1.080	0.15	1	0	108	70	130				
Trichloroethene	1.080	0.15	1	0	108	70	130				
Vinyl chloride	0.9500	0.15	1	0	95.0	70	130				

Sample ID	ALCS1UG-030812	SampType:	LCS	TestCode:	1ugM3_TO15	Units:	ppbV	Prep Date:		RunNo:	5537
Client ID:	ZZZZ	Batch ID:	R5537	TestNo:	TO-15			Analysis Date:	3/8/2012	SeqNo:	64834
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	0.9000	0.15	1	0.87	3.00	70	130				BS
cis-1,2-Dichloroethene	1.110	0.15	1	1.11	0	70	130				BS

Qualifiers: . Results reported are not blank corrected E Value above quantitation range H Holding times for preparation or analysis exceeded
 J Analyte detected at or below quantitation limits ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits

CLIENT: WSP Environment and Energy
 Work Order: C1203005
 Project: 28873/03 TTC - GLEN HEAD, NY

TestCode: 1ugM3_TO15

Sample ID	ALCS1UG-030812	SampType: LCS	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 5537					
Client ID:	ZZZZZ	Batch ID: R5537	TestNo: TO-15		Analysis Date: 3/8/2012	SeqNo: 64834					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachloroethylene	0.9500	0.15	1	1.05	-10.0	70	130				BS
trans-1,2-Dichloroethene	1.100	0.15	1	1.02	8.00	70	130				BS
Trichloroethene	0.9800	0.15	1	0.95	3.00	70	130				BS
Vinyl chloride	1.020	0.15	1	1	2.00	70	130				BS

Sample ID	ALCS1UGD-030612	SampType: LCSD	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 5535					
Client ID:	ZZZZZ	Batch ID: R5535	TestNo: TO-15		Analysis Date: 3/7/2012	SeqNo: 64801					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	0.9000	0.15	1	0	90.0	70	130	0.92	2.20	30	
cis-1,2-Dichloroethene	0.9300	0.15	1	0	93.0	70	130	0.91	2.17	30	
Tetrachloroethylene	0.9500	0.15	1	0	95.0	70	130	0.88	7.55	30	
trans-1,2-Dichloroethene	0.9000	0.15	1	0	90.0	70	130	0.82	2.20	30	
Trichloroethene	0.9200	0.15	1	0	92.0	70	130	0.91	1.08	30	
Vinyl chloride	0.8400	0.15	1	0	84.0	70	130	0.83	1.20	30	

Sample ID	ALCS1UGD-030712	SampType: LCSD	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 5636					
Client ID:	ZZZZZ	Batch ID: R5536	TestNo: TO-15		Analysis Date: 3/8/2012	SeqNo: 64820					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	0.9000	0.15	1	0	90.0	70	130	0.87	3.38	30	
cis-1,2-Dichloroethene	1.100	0.15	1	0	110	70	130	1.08	0.913	30	
Tetrachloroethylene	0.9700	0.15	1	0	97.0	70	130	1.09	11.7	30	
trans-1,2-Dichloroethene	1.050	0.15	1	0	105	70	130	1.06	0.948	30	
Trichloroethene	0.9400	0.15	1	0	94.0	70	130	1.08	13.9	30	
Vinyl chloride	1.000	0.15	1	0	100	70	130	0.95	5.13	30	

Qualifiers: . Results reported are not blank corrected
 J Analyte detected at or below quantitation limits
 S Spike Recovery outside accepted recovery limits

E Value above quantitation range
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

Data File : C:\HPCHEM\1\DATA\AJ030606.D

Vial: 31

Acq On : 6 Mar 2012 3:06 pm

Operator: RJP

Sample : ALCS1UG-030612

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 06 15:27:48 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.49	128	22927	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.81	114	86818	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	66850	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	45092	1.00	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	= 100.00%	

Target Compounds

						Qvalue
2) Propylene	2.85	41	13199	0.93	ppb	80
3) Freon 12	2.88	85	111346	0.94	ppb	100
4) Chloromethane	3.02	50	28572	0.91	ppb	98
5) Freon 114	3.03	85	101612	0.93	ppb	93
6) Vinyl Chloride	3.16	62	25368	0.83	ppb	99
7) 1,3-butadiene	3.23	39	16891	0.85	ppb	96
8) Bromomethane	3.47	94	37559	0.92	ppb	99
9) Chloroethane	3.58	64	10387	0.88	ppb	95
10) Vinyl Bromide	3.82	106	38333	0.92	ppb	99
11) Freon 11	4.02	101	114653	0.92	ppb	99
12) Acetone	4.20	58	10390	1.04	ppb	# 42
13) Isopropyl alcohol	4.28	45	19523	1.63	ppb	# 100
14) 1,1-dichloroethene	4.60	96	31904	0.92	ppb	89
15) Freon 113	4.76	101	77867	0.92	ppb	97
16) Methylene chloride	4.98	84	24271	0.87	ppb	97
17) Allyl chloride	4.97	41	24724	1.01	ppb	96
18) Carbon disulfide	5.10	76	79100	0.95	ppb	97
19) trans-1,2-dichloroethene	5.81	61	34117	0.92	ppb	98
20) methyl tert-butyl ether	5.88	73	52278	0.90	ppb	97
21) 1,1-dichloroethane	6.19	63	41771	0.94	ppb	99
22) Vinyl acetate	6.25	43	29920	0.88	ppb	98
23) Methyl Ethyl Ketone	6.72	43	37878	0.85	ppb	92
24) cis-1,2-dichloroethene	7.06	61	30227	0.91	ppb	93
25) Hexane	6.70	41	21368	0.83	ppb	95
26) Ethyl acetate	7.31	43	28934	0.87	ppb	99
27) Chloroform	7.64	83	71933	0.90	ppb	98
28) Tetrahydrofuran	7.85	42	13130	0.96	ppb	# 71
29) 1,2-dichloroethane	8.72	62	47134	0.92	ppb	99
31) 1,1,1-trichloroethane	8.42	97	85370	0.95	ppb	98
32) Cyclohexane	9.11	56	21482	0.89	ppb	# 39
33) Carbon tetrachloride	9.06	117	113479	0.90	ppb	97
34) Benzene	9.03	78	66283	0.94	ppb	96
35) 1,4-dioxane	10.89	88	9517m	1.45	ppb	
36) 2,2,4-trimethylpentane	10.00	57	71530	0.93	ppb	95
37) Heptane	10.41	43	23380	0.96	ppb	97
38) Trichloroethene	10.50	130	46877	0.91	ppb	93
39) 1,2-dichloropropane	10.62	63	22260	0.96	ppb	97
40) Bromodichloromethane	11.01	83	76938	0.95	ppb	97
41) cis-1,3-dichloropropene	11.95	75	37139	1.07	ppb	94
42) trans-1,3-dichloropropene	12.76	75	29096	0.97	ppb	93
43) 1,1,2-trichloroethane	13.07	97	35420	0.92	ppb	92
45) Toluene	12.81	92	46957	0.87	ppb	95
46) Methyl Isobutyl Ketone	11.92	43	23585	1.56	ppb	97

(#)=qualifier out of range (m)=manual integration

AJ030606.D A305_1UG.M

Thu Mar 15 13:26:39 2012

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AJ030626.D

Vial: 31

Acq On : 7 Mar 2012 2:50 am

Operator: RJP

Sample : ALCS1UGD-030612

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 07 03:11:43 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.47	128	22743	1.00	ppb	0.00
30) 1,4-difluorobenzene	9.80	114	82887	1.00	ppb	0.00
44) Chlorobenzene-d5	14.74	117	60501	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	43224	1.06	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	106.00%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	2.84	41	13646	0.97	ppb	87
3) Freon 12	2.88	85	111605	0.95	ppb	96
4) Chloromethane	3.02	50	29557	0.95	ppb	98
5) Freon 114	3.01	85	100105	0.92	ppb	91
6) Vinyl Chloride	3.15	62	25481	0.84	ppb	100
7) 1,3-butadiene	3.22	39	17689	0.89	ppb	91
8) Bromomethane	3.46	94	35865	0.89	ppb	95
9) Chloroethane	3.57	64	10887	0.93	ppb	89
10) Vinyl Bromide	3.82	106	37220	0.90	ppb	95
11) Freon 11	4.01	101	112320	0.91	ppb	99
12) Acetone	4.20	58	9981	1.01	ppb	# 82
13) Isopropyl alcohol	4.28	45	12241	1.03	ppb	# 100
14) 1,1-dichloroethene	4.59	96	31020	0.90	ppb	93
15) Freon 113	4.76	101	75204	0.89	ppb	96
16) Methylene chloride	4.97	84	23282	0.84	ppb	97
17) Allyl chloride	4.95	41	18424	0.76	ppb	93
18) Carbon disulfide	5.09	76	66108	0.80	ppb	99
19) trans-1,2-dichloroethene	5.79	61	32830	0.90	ppb	95
20) methyl tert-butyl ether	5.87	73	52638	0.91	ppb	98
21) 1,1-dichloroethane	6.18	63	41664	0.95	ppb	100
22) Vinyl acetate	6.25	43	31332	0.93	ppb	99
23) Methyl Ethyl Ketone	6.71	43	39943	0.91	ppb	92
24) cis-1,2-dichloroethene	7.05	61	30616	0.93	ppb	96
25) Hexane	6.70	41	25258	0.99	ppb	# 87
26) Ethyl acetate	7.29	43	30566	0.93	ppb	97
27) Chloroform	7.63	83	73563	0.93	ppb	100
28) Tetrahydrofuran	7.85	42	10952	0.81	ppb	# 43
29) 1,2-dichloroethane	8.71	62	47332	0.93	ppb	98
31) 1,1,1-trichloroethane	8.41	97	83076	0.97	ppb	100
32) Cyclohexane	9.11	56	22177	0.96	ppb	# 41
33) Carbon tetrachloride	9.04	117	114247	0.95	ppb	96
34) Benzene	9.01	78	65112	0.97	ppb	99
35) 1,4-dioxane	10.88	88	9747	1.55	ppb	# 56
36) 2,2,4-trimethylpentane	9.98	57	72683	0.99	ppb	94
37) Heptane	10.41	43	23655	1.02	ppb	96
38) Trichloroethene	10.49	130	45553	0.92	ppb	97
39) 1,2-dichloropropane	10.61	63	22199	1.00	ppb	99
40) Bromodichloromethane	11.01	83	74039	0.96	ppb	100
41) cis-1,3-dichloropropene	11.93	75	35237	1.07	ppb	95
42) trans-1,3-dichloropropene	12.76	75	28571	1.00	ppb	96
43) 1,1,2-trichloroethane	13.06	97	34959	0.95	ppb	89
45) Toluene	12.79	92	44174	0.91	ppb	92
46) Methyl Isobutyl Ketone	11.91	43	26283	1.91	ppb	90

(#)= qualifier out of range (m) = manual integration

AJ030626.D A305_1UG.M

Thu Mar 15 13:26:48 2012

MSD1

Page 1



CEN TEK LABORATORIES, LLC

Date: 15-Mar-12

ANALYTICAL QC SUMMARY REPORT

Page 56 of 296

Centek Laboratories, LLC

CLIENT: WSP Environment and Energy
Work Order: C1203005
Project: 28873/03 TTC - GLEN HEAD, NY

TestCode: 1ugM3_TO15

Sample ID	AMB1UG-030812	SampType:	MBLK	TestCode:	1ugM3_TO15	Units:	ppbV	Prep Date:		RunNo:	6535		
Client ID:	ZZZZ	Batch ID:	R5535	TestNo:	TO-15			Analysis Date:	3/6/2012	SeqNo:	64799		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
Trichloroethene	< 0.15	0.15									
Vinyl chloride	< 0.15	0.15									

Sample ID	AMB1UG-030712	SampType:	MBLK	TestCode:	1ugM3_TO15	Units:	ppbV	Prep Date:		RunNo:	5536		
Client ID:	ZZZZ	Batch ID:	R5536	TestNo:	TO-15			Analysis Date:	3/7/2012	SeqNo:	64818		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
Trichloroethene	< 0.15	0.15									
Vinyl chloride	< 0.15	0.15									

Sample ID	AMB1UG-030812	SampType:	MBLK	TestCode:	1ugM3_TO15	Units:	ppbV	Prep Date:		RunNo:	5537		
Client ID:	ZZZZZ	Batch ID:	R5537	TestNo:	TO-15			Analysis Date:	3/8/2012	SeqNo:	84832		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	0.8700	0.15									
cis-1,2-Dichloroethene	1.110	0.15									

Qualifiers:

.	Results reported are not blank corrected	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected at or below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: WSP Environment and Energy
Work Order: C1203005
Project: 28873/03 TTC - GLEN HEAD, NY

TestCode: 1ugM3_TO15

Sample ID	AMB1UG-030812	SampType:	MBLK	TestCode:	1ugM3_TO15	Units:	ppbV	Prep Date:		RunNo:	5537
Client ID:	ZZZZZ	Batch ID:	R5537	TestNo:	TO-15			Analysis Date:	3/8/2012	SeqNo:	64832
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachloroethylene	1.050	0.15									
trans-1,2-Dichloroethene	1.020	0.15									
Trichloroethene	0.9500	0.15									
Vinyl chloride	1.000	0.15									

Qualifiers:
 . Results reported are not blank corrected
 J Analyte detected at or below quantitation limits
 S Spike Recovery outside accepted recovery limits

E Value above quantitation range
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

Centek Laboratories, LLC

Response Factor Report MSD #1

Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Thu Mar 15 13:17:18 2012
 Response via : Initial Calibration

Calibration Files

0.04 =AJ030515.D 0.15 =AJ030517.D 0.30 =AJ030518.D
 0.50 =AJ030519.D 0.75 =AJ030520.D 1.25 =AJ030522.D

Compound	0.04	0.15	0.30	0.50	0.75	1.25	Avg	%RSD
1) I Bromochloromethane	-----ISTD-----							
2) T Propylene	0.746	0.562	0.671	0.523	0.653	0.621		13.18
3) T Freon 12	3.862	4.196	5.255	4.844	6.344	5.174		17.19
4) T Chloromethane	1.419	1.095	1.369	1.271	1.606	1.371		12.24
5) T Freon 114	3.950	3.790	4.923	4.413	5.712	4.762		15.37
6) T Vinyl Chloride	2.217	1.179	0.986	1.212	1.129	1.451	1.335	27.44 ✓
7) T 1,3-butadiene	1.039	0.777	0.889	0.794	0.895	0.870		10.71
8) T Bromomethane	1.806	1.429	1.889	1.633	2.033	1.774		11.83
9) T Chloroethane	0.535	0.409	0.537	0.413	0.628	0.512		15.67
10) T Vinyl Bromide	1.645	1.493	1.756	1.664	2.204	1.823		14.49
11) T Freon 11	4.430	4.301	5.584	5.143	6.477	5.424		15.58
12) T Acetone	0.354	0.392	0.415	0.404	0.458	0.434		13.72
13) T Isopropyl alcoh	0.719	0.700		0.507	0.491	0.522		26.80 ✓
14) T 1,1-dichloroeth	1.094	1.285	1.576	1.494	1.809	1.512		16.98 ✓
15) T Freon 113	2.740	2.985	3.826	3.561	4.579	3.695		17.59
16) T Methylene chlor	1.088	1.079	1.214	1.003	1.451	1.213		14.34
17) T Allyl chloride	0.883	0.947	1.095	0.788	1.365	1.072		17.84
18) T Carbon disulfid	2.876	3.134	3.925	2.910	4.256	3.619		16.84
19) T trans-1,2-dichl	1.294	1.359	1.646	1.425	1.916	1.610		16.41 ✓
20) T methyl tert-but	1.925	2.049	2.468	2.166	3.058	2.534		19.21
21) T 1,1-dichloroeth	1.375	1.645	1.941	1.804	2.385	1.936		17.50
22) T Vinyl acetate	1.338	1.234	1.451	1.198	1.824	1.488		16.45
23) T Methyl Ethyl Ke		1.581	1.639	1.691	2.350	1.937		17.11
24) T cis-1,2-dichlor	1.158	1.187	1.455	1.289	1.777	1.445		16.78 ✓
25) T Hexane	1.162	0.986	1.121	0.961	1.335	1.118		12.27
26) T Ethyl acetate	1.319	1.089	1.268	1.200	1.847	1.445		20.09
27) T Chloroform	2.993	2.773	3.553	3.203	4.258	3.489		15.28
28) T Tetrahydrofuran		0.515	0.559	0.559	0.696	0.595		11.77
29) T 1,2-dichloroeth	1.847	1.766	2.286	2.029	2.703	2.227		15.75
30) I 1,4-difluorobenzene	-----ISTD-----							
31) T 1,1,1-trichloro	0.975	0.774	1.057	0.891	1.193	1.030		16.76
32) T Cyclohexane	0.266	0.196	0.269	0.239	0.331	0.279		19.87
33) T Carbon tetrachl	2.109	1.314	1.039	1.412	1.190	1.581	1.457	22.13
34) T Benzene	0.781	0.634	0.793	0.678	0.951	0.809		17.57
35) T 1,4-dioxane		0.098		0.082	0.070	0.076		19.93
36) T 2,2,4-trimethyl	0.768	0.667	0.861	0.748	1.058	0.884		18.94
37) T Heptane	0.260	0.205	0.255	0.230	0.322	0.280		20.14
38) T Trichloroethene	0.869	0.540	0.411	0.561	0.485	0.670	0.596	23.29 ✓
39) T 1,2-dichloropro	0.249	0.196	0.277	0.233	0.303	0.267		16.99
40) T Bromodichlorome	0.862	0.706	0.911	0.828	1.105	0.932		16.84
41) T cis-1,3-dichlor	0.288	0.290	0.392	0.340	0.501	0.398		24.11
42) T trans-1,3-dichl	0.344	0.263	0.316	0.274	0.407	0.346		19.29
43) T 1,1,2-trichloro	0.419	0.343	0.462	0.371	0.522	0.442		16.46
44) I Chlorobenzene-d5	-----ISTD-----							
45) T Toluene	0.650	0.536	0.812	0.761	0.998	0.807		21.41
46) T Methyl Isobutyl		0.262		0.291	0.232	0.227		24.84
47) T Dibromochlorome	1.535	1.185	1.609	1.453	1.857	1.589		16.45
48) T Methyl Butyl Ke		0.197		0.158	0.173	0.154		23.07
49) T 1,2-dibromoetha	0.928	0.773	1.019	0.963	1.200	1.015		16.26
50) T Tetrachloroethy	0.916	0.682	0.980	0.864	1.092	0.939		16.71 ✓
51) T Chlorobenzene	1.170	0.973	1.378	1.235	1.568	1.333		17.72

{#} = Out of Range ### Number of calibration levels exceeded format ###
 A305_1UG.M Thu Mar 15 13:47:26 2012 MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AJ030517.D
 Acq On : 5 Mar 2012 9:56 pm
 Sample : A1UG_0.15
 Misc : Method-A305_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 06 08:45:32 2012

Vial: 15
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 08:41:56 2012
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AJ030525.D
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.48	128	22514	1.00	ppb	0.00
30) 1,4-difluorobenzene	9.81	114	76245	1.00	ppb	0.01
44) Chlorobenzene-d5	14.74	117	53226	1.00	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
57) Bromofluorobenzene	16.30	95	35165	0.95	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	95.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	2.86	41	2520	0.19	ppb	97
3) Freon 12	2.88	85	13041	0.10	ppb	100
4) Chloromethane	3.02	50	4791	0.15	ppb	83
5) Freon 114	3.02	85	13338	0.12	ppb	89
6) Vinyl Chloride	3.16	62	3982	0.14	ppb	95
7) 1,3-butadiene	3.23	39	3509	0.17	ppb	80
8) Bromomethane	3.46	94	6098	0.15	ppb	99
9) Chloroethane	3.58	64	1807	0.15	ppb	95
10) Vinyl Bromide	3.82	106	5556	0.13	ppb	94
11) Freon 11	4.01	101	14962	0.11	ppb	93
12) Acetone	4.22	58	1194	0.11	ppb	# 78
13) Isopropyl alcohol	4.29	45	2428	0.20	ppb	# 100
14) 1,1-dichloroethene	4.59	96	3695	0.10	ppb	98
15) Freon 113	4.77	101	9254	0.10	ppb	91
16) Methylene chloride	4.98	84	3673m	0.12	ppb	
17) Allyl chloride	4.97	41	2981m	0.11	ppb	
18) Carbon disulfide	5.11	76	9713	0.11	ppb	98
19) trans-1,2-dichloroethene	5.81	61	4369	0.10	ppb	87
21) 1,1-dichloroethane	6.20	63	4642	0.10	ppb	90
22) Vinyl acetate	6.27	43	4519m	0.12	ppb	
24) cis-1,2-dichloroethene	7.06	61	3909	0.11	ppb	88
25) Hexane	6.70	41	3923m	0.16	ppb	
26) Ethyl acetate	7.34	43	4456m	0.12	ppb	
27) Chloroform	7.64	83	10108	0.12	ppb	96
29) 1,2-dichloroethane	8.72	62	6238	0.12	ppb	89
31) 1,1,1-trichloroethane	8.42	97	11149	0.13	ppb	92
32) Cyclohexane	9.11	56	3039	0.13	ppb	# 71
33) Carbon tetrachloride	9.05	117	15025	0.13	ppb	94
34) Benzene	9.01	78	8927	0.13	ppb	87
36) 2,2,4-trimethylpentane	9.98	57	8784	0.12	ppb	88
37) Heptane	10.43	43	2974m	0.12	ppb	
38) Trichloroethene	10.52	130	6180	0.13	ppb	94
39) 1,2-dichloropropane	10.63	63	2850m	0.13	ppb	
40) Bromodichloromethane	11.01	83	9856	0.13	ppb	92
42) trans-1,3-dichloropropene	12.77	75	3934m	0.13	ppb	
43) 1,1,2-trichloroethane	13.08	97	4793	0.13	ppb	90
45) Toluene	12.80	92	5192	0.11	ppb	96
47) Dibromochloromethane	13.74	129	12256	0.13	ppb	98
49) 1,2-dibromoethane	14.00	107	7406	0.12	ppb	90
50) Tetrachloroethylene	13.84	164	7310	0.13	ppb	95
51) Chlorobenzene	14.79	112	9344	0.12	ppb	95
52) Ethylbenzene	15.06	91	11207m	0.10	ppb	
53) m&p-xylene	15.25	91	16737	0.18	ppb	96

(#) = qualifier out of range (m) = manual integration
 AJ030517.D A305_1UG.M Thu Mar 15 13:47:59 2012

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AJ030525.D

Vial: 23

Acq On : 6 Mar 2012 2:17 am

Operator: RJP

Sample : A1UG_1.0

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 06 08:42:05 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 08:41:56 2012

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AJ030525.D

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.47	128	23557	1.00	ppb	0.00
30) 1,4-difluorobenzene	9.79	114	88499	1.00	ppb	0.00
44) Chlorobenzene-d5	14.74	117	61624	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.29	95	42860	1.00	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	100.00%

Target Compounds

Qvalue

2) Propylene	2.84	41	14045	1.00	ppb	93
3) Freon 12	2.88	85	133856	1.00	ppb	98
4) Chloromethane	3.01	50	34126	1.00	ppb	97
5) Freon 114	3.02	85	120750	1.00	ppb	92
6) Vinyl Chloride	3.15	62	29923	1.00	ppb	97
7) 1,3-butadiene	3.22	39	21632	1.00	ppb	92
8) Bromomethane	3.46	94	42277	1.00	ppb	96
9) Chloroethane	3.57	64	12446	1.00	ppb	99
10) Vinyl Bromide	3.81	106	46018	1.00	ppb	99
11) Freon 11	4.01	101	138344	1.00	ppb	100
12) Acetone	4.20	58	11670	1.03	ppb	# 52
13) Isopropyl alcohol	4.28	45	11173	0.90	ppb	# 100
14) 1,1-dichloroethene	4.60	96	38017	1.00	ppb	91
15) Freon 113	4.76	101	94244	1.00	ppb	98
16) Methylene chloride	4.97	84	31206	1.00	ppb	92
17) Allyl chloride	4.96	41	27690	1.00	ppb	91
18) Carbon disulfide	5.09	76	91840	1.00	ppb	98
19) trans-1,2-dichloroethene	5.80	61	45220	1.00	ppb	92
20) methyl tert-butyl ether	5.87	73	69234	1.00	ppb	95
21) 1,1-dichloroethane	6.18	63	50804	1.00	ppb	96
22) Vinyl acetate	6.24	43	38418	1.00	ppb	98
23) Methyl Ethyl Ketone	6.70	43	48242	1.00	ppb	91
24) cis-1,2-dichloroethane	7.05	61	37016	1.00	ppb	94
25) Hexane	6.69	41	25814	1.00	ppb	90
26) Ethyl acetate	7.29	43	37700	1.00	ppb	98
27) Chloroform	7.64	83	86632	1.00	ppb	96
28) Tetrahydrofuran	7.83	42	13305	1.00	ppb	# 54
29) 1,2-dichloroethane	8.71	62	55701	1.00	ppb	98
31) 1,1,1-trichloroethane	8.40	97	99731	1.00	ppb	98
32) Cyclohexane	9.10	56	27662	1.00	ppb	# 47
33) Carbon tetrachloride	9.04	117	135791	1.00	ppb	97
34) Benzene	9.01	78	77418	1.00	ppb	99
35) 1,4-dioxane	10.87	88	7149m //	0.90	ppb	
36) 2,2,4-trimethylpentane	9.98	57	87405	1.00	ppb	96
37) Heptane	10.40	43	28481	1.00	ppb	96
38) Trichloroethene	10.49	130	53849	1.00	ppb	95
39) 1,2-dichloropropane	10.61	63	26405	1.00	ppb	98
40) Bromodichloromethane	11.01	83	90571	1.00	ppb	99
41) cis-1,3-dichloropropene	11.94	75	39467	1.00	ppb	96
42) trans-1,3-dichloropropene	12.76	75	34044	1.00	ppb	88
43) 1,1,2-trichloroethane	13.06	97	42741	1.00	ppb	95
45) Toluene	12.79	92	55640	1.00	ppb	100
46) Methyl Isobutyl Ketone	11.92	43	15878	1.00	ppb	97

(#)= qualifier out of range (m) = manual integration

AJ030525.D A305_1UG.M

Thu Mar 15 13:48:20 2012

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AJ030523.D

Vial: 21

Acq On : 6 Mar 2012 1:09 am

Operator: RJP

Sample : A1UG_1.5

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 06 08:43:47 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 08:41:56 2012

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AJ030525.D

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.46	128	22618	1.00	ppb	0.00
30) 1,4-difluorobenzene	9.80	114	84182	1.00	ppb	0.00
44) Chlorobenzene-d5	14.74	117	60925	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.29	95	45029	1.06	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	106.00%

Target Compounds

Qvalue

2) Propylene	2.84	41	23397	1.74	ppb	89
3) Freon 12	2.88	85	210879	1.64	ppb	97
4) Chloromethane	3.01	50	52063	1.59	ppb	99
5) Freon 114	3.01	85	193440	1.67	ppb	93
6) Vinyl Chloride	3.15	62	50051	1.74	ppb	98
7) 1,3-butadiene	3.22	39	30423	1.46	ppb	96
8) Bromomethane	3.46	94	68270	1.68	ppb	99
9) Chloroethane	3.58	64	20155	1.69	ppb	86
10) Vinyl Bromide	3.81	106	74289	1.68	ppb	98
11) Freon 11	4.01	101	221269	1.67	ppb	99
12) Acetone	4.19	58	18217	1.67	ppb	# 66
13) Isopropyl alcohol	4.27	45	14430m	1.21	ppb	
14) 1,1-dichloroethene	4.59	96	62770	1.72	ppb	89
15) Freon 113	4.76	101	150719	1.67	ppb	97
16) Methylene chloride	4.97	84	48962	1.63	ppb	93
17) Allyl chloride	4.95	41	41906	1.57	ppb	86
18) Carbon disulfide	5.09	76	151407	1.71	ppb	99
19) trans-1,2-dichloroethene	5.79	61	63768	1.47	ppb	98
20) methyl tert-butyl ether	5.86	73	109182	1.64	ppb	93
21) 1,1-dichloroethane	6.17	63	78040	1.60	ppb	98
22) Vinyl acetate	6.24	43	61616	1.67	ppb	95
23) Methyl Ethyl Ketone	6.70	43	80722	1.74	ppb	90
24) cis-1,2-dichloroethene	7.05	61	59945	1.69	ppb	95
25) Hexane	6.69	41	43524	1.76	ppb	90
26) Ethyl acetate	7.29	43	62854	1.74	ppb	97
27) Chloroform	7.63	83	141679	1.70	ppb	99
28) Tetrahydrofuran	7.83	42	23436m	1.83	ppb	
29) 1,2-dichloroethane	8.71	62	91059	1.70	ppb	99
31) 1,1,1-trichloroethane	8.41	97	163994	1.73	ppb	98
32) Cyclohexane	9.10	56	46489	1.77	ppb	# 53
33) Carbon tetrachloride	9.04	117	215434	1.67	ppb	100
34) Benzene	9.00	78	132562	1.80	ppb	98
35) 1,4-dioxane	10.90	88	9048m	1.19	ppb	
36) 2,2,4-trimethylpentane	9.97	57	145675	1.75	ppb	95
37) Heptane	10.39	43	47632	1.76	ppb	97
38) Trichloroethene	10.48	130	90714	1.77	ppb	94
39) 1,2-dichloropropane	10.61	63	42643	1.70	ppb	99
40) Bromodichloromethane	11.01	83	148550	1.72	ppb	98
41) cis-1,3-dichloropropene	11.93	75	69919	1.86	ppb	96
42) trans-1,3-dichloropropene	12.75	75	57614	1.78	ppb	93
43) 1,1,2-trichloroethane	13.06	97	68832	1.69	ppb	91
45) Toluene	12.79	92	95963	1.74	ppb	99
46) Methyl Isobutyl Ketone	11.92	43	16012	1.02	ppb	96

(#)= qualifier out of range (m)= manual integration

AJ030523.D A305_1UG.M

Thu Mar 15 13:48:14 2012

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AJ030524.D
 Acq On : 6 Mar 2012 1:44 am
 Sample : AIUG_2.0
 Misc : Method-A305_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 06 08:43:28 2012

Vial: 22
 Operator: RJF
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 08:41:56 2012
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AJ030525.D
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.46	128	21744	1.00	ppb	0.00
30) 1,4-difluorobenzene	9.79	114	89045	1.00	ppb	0.00
44) Chlorobenzene-d5	14.74	117	64627	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	46355	1.03	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	103.00%

Target Compounds

Qvalue

2) Propylene	2.84	41	22804	1.76	ppb	89
3) Freon 12	2.87	85	217007	1.76	ppb	99
4) Chloromethane	3.01	50	53387	1.69	ppb	98
5) Freon 114	3.02	85	194726	1.75	ppb	91
6) Vinyl Chloride	3.14	62	47861	1.73	ppb	98
7) 1,3-butadiene	3.22	39	32722	1.64	ppb	89
8) Bromomethane	3.46	94	69515	1.78	ppb	93
9) Chloroethane	3.57	64	19832	1.73	ppb	99
10) Vinyl Bromide	3.81	106	72941	1.72	ppb	98
11) Freon 11	4.01	101	220119	1.72	ppb	99
12) Acetone	4.18	58	18060	1.72	ppb	# 73
13) Isopropyl alcohol	4.28	45	14655m	1.28	ppb	
14) 1,1-dichloroethene	4.59	96	59901	1.71	ppb	91
15) Freon 113	4.75	101	148963	1.71	ppb	96
16) Methylene chloride	4.97	84	48011	1.67	ppb	94
17) Allyl chloride	4.96	41	47389	1.85	ppb	95
18) Carbon disulfide	5.09	76	151602	1.79	ppb	100
19) trans-1,2-dichloroethene	5.79	61	62757	1.51	ppb	97
20) methyl tert-butyl ether	5.86	73	106572	1.67	ppb	94
21) 1,1-dichloroethane	6.18	63	81724	1.74	ppb	100
22) Vinyl acetate	6.23	43	61257	1.73	ppb	99
23) Methyl Ethyl Ketone	6.70	43	81323	1.82	ppb	91
24) cis-1,2-dichloroethene	7.05	61	58948	1.73	ppb	96
25) Hexane	6.70	41	43648	1.83	ppb	91
26) Ethyl acetate	7.28	43	60198	1.73	ppb	98
27) Chloroform	7.63	83	142518	1.78	ppb	98
28) Tetrahydrofuran	7.83	42	25358	2.06	ppb	# 62
29) 1,2-dichloroethane	8.71	62	93026	1.81	ppb	100
31) 1,1,1-trichloroethane	8.41	97	164190	1.64	ppb	98
32) Cyclohexane	9.10	56	44310	1.59	ppb	# 45
33) Carbon tetrachloride	9.04	117	217959	1.60	ppb	98
34) Benzene	9.01	78	126111	1.62	ppb	99
35) 1,4-dioxane	10.88	88	9393m	1.17	ppb	
36) 2,2,4-trimethylpentane	9.98	57	147437	1.68	ppb	94
37) Heptane	10.40	43	47726	1.67	ppb	97
38) Trichloroethene	10.48	130	89693	1.66	ppb	96
39) 1,2-dichloropropane	10.61	63	43448	1.64	ppb	96
40) Bromodichloromethane	11.01	83	150919	1.66	ppb	98
41) cis-1,3-dichloropropene	11.93	75	67153	1.69	ppb	97
42) trans-1,3-dichloropropene	12.76	75	57025	1.66	ppb	93
43) 1,1,2-trichloroethane	13.06	97	69601	1.62	ppb	95
45) Toluene	12.79	92	96124	1.65	ppb	99
46) Methyl Isobutyl Ketone	11.92	43	18582	1.12	ppb	93

(#) = qualifier out of range (m) = manual integration
 AJ030524.D A305_1UG.M Thu Mar 15 13:48:17 2012

MSD1

Page 1

Centek Laboratories, LLC Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AJ030603.D
 Acq On : 6 Mar 2012 12:39 pm
 Sample : A1UG_1.0
 Misc : Method-A305_1UG
 MS Integration Params: RTEINT.P

Vial: 29
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Thu Mar 15 13:17:17 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	1.000	1.000	0.0	96	0.00
2 T	Propylene	0.621	0.524	15.6	84	0.00
3 T	Freon 12	5.174	4.792	7.4	81	0.00
4 T	Chloromethane	1.371	1.165	15.0	77	0.00
5 T	Freon 114	4.762	4.258	10.6	80	0.00
6 T	Vinyl Chloride	1.335	1.090	18.4	82	0.00
7 T	1,3-butadiene	0.870	0.712	18.2	74	0.00
8 T	Bromomethane	1.774	1.565	11.8	84	0.00
9 T	Chloroethane	0.512	0.424	17.2	77	0.00
10 T	Vinyl Bromide	1.823	1.639	10.1	80	0.00
11 T	Freon 11	5.424	4.874	10.1	79	0.00
12 T	Acetone	0.434	0.410	5.5	79	0.00
13 T	Isopropyl alcohol	0.522	0.776	-48.7#	157#	0.00
14 T	1,1-dichloroethene	1.512	1.452	4.0	86	0.00
15 T	Freon 113	3.695	3.388	8.3	81	0.00
16 T	Methylene chloride	1.213	0.932	23.2	67	0.00
17 T	Allyl chloride	1.072	0.768	28.4	63	0.00
18 T	Carbon disulfide	3.619	2.875	20.6	71	0.00
19 T	trans-1,2-dichloroethene	1.610	1.413	12.2	71	0.00
20 T	methyl tert-butyl ether	2.534	2.184	13.8	71	0.00
21 T	1,1-dichloroethane	1.936	1.850	4.4	82	0.00
22 T	Vinyl acetate	1.488	1.216	18.3	71	0.00
23 T	Methyl Ethyl Ketone	1.937	1.631	15.8	76	0.00
24 T	cis-1,2-dichloroethene	1.445	1.313	9.1	80	0.00
25 T	Hexane	1.118	0.962	14.0	84	0.00
26 T	Ethyl acetate	1.445	1.292	10.6	77	0.00
27 T	Chloroform	3.489	3.105	11.0	81	0.00
28 T	Tetrahydrofuran	0.595	0.468	21.3	79	0.00
29 T	1,2-dichloroethane	2.227	2.010	9.7	81	0.00
30 I	1,4-difluorobenzene	1.000	1.000	0.0	102	0.00
31 T	1,1,1-trichloroethane	1.030	0.923	10.4	84	0.00
32 T	Cyclohexane	0.279	0.236	15.4	77	0.00
33 T	Carbon tetrachloride	1.457	1.177	19.2	79	0.00
34 T	Benzene	0.809	0.725	10.4	85	0.00
35 T	1,4-dioxane	0.076	0.082	-7.9	104	0.00
36 T	2,2,4-trimethylpentane	0.884	0.790	10.6	82	0.00
37 T	Heptane	0.280	0.253	9.6	80	0.00
38 T	Trichloroethene	0.596	0.482	19.1	81	0.00
39 T	1,2-dichloropropane	0.267	0.251	6.0	86	0.00
40 T	Bromodichloromethane	0.932	0.796	14.6	80	0.00
41 T	cis-1,3-dichloropropene	0.398	0.388	2.5	89	0.00
42 T	trans-1,3-dichloropropene	0.346	0.318	8.1	84	0.00
43 T	1,1,2-trichloroethane	0.442	0.367	17.0	78	0.00
44 I	Chlorobenzene-d5	1.000	1.000	0.0	103	0.00
45 T	Toluene	0.807	0.721	10.7	82	0.00
46 T	Methyl Isobutyl Ketone	0.227	0.288	-26.9	115	0.00
47 T	Dibromochloromethane	1.589	1.326	16.6	78	0.00
48 T	Methyl Butyl Ketone	0.154	0.197	-27.9	118	0.00
49 T	1,2-dibromoethane	1.015	0.863	15.0	80	0.00

(#) = Out of Range

AJ030603.D A305_1UG.M

Thu Mar 15 13:36:51 2012

MSD1

Page 1

Centek Laboratories, LLC Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AJ030603.D Vial: 29
 Acq On : 6 Mar 2012 12:39 pm Operator: RJP
 Sample : AIUG_1.0 Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Thu Mar 15 13:17:17 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
50 T	Tetrachloroethylene	0.939	0.810	13.7	81	0.00
51 T	Chlorobenzene	1.333	1.174	11.9	80	0.00
52 T	Ethylbenzene	1.758	1.493	15.1	76	0.00
53 T	m&p-xylene	1.478	1.294	12.4	78	0.00
54 T	Styrene	0.963	0.847	12.0	82	0.00
55 T	Bromoform	1.508	1.131	25.0	71	0.00
56 T	o-xylene	1.630	1.399	14.2	78	0.00
57 S	Bromofluorobenzene	0.672	0.654	2.7	97	0.00
58 T	1,1,2,2-tetrachloroethane	1.117	0.963	13.8	80	0.00
59 T	4-ethyltoluene	1.739	1.577	9.3	84	0.00
60 T	1,3,5-trimethylbenzene	1.779	1.540	13.4	76	0.00
61 T	1,2,4-trimethylbenzene	1.444	1.318	8.7	84	0.00
62 T	1,3-dichlorobenzene	1.363	1.244	8.7	86	0.00
63 T	benzyl chloride	0.711	0.684	3.8	93	0.00
64 T	1,4-dichlorobenzene	1.310	1.222	6.7	88	0.00
65 T	1,2-dichlorobenzene	1.248	1.118	10.4	88	0.00
66 T	1,2,4-trichlorobenzene	0.433	0.546	-26.1	128	0.00
67 T	Naphthalene	0.523	0.799	-52.8#	162#	0.00
68 T	Hexachloro-1,3-butadiene	0.626	0.853	-36.3#	160#	0.00

(#) = Out of Range
 AJ030603.D A305_1UG.M

SPCC's out = 0 CCC's out = 0
 Thu Mar 15 13:36:51 2012 MSD1

Page 2

Data File : C:\HPCHEM\1\DATA\AJ030603.D

Vial: 29

Acq On : 6 Mar 2012 12:39 pm

Operator: RJP

Sample : A1UG_1.0

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 06 13:57:38 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.49	128	22565	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.81	114	90580	1.00	ppb	0.01
44) Chlorobenzene-d5	14.74	117	63490	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	41545	0.97	ppb	0.01
Spiked Amount	1.000	Range 70 - 130	Recovery	=	97.00%	

Target Compounds

Qvalue

2) Propylene	2.85	41	11835	0.85	ppb	88
3) Freon 12	2.88	85	108136	0.93	ppb	100
4) Chloromethane	3.02	50	26277	0.85	ppb	97
5) Freon 114	3.03	85	96079	0.89	ppb	94
6) Vinyl Chloride	3.15	62	24591	0.82	ppb	99
7) 1,3-butadiene	3.23	39	16069	0.82	ppb	95
8) Bromomethane	3.47	94	35324	0.88	ppb	97
9) Chloroethane	3.59	64	9577	0.83	ppb	88
10) Vinyl Bromide	3.82	106	36988	0.90	ppb	99
11) Freon 11	4.02	101	109971	0.90	ppb	99
12) Acetone	4.20	58	9256	0.95	ppb	# 56
13) Isopropyl alcohol	4.28	45	17520m	1.49	ppb	
14) 1,1-dichloroethene	4.60	96	32771	0.96	ppb	# 86
15) Freon 113	4.77	101	76457	0.92	ppb	96
16) Methylene chloride	4.99	84	21026	0.77	ppb	97
17) Allyl chloride	4.97	41	17330	0.72	ppb	90
18) Carbon disulfide	5.10	76	64865	0.79	ppb	99
19) trans-1,2-dichloroethene	5.81	61	31882	0.88	ppb	98
20) methyl tert-butyl ether	5.88	73	49274	0.86	ppb	96
21) 1,1-dichloroethane	6.19	63	41741	0.96	ppb	98
22) Vinyl acetate	6.26	43	27441	0.82	ppb	96
23) Methyl Ethyl Ketone	6.72	43	36806	0.84	ppb	97
24) cis-1,2-dichloroethene	7.06	61	29628	0.91	ppb	98
25) Hexane	6.71	41	21711	0.86	ppb	97
26) Ethyl acetate	7.31	43	29151	0.89	ppb	98
27) Chloroform	7.65	83	70065	0.89	ppb	96
28) Tetrahydrofuran	7.85	42	10561	0.79	ppb	# 54
29) 1,2-dichloroethane	8.72	62	45364	0.90	ppb	98
31) 1,1,1-trichloroethane	8.42	97	83626	0.90	ppb	98
32) Cyclohexane	9.12	56	21389	0.85	ppb	# 45
33) Carbon tetrachloride	9.06	117	106642	0.81	ppb	99
34) Benzene	9.03	78	65664	0.90	ppb	96
35) 1,4-dioxane	10.90	88	7466m	1.09	ppb	
36) 2,2,4-trimethylpentane	10.00	57	71557	0.89	ppb	93
37) Heptane	10.41	43	22901	0.90	ppb	96
38) Trichloroethene	10.50	130	43700	0.81	ppb	95
39) 1,2-dichloropropane	10.62	63	22708	0.94	ppb	88
40) Bromodichloromethane	11.02	83	72140	0.85	ppb	97
41) cis-1,3-dichloropropene	11.95	75	35103	0.97	ppb	98
42) trans-1,3-dichloropropene	12.77	75	28767	0.92	ppb	94
43) 1,1,2-trichloroethane	13.08	97	33229	0.83	ppb	93
45) Toluene	12.80	92	45808	0.89	ppb	99
46) Methyl Isobutyl Ketone	11.93	43	18278m	1.27	ppb	

(#)=qualifier out of range (m)=manual integration

AJ030603.D A305_1UG.M

Thu Mar 15 13:37:04 2012

MSDL

Page 1

Centek Laboratories, LLC Final Report Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AJ030702.D
 Acq On : 7 Mar 2012 2:13 pm
 Sample : A1UG_1.0
 Misc : Method-A305_1UG
 MS Integration Params: RTEINT.P

Vial: 48
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Thu Mar 15 13:17:18 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	1.000	1.000	0.0	102	-0.01
2 T	Propylene	0.621	0.613	1.3	105	0.00
3 T	Freon 12	5.174	5.219	-0.9	94	0.00
4 T	Chloromethane	1.371	1.345	1.9	95	0.00
5 T	Freon 114	4.762	4.555	4.3	91	0.00
6 T	Vinyl Chloride	1.335	1.186	11.2	96	0.00
7 T	1,3-butadiene	0.870	0.813	6.6	91	0.00
8 T	Bromomethane	1.774	1.578	11.0	90	0.00
9 T	Chloroethane	0.512	0.511	0.2	99	0.00
10 T	Vinyl Bromide	1.823	1.721	5.6	90	-0.01
11 T	Freon 11	5.424	5.006	7.7	87	-0.01
12 T	Acetone	0.434	0.508	-17.1	105	0.00
13 T	Isopropyl alcohol	0.522	0.635	-21.6	137	0.00
14 T	1,1-dichloroethene	1.512	1.388	8.2	88	0.00
15 T	Freon 113	3.695	3.454	6.5	88	-0.01
16 T	Methylene chloride	1.213	1.103	9.1	85	-0.01
17 T	Allyl chloride	1.072	1.036	3.4	90	-0.01
18 T	Carbon disulfide	3.619	3.224	10.9	85	0.00
19 T	trans-1,2-dichloroethene	1.610	1.575	2.2	84	-0.01
20 T	methyl tert-butyl ether	2.534	2.447	3.4	85	0.00
21 T	1,1-dichloroethane	1.936	1.953	-0.9	93	0.00
22 T	Vinyl acetate	1.488	1.424	4.3	89	0.00
23 T	Methyl Ethyl Ketone	1.937	1.855	4.2	93	0.00
24 T	cis-1,2-dichloroethene	1.445	1.416	2.0	92	0.00
25 T	Hexane	1.118	1.043	6.7	97	0.00
26 T	Ethyl acetate	1.445	1.387	4.0	89	0.00
27 T	Chloroform	3.489	3.425	1.8	95	0.00
28 T	Tetrahydrofuran	0.595	0.519	12.8	94	0.00
29 T	1,2-dichloroethane	2.227	2.105	5.5	91	-0.01
30 I	1,4-difluorobenzene	1.000	1.000	0.0	102	0.00
31 T	1,1,1-trichloroethane	1.030	1.037	-0.7	94	0.00
32 T	Cyclohexane	0.279	0.294	-5.4	96	-0.01
33 T	Carbon tetrachloride	1.457	1.372	5.8	91	0.00
34 T	Benzene	0.809	0.805	0.5	94	0.00
35 T	1,4-dioxane	0.076	0.059	22.4	75	0.00
36 T	2,2,4-trimethylpentane	0.884	0.900	-1.8	93	0.00
37 T	Heptane	0.280	0.288	-2.9	91	0.00
38 T	Trichloroethene	0.596	0.603	-1.2	101	0.00
39 T	1,2-dichloropropane	0.267	0.269	-0.7	92	0.00
40 T	Bromodichloromethane	0.932	0.936	-0.4	94	0.00
41 T	cis-1,3-dichloropropene	0.398	0.427	-7.3	98	0.00
42 T	trans-1,3-dichloropropene	0.346	0.367	-6.1	98	0.00
43 T	1,1,2-trichloroethane	0.442	0.442	0.0	94	0.00
44 I	Chlorobenzene-d5	1.000	1.000	0.0	108	0.00
45 T	Toluene	0.807	0.804	0.4	96	0.00
46 T	Methyl Isobutyl Ketone	0.227	0.202	11.0	84	0.02
47 T	Dibromochloromethane	1.589	1.359	14.5	83	0.00
48 T	Methyl Butyl Ketone	0.154	0.075	51.3#	47#	0.08
49 T	1,2-dibromoethane	1.015	0.981	3.3	94	0.00

(#) = Out of Range

AJ030702.D A305_1UG.M

Thu Mar 15 13:40:32 2012

MSD1

Page 1

Centek Laboratories, LLC Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AJ030702.D Vial: 48
 Acq On : 7 Mar 2012 2:13 pm Operator: RJP
 Sample : A1UG_1.0 Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Thu Mar 15 13:17:18 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
50 T	Tetrachloroethylene	0.939	0.907	3.4	94	0.00
51 T	Chlorobenzene	1.333	1.306	2.0	93	0.00
52 T	Ethylbenzene	1.758	1.665	5.3	89	0.00
53 T	m&p-xylene	1.478	1.454	1.6	91	0.00
54 T	Styrene	0.963	0.971	-0.8	98	0.00
55 T	Bromoform	1.508	1.066	29.3	70	0.00
56 T	o-xylene	1.630	1.594	2.2	93	0.00
57 S	Bromofluorobenzene	0.672	0.700	-4.2	108	0.00
58 T	1,1,2,2-tetrachloroethane	1.117	1.120	-0.3	97	0.00
59 T	4-ethyltoluene	1.739	1.765	-1.5	98	0.00
60 T	1,3,5-trimethylbenzene	1.779	1.746	1.9	90	0.00
61 T	1,2,4-trimethylbenzene	1.444	1.446	-0.1	96	0.00
62 T	1,3-dichlorobenzene	1.363	1.314	3.6	95	0.00
63 T	benzyl chloride	0.711	0.761	-7.0	108	0.00
64 T	1,4-dichlorobenzene	1.310	1.329	-1.5	99	0.00
65 T	1,2-dichlorobenzene	1.248	1.290	-3.4	106	0.00
66 T	1,2,4-trichlorobenzene	0.433	0.600	-38.6	147	0.00
67 T	Naphthalene	0.523	0.597	-14.1	127	0.00
68 T	Hexachloro-1,3-butadiene	0.626	0.911	-45.5	179	0.00

(#) = Out of Range
 AJ030702.D A305_1UG.M

SPCC's out = 0 CCC's out = 0
 Thu Mar 15 13:40:32 2012 MSD1

Page 2

Data File : C:\HPCHEM\1\DATA\AJ030702.D

Vial: 48

Acq On : 7 Mar 2012 2:13 pm

Operator: RJP

Sample : A1UG_1.0

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 07 14:35:06 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.48	128	24103	1.00	ppb	0.00
30) 1,4-difluorobenzene	9.80	114	90492	1.00	ppb	0.00
44) Chlorobenzene-d5	14.74	117	66281	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	46406	1.04	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	104.00%

Target Compounds

						Qvalue
2) Propylene	2.84	41	14770	0.99	ppb	88
3) Freon 12	2.88	85	125788	1.01	ppb	99
4) Chloromethane	3.02	50	32425	0.98	ppb	96
5) Freon 114	3.02	85	109796	0.96	ppb	91
6) Vinyl Chloride	3.15	62	28578	0.89	ppb	98
7) 1,3-butadiene	3.22	39	19603	0.93	ppb	93
8) Bromomethane	3.46	94	38024	0.89	ppb	98
9) Chloroethane	3.58	64	12322	1.00	ppb	94
10) Vinyl Bromide	3.81	106	41482	0.94	ppb	92
11) Freon 11	4.01	101	120665	0.92	ppb	98
12) Acetone	4.20	58	12252	1.17	ppb	# 53
13) Isopropyl alcohol	4.28	45	15311	1.22	ppb	# 100
14) 1,1-dichloroethene	4.59	96	33449	0.92	ppb	89
15) Freon 113	4.76	101	83257	0.93	ppb	100
16) Methylene chloride	4.97	84	26595	0.91	ppb	95
17) Allyl chloride	4.96	41	24964	0.97	ppb	90
18) Carbon disulfide	5.10	76	77717	0.89	ppb	98
19) trans-1,2-dichloroethene	5.80	61	37971	0.98	ppb	98
20) methyl tert-butyl ether	5.87	73	58969	0.97	ppb	100
21) 1,1-dichloroethane	6.19	63	47076	1.01	ppb	96
22) Vinyl acetate	6.25	43	34329	0.96	ppb	98
23) Methyl Ethyl Ketone	6.72	43	44707	0.96	ppb	92
24) cis-1,2-dichloroethene	7.06	61	34135	0.98	ppb	93
25) Hexane	6.71	41	25128	0.93	ppb	94
26) Ethyl acetate	7.31	43	33434	0.96	ppb	98
27) Chloroform	7.64	83	82554	0.98	ppb	99
28) Tetrahydrofuran	7.85	42	12519	0.87	ppb	# 59
29) 1,2-dichloroethane	8.71	62	50730	0.94	ppb	100
31) 1,1,1-trichloroethane	8.42	97	93822	1.01	ppb	99
32) Cyclohexane	9.11	56	26587	1.05	ppb	# 54
33) Carbon tetrachloride	9.05	117	124184	0.94	ppb	99
34) Benzene	9.02	78	72862	1.00	ppb	98
35) 1,4-dioxane	10.91	88	5373m	0.78	ppb	
36) 2,2,4-trimethylpentane	9.99	57	81465	1.02	ppb	94
37) Heptane	10.41	43	26059	1.03	ppb	96
38) Trichloroethene	10.50	130	54564	1.01	ppb	89
39) 1,2-dichloropropane	10.62	63	24359	1.01	ppb	98
40) Bromodichloromethane	11.02	83	84736	1.00	ppb	97
41) cis-1,3-dichloropropene	11.94	75	38625	1.07	ppb	99
42) trans-1,3-dichloropropene	12.76	75	33208	1.06	ppb	94
43) 1,1,2-trichloroethane	13.07	97	40000	1.00	ppb	91
45) Toluene	12.80	92	53297	1.00	ppb	100
46) Methyl Isobutyl Ketone	11.94	43	13391m	0.89	ppb	

(#)= qualifier out of range (m) = manual integration

AJ030702.D A305_1UG.M

Thu Mar 15 13:40:37 2012

MSD1

Page 1

Centek Laboratories, LLC

Small Scale Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AJ030802.D
 Acq On : 8 Mar 2012 11:55 am
 Sample : A1UG 1.0
 Misc : Method-A305 1UG
 MS Integration Params: RTEINT.P

Vial: 2
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Thu Mar 15 13:17:18 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	1.000	1.000	0.0	95	0.00
2 T	Propylene	0.621	0.628	-1.1	100	0.00
3 T	Freon 12	5.174	5.012	3.1	84	0.00
4 T	Chloromethane	1.371	1.339	2.3	88	0.00
5 T	Freon 114	4.762	4.680	1.7	87	0.00
6 T	Vinyl Chloride	1.335	1.236	7.4	92	0.00
7 T	1,3-butadiene	0.870	0.680	21.8	70	0.00
8 T	Bromomethane	1.774	1.721	3.0	91	0.00
9 T	Chloroethane	0.512	0.525	-2.5	94	0.00
10 T	Vinyl Bromide	1.823	1.605	12.0	78	0.00
11 T	Freon 11	5.424	5.062	6.7	82	0.00
12 T	Acetone	0.434	0.450	-3.7	86	0.02
13 T	Isopropyl alcohol	0.522	0.568	-8.8	113	0.02
14 T	1,1-dichloroethane	1.512	1.237	18.2	73	0.00
15 T	Freon 113	3.695	3.276	11.3	78	0.00
16 T	Methylene chloride	1.213	1.023	15.7	73	0.00
17 T	Allyl chloride	1.072	0.813	24.2	66	0.00
18 T	Carbon disulfide	3.619	3.031	16.2	74	0.00
19 T	trans-1,2-dichloroethene	1.610	1.512	6.1	75	0.00
20 T	methyl tert-butyl ether	2.534	2.274	10.3	73	0.00
21 T	1,1-dichloroethane	1.936	1.881	2.8	83	0.00
22 T	Vinyl acetate	1.488	1.359	8.7	79	0.02
23 T	Methyl Ethyl Ketone	1.937	1.483	23.4	69	-0.02
24 T	cis-1,2-dichloroethane	1.445	1.393	3.6	84	0.00
25 T	Hexane	1.118	0.978	12.5	85	0.00
26 T	Ethyl acetate	1.445	1.110	23.2	66	0.00
27 T	Chloroform	3.489	3.390	2.8	87	0.00
28 T	Tetrahydrofuran	0.595	0.515	13.4	87	0.02
29 T	1,2-dichloroethane	2.227	2.110	5.3	85	0.00
30 I	1,4-difluorobenzene	1.000	1.000	0.0	92	0.00
31 T	1,1,1-trichloroethane	1.030	1.024	0.6	84	0.00
32 T	Cyclohexane	0.279	0.283	-1.4	83	0.00
33 T	Carbon tetrachloride	1.457	1.359	6.7	82	0.00
34 T	Benzene	0.809	0.817	-1.0	86	0.00
35 T	1,4-dioxane	0.076	0.068	10.5	78	0.02
36 T	2,2,4-trimethylpentane	0.884	0.906	-2.5	85	0.00
37 T	Heptane	0.280	0.291	-3.9	83	0.01
38 T	Trichloroethane	0.596	0.555	6.9	84	0.00
39 T	1,2-dichloropropane	0.267	0.270	-1.1	83	0.00
40 T	Bromodichloromethane	0.932	0.935	-0.3	84	0.00
41 T	cis-1,3-dichloropropene	0.398	0.414	-4.0	85	0.00
42 T	trans-1,3-dichloropropene	0.346	0.347	-0.3	83	0.00
43 T	1,1,2-trichloroethane	0.442	0.441	0.2	84	0.00
44 I	Chlorobenzene-d5	1.000	1.000	0.0	101	0.00
45 T	Toluene	0.807	0.723	10.4	81	0.00
46 T	Methyl Isobutyl Ketone	0.227	0.199	12.3	78	0.02
47 T	Dibromochloromethane	1.589	1.222	23.1	70	0.00
48 T	Methyl Butyl Ketone	0.154	0.118	23.4	69	0.04
49 T	1,2-dibromoethane	1.015	0.924	9.0	83	0.00

(#) = Out of Range

AJ030802.D A305_1UG.M

Thu Mar 15 13:44:42 2012

MSD1

Page 1

Centek Laboratories, LLC Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AJ030802.D Vial: 2
 Acq On : 8 Mar 2012 11:55 am Operator: RJP
 Sample : A1UG_1.0 Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Thu Mar 15 13:17:18 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area	% Dev(min)
50 T	Tetrachloroethylene	0.939	0.827	11.9	81	0.00
51 T	Chlorobenzene	1.333	1.172	12.1	78	0.00
52 T	Ethylbenzene	1.758	1.564	11.0	78	0.00
53 T	m&p-xylene	1.478	1.362	7.8	80	0.00
54 T	Styrene	0.963	0.823	14.5	78	0.00
55 T	Bromoform	1.508	0.820	45.6#	50	0.00
56 T	o-xylene	1.630	1.617	0.8	88	0.00
57 S	Bromofluorobenzene	0.672	0.658	2.1	95	0.00
58 T	1,1,2,2-tetrachloroethane	1.117	1.034	7.4	83	0.00
59 T	4-ethyltoluene	1.739	1.489	14.4	77	0.00
60 T	1,3,5-trimethylbenzene	1.779	1.583	11.0	76	0.00
61 T	1,2,4-trimethylbenzene	1.444	1.266	12.3	78	0.00
62 T	1,3-dichlorobenzene	1.363	1.125	17.5	76	0.00
63 T	benzyl chloride	0.711	0.579	18.6	77	0.00
64 T	1,4-dichlorobenzene	1.310	1.062	18.9	74	0.00
65 T	1,2-dichlorobenzene	1.248	1.052	15.7	81	0.00
66 T	1,2,4-trichlorobenzene	0.433	0.361	16.6	83	0.00
67 T	Naphthalene	0.523	0.433	17.2	86	0.00
68 T	Hexachloro-1,3-butadiene	0.626	0.592	5.4	109	0.00

(#) = Out of Range
 AJ030802.D A305_1UG.M

SPCC's out = 0 CCC's out = 0
 Thu Mar 15 13:44:42 2012 MSD1

Page 2

Data File : C:\HPCHEM\1\DATA\AJ030802.D

Vial: 2

Acq On : 8 Mar 2012 11:55 am

Operator: RJP

Sample : A1UG_1.0

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 08 12:16:21 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.49	128	22335	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.81	114	81586	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	61984	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	40816	0.98	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	98.00%

Target Compounds

Qvalue

2) Propylene	2.85	41	14029	1.01	ppb	88
3) Freon 12	2.88	85	111944	0.97	ppb	100
4) Chloromethane	3.02	50	29912	0.98	ppb	93
5) Freon 114	3.03	85	104538	0.98	ppb	90
6) Vinyl Chloride	3.16	62	27598	0.93	ppb	93
7) 1,3-butadiene	3.23	39	15180	0.78	ppb	92
8) Bromomethane	3.47	94	38435	0.97	ppb	93
9) Chloroethane	3.58	64	11716	1.02	ppb	99
10) Vinyl Bromide	3.82	106	35837	0.88	ppb	88
11) Freon 11	4.02	101	113062	0.93	ppb	99
12) Acetone	4.23	58	10057	1.04	ppb	# 84
13) Isopropyl alcohol	4.30	45	12680	1.09	ppb	# 100
14) 1,1-dichloroethene	4.60	96	27619	0.82	ppb	95
15) Freon 113	4.77	101	73171	0.89	ppb	99
16) Methylene chloride	4.98	84	22852	0.84	ppb	96
17) Allyl chloride	4.97	41	18156	0.76	ppb	92
18) Carbon disulfide	5.11	76	67688	0.84	ppb	97
19) trans-1,2-dichloroethene	5.81	61	33772	0.94	ppb	97
20) methyl tert-butyl ether	5.89	73	50782	0.90	ppb	96
21) 1,1-dichloroethane	6.20	63	42015	0.97	ppb	98
22) Vinyl acetate	6.28	43	30343	0.91	ppb	100
23) Methyl Ethyl Ketone	6.70	43	33128	0.77	ppb	96
24) cis-1,2-dichloroethene	7.06	61	31104	0.96	ppb	98
25) Hexane	6.71	41	21850	0.87	ppb	88
26) Ethyl acetate	7.32	43	24798	0.77	ppb	95
27) Chloroform	7.65	83	75714	0.97	ppb	99
28) Tetrahydrofuran	7.87	42	11512	0.87	ppb	# 69
29) 1,2-dichloroethane	8.72	62	47133	0.95	ppb	99
31) 1,1,1-trichloroethane	8.42	97	83508	0.99	ppb	99
32) Cyclohexane	9.12	56	23086	1.02	ppb	# 44
33) Carbon tetrachloride	9.06	117	110901	0.93	ppb	99
34) Benzene	9.03	78	66693	1.01	ppb	97
35) 1,4-dioxane	10.92	88	5586m	0.90	ppb	
36) 2,2,4-trimethylpentane	9.99	57	73908	1.02	ppb	94
37) Heptane	10.42	43	23726	1.04	ppb	94
38) Trichloroethene	10.50	130	45295	0.93	ppb	93
39) 1,2-dichloropropane	10.62	63	22033	1.01	ppb	98
40) Bromodichloromethane	11.02	83	76318	1.00	ppb	99
41) cis-1,3-dichloropropene	11.96	75	33743	1.04	ppb	97
42) trans-1,3-dichloropropene	12.76	75	28324	1.00	ppb	97
43) 1,1,2-trichloroethane	13.08	97	35948	1.00	ppb	94
45) Toluene	12.80	92	44826	0.90	ppb	94
46) Methyl Isobutyl Ketone	11.95	43	12357	0.88	ppb	96

(#)=qualifier out of range (m)=manual integration

AJ030802.D A305_1UG.M

Thu Mar 15 13:44:48 2012

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AJ030502.D

Acq On : 5 Mar 2012 1:10 pm

Sample : BFB1UG

Misc : Method-A305_1UG

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

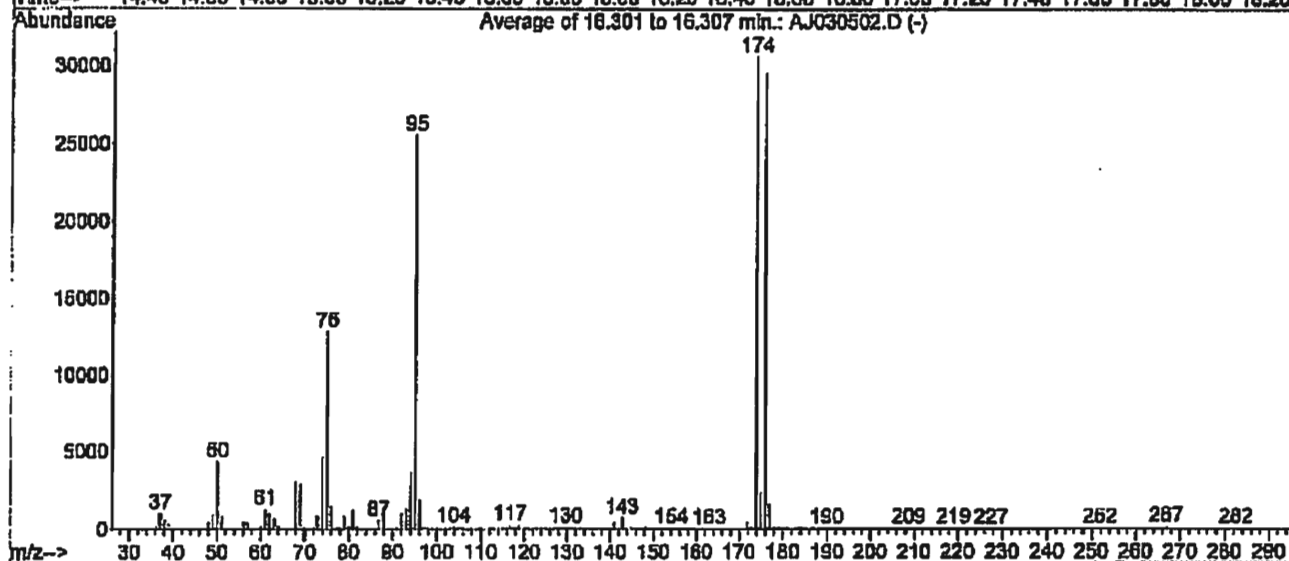
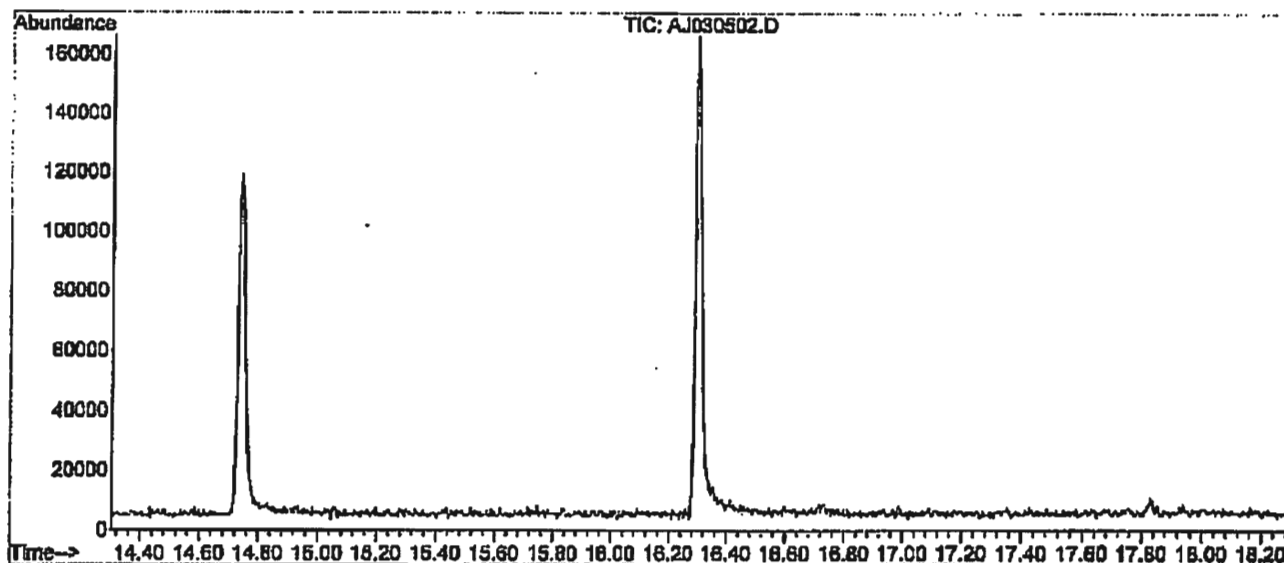
Title : TO-15 VOA Standards for 5 point calibration

Vial: 2

Operator: RJP

Inst : MSD #1

Multiplr: 1.00



Spectrum Information: Average of 16.301 to 16.307 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.1	4379	PASS
75	95	30	66	50.2	12833	PASS
95	95	100	100	100.0	25557	PASS
96	95	5	9	7.3	1878	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	119.8	30629	PASS
175	174	4	9	7.7	2345	PASS
176	174	95	101	96.6	29586	PASS
177	176	5	9	5.3	1571	PASS

Data File : C:\HPCHEM\1\DATA\AJ030601.D

Acq On : 6 Mar 2012 11:24 am

Sample : BFB1UG

Misc : Method-A305_1UG

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

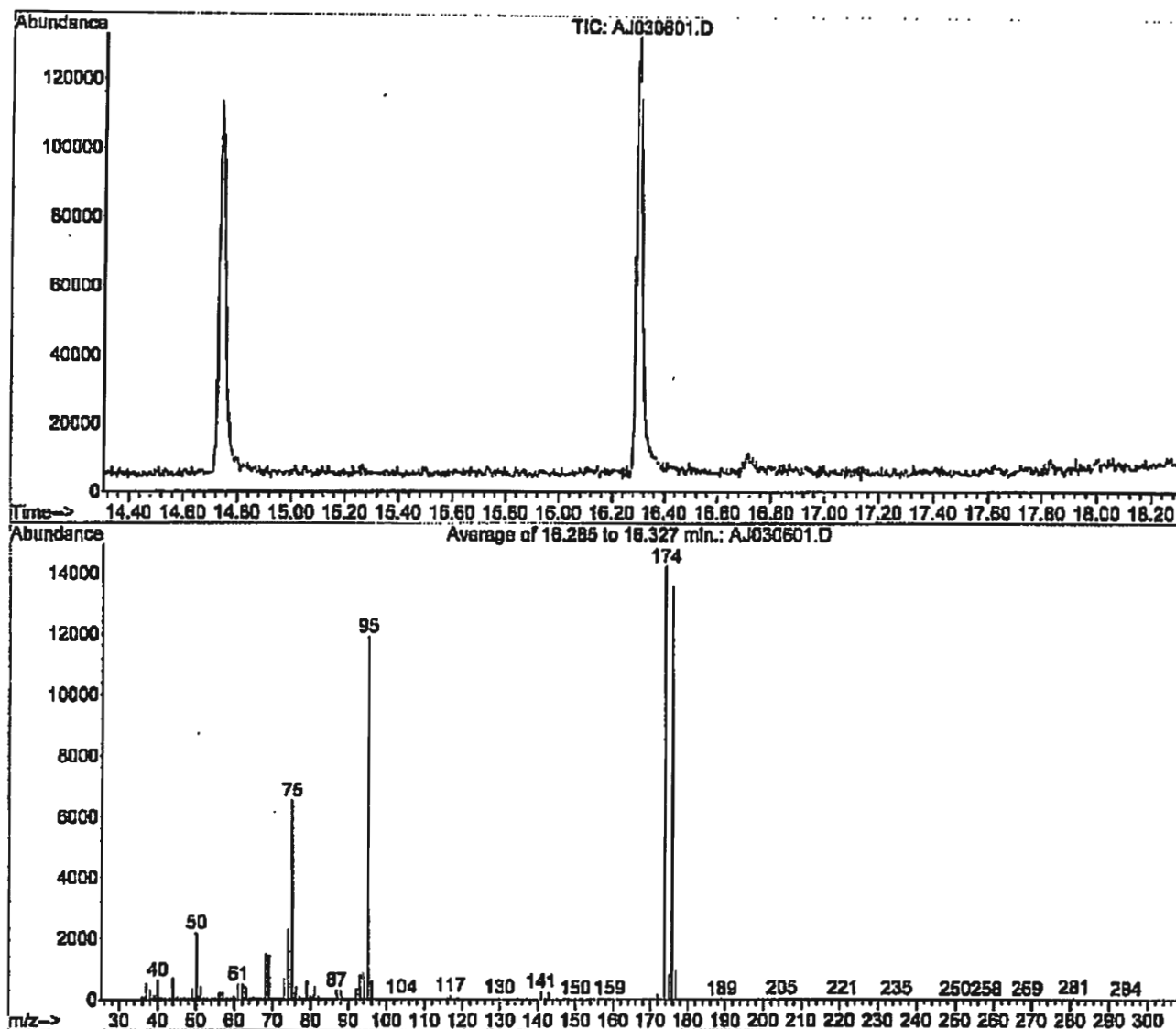
Title : TO-15 VOA Standards for 5 point calibration

Vial: 27

Operator: RJP

Inst : MSD #1

Multiplr: 1.00



Spectrum Information: Average of 16.285 to 16.327 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.4	2188	PASS
75	95	30	66	54.7	6525	PASS
95	95	100	100	100.0	11920	PASS
96	95	5	9	5.0	601	PASS
173	174	0.00	2	0.2	25	PASS
174	95	50	120	119.5	14249	PASS
175	174	4	9	5.7	809	PASS
176	174	95	101	95.4	13596	PASS
177	176	5	9	6.9	932	PASS

Data File : C:\HPCHEM\1\DATA\AJ030701.D

Acq On : 7 Mar 2012 12:08 pm

Sample : BFB1UG

Misc : Method-A305_1UG

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

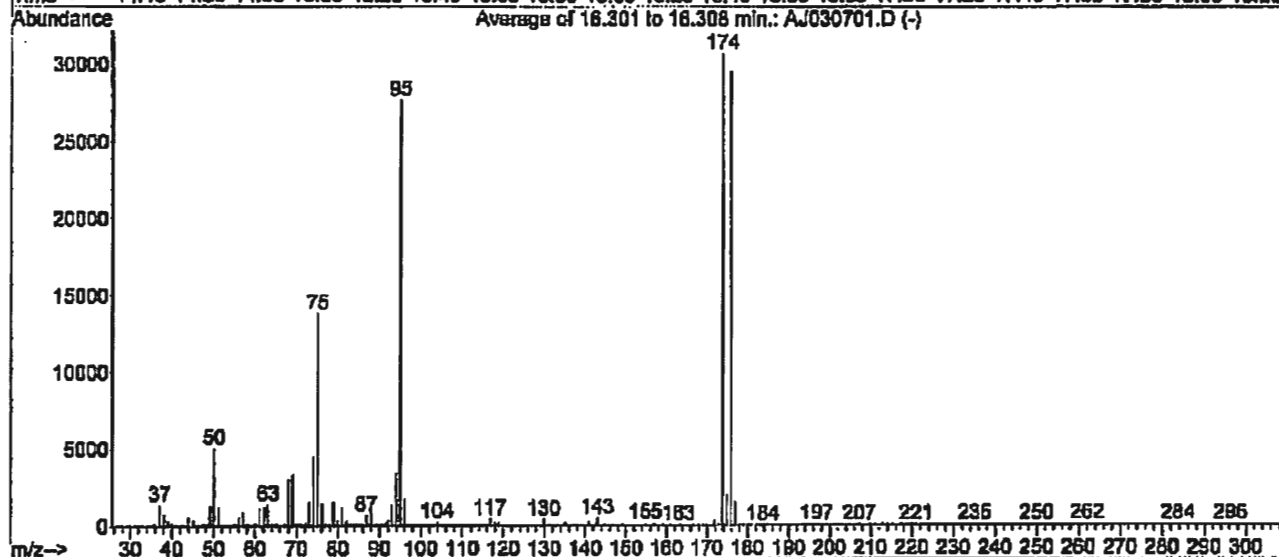
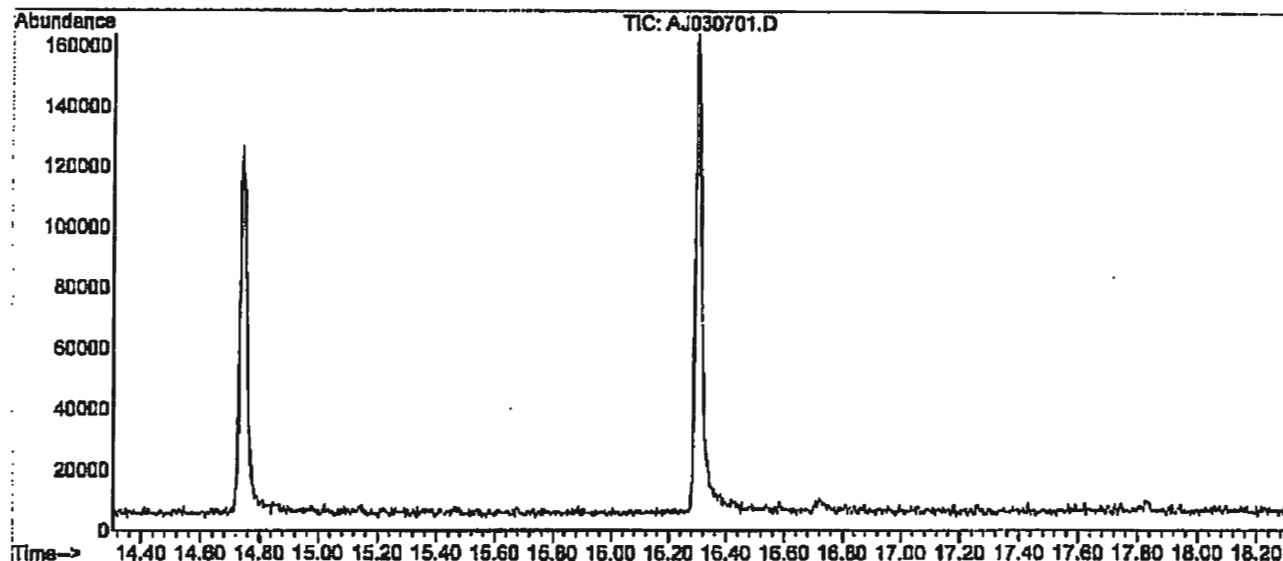
Title : TO-15 VOA Standards for 5 point calibration

Vial: 47

Operator: RJP

Inst : MSD #1

Multiplr: 1.00



Spectrum Information: Average of 16.301 to 16.308 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.3	5054	PASS
75	95	30	66	49.9	13807	PASS
95	95	100	100	100.0	27676	PASS
96	95	5	9	6.3	1745	PASS
173	174	0.00	2	0.4	134	PASS
174	95	50	120	110.8	30672	PASS
175	174	4	9	6.4	1956	PASS
176	174	95	101	96.2	29509	PASS
177	176	5	9	5.1	1508	PASS

Data File : C:\HPCHEM\1\DATA\AJ030801.D

Vial: 1

Acq On : 8 Mar 2012 11:19 am

Operator: RJP

Sample : BFB / AMB1UG-030812

Inst : MSD #1

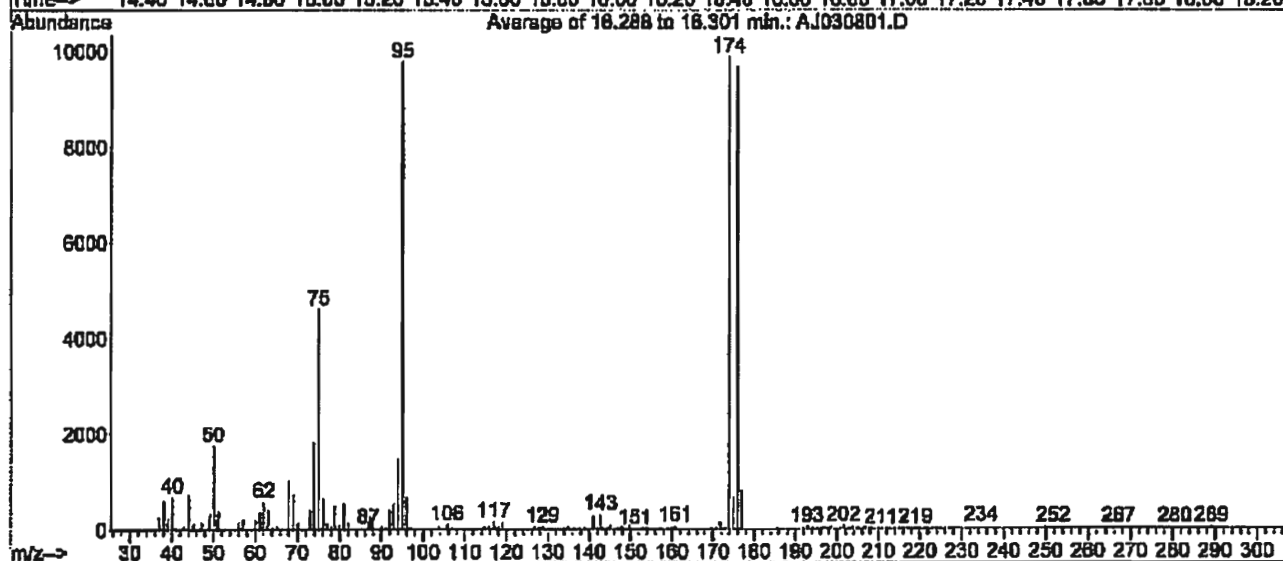
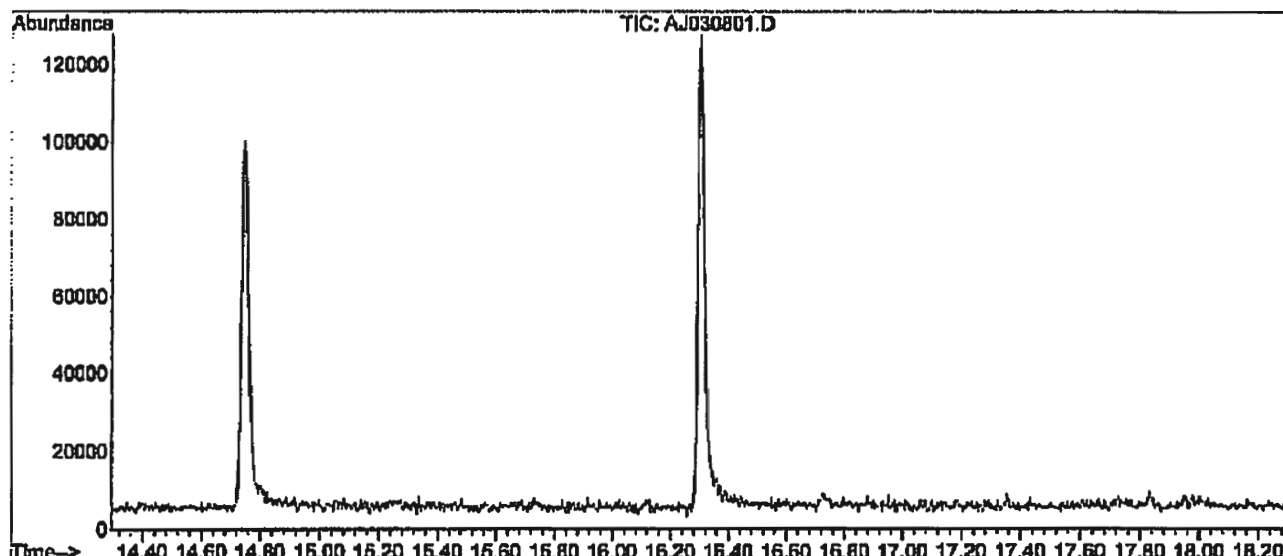
Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration



Spectrum Information: Average of 16.288 to 16.301 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.9	1753	PASS
75	95	30	66	47.2	4613	PASS
95	95	100	100	100.0	9781	PASS
96	95	5	9	7.0	684	PASS
173	174	0.00	2	0.4	43	PASS
174	95	50	120	101.1	9886	PASS
175	174	4	9	6.8	677	PASS
176	174	95	101	97.8	9664	PASS
177	176	5	9	8.3	802	PASS

Data File : C:\HPCHEM\1\DATA\AJ030640.D

Vial: 45

Acq On : 7 Mar 2012 10:40 am

Operator: RJP

Sample : C1203005-001A

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.F

Quant Results File: A305_1UG.RES

Quant Time: Mar 07 11:01:45 2012

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.49	128	23937	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.81	114	102808	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	72865	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	52165	1.07	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	107.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
38) Trichloroethene	10.51	130	126316	2.06	ppb	96
50) Tetrachloroethylene	13.84	164	237205	3.47	ppb	98

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030640.D A305_1UG.M Thu Mar 15 13:20:06 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030725.D

Vial: 68

Acq On : 8 Mar 2012 8:27 am

Operator: RJP

Sample : C1203005-001A 5x

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 08 08:48:13 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.49	128	21720	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.82	114	84992	1.00	ppb	0.02
44) Chlorobenzene-d5	14.75	117	60110	1.00	ppb	0.01
System Monitoring Compounds						
57) Bromofluorobenzene	16.30	95	37395	0.93	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	93.00%
Target Compounds						Qvalue
50) Tetrachloroethylene	13.84	164	49526	0.88	ppb	94

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030725.D A305_1UG.M Thu Mar 15 13:20:50 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030628.D

Vial: 5

Acq On : 7 Mar 2012 3:58 am

Operator: RJP

Sample : C1203005-002A

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 07 04:19:22 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.48	128	23791	1.00	ppb	0.00
30) 1,4-difluorobenzene	9.80	114	109511	1.00	ppb	0.00
44) Chlorobenzene-d5	14.74	117	79112	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	60736m	1.14	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	114.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
38) Trichloroethene	10.49	130	30624	0.47	ppb	91
50) Tetrachloroethylene	13.83	164	5429371	73.06	ppb	98

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030628.D A305_1UG.M Thu Mar 15 13:19:15 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030709.D Vial: 55
 Acq On : 7 Mar 2012 6:42 pm Operator: RJP
 Sample : C1203005-002A 40x Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 07 19:03:31 2012 Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.50	128	24304	1.00	ppb	0.03
30) 1,4-difluorobenzene	9.81	114	99038	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	74493	1.00	ppb	0.00

System Monitoring Compounds
 57) Bromofluorobenzene 16.30 95 47040 0.94 ppb 0.00
 Spiked Amount 1.000 Range 70 - 130 Recovery = 94.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
50) Tetrachloroethylene	13.84	164	159309	2.28	ppb	93

Data File : C:\HPCHEM\1\DATA\AJ030629.D Vial: 6
 Acq On : 7 Mar 2012 4:32 am Operator: RJP
 Sample : C1203005-003A Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 07 04:53:22 2012 Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.48	128	26974	1.00	ppb	0.00
30) 1,4-difluorobenzene	9.80	114	116460	1.00	ppb	0.00
44) Chlorobenzene-d5	14.73	117	79006	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	56258m	1.06	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	106.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
38) Trichloroethene	10.50	130	90908	1.31	ppb	95
50) Tetrachloroethylene	13.83	164	4923743	66.34	ppb	98

Data File : C:\HPCHEM\1\DATA\AJ030710.D
 Acq On : 7 Mar 2012 7:15 pm
 Sample : C1203005-003A 40x
 Misc : Method-A305_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 07 19:36:47 2012

Vial: 56
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.50	128	24573	1.00	ppb	0.03
30) 1,4-difluorobenzene	9.82	114	96231	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	69979	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	47116	1.00	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	100.00%

Target Compounds

50) Tetrachloroethylene	13.84	164	143553	2.18	ppb	Qvalue 97

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030710.D A305_1UG.M Thu Mar 15 13:20:26 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030630.D Vial: 7
 Acq On : 7 Mar 2012 5:06 am Operator: RJP
 Sample : C1203005-004A Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 07 05:27:23 2012 Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.48	128	25766	1.00	ppb	0.00
30) 1,4-difluorobenzene	9.80	114	107301	1.00	ppb	0.00
44) Chlorobenzene-d5	14.74	117	79608	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	60176m	1.12	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	112.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
38) Trichloroethene	10.49	130	28968	0.45	ppb	95
50) Tetrachloroethylene	13.83	164	3200337	42.79	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030630.D A305_1UG.M Thu Mar 15 13:19:23 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030711.D Vial: 57
 Acq On : 7 Mar 2012 7:48 pm Operator: RJP
 Sample : C1203005-004A 40x Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 07 20:10:01 2012 Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.N (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.50	128	22725	1.00	ppb	0.03
30) 1,4-difluorobenzene	9.81	114	85026	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	64763	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	41010	0.94	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	94.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
50) Tetrachloroethylene	13.84	164	108340	1.78	ppb	94

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030711.D A305_1UG.M Thu Mar 15 13:20:30 2012 MSD1

Centek Laboratories, LLC Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AJ030631.D Vial: 8
 Acq On : 7 Mar 2012 5:40 am Operator: RJP
 Sample : C1203005-005A Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 07 06:01:22 2012 Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.48	128	26663	1.00	ppb	0.00
30) 1,4-difluorobenzene	9.80	114	112121	1.00	ppb	0.00
44) Chlorobenzene-d5	14.74	117	83718	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.29	95	64755m	1.15	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	115.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
38) Trichloroethene	10.50	130	13341	0.20	ppb	98
50) Tetrachloroethylene	13.83	164	5202479	66.15	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030631.D A305_1UG.M Thu Mar 15 13:19:27 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030806.D

Vial: 6

Acq On : 8 Mar 2012 2:16 pm

Operator: RJP

Sample : C1203005-005A 90X

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 08 14:37:52 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.49	128	20592	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.81	114	77552	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	57398	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.31	95	36687	0.95	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	95.00%

Target Compounds

50) Tetrachloroethylene	13.84	164	55858	1.04	ppb	Qvalue 99

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030806.D A305_1UG.M Thu Mar 15 13:20:54 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030632.D Vial: 9
 Acq On : 7 Mar 2012 6:14 am Operator: RJP
 Sample : C1203005-006A Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 07 06:35:23 2012 Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.48	128	26830	1.00	ppb	0.00
30) 1,4-difluorobenzene	9.80	114	118169	1.00	ppb	0.00
44) Chlorobenzene-d5	14.74	117	85986	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	63259m ^u	1.09	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	109.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
38) Trichloroethene	10.51	130	7490m ^u	0.11	ppb	
50) Tetrachloroethylene	13.84	164	1999995	24.76	ppb	97

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030632.D A305_1UG.M Thu Mar 15 13:19:31 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030713.D Vial: 59
 Acq On : 7 Mar 2012 8:54 pm Operator: RJP
 Sample : C1203005-006A 20x Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 07 21:15:58 2012 Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.49	128	23450	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.81	114	90391	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	64791	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.31	95	40740	0.94	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	94.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
50) Tetrachloroethylene	13.84	164	128902	2.12	ppb	96

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030713.D A305_1UG.M Thu Mar 15 13:20:34 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030633.D Vial: 10
 Acq On : 7 Mar 2012 6:48 am Operator: RJP
 Sample : C1203005-007A Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 07 07:09:29 2012 Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.49	128	30228	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.81	114	145875	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	102607	1.00	ppb	0.00

System Monitoring Compounds
 57) Bromofluorobenzene 16.30 95 88034m^M 1.28 ppb 0.01
 Spiked Amount 1.000 Range 70 - 130 Recovery = 128.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
50) Tetrachloroethylene	13.84	164	7845284	81.39	ppb	99

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030633.D A305_1UG.M Thu Mar 15 13:19:36 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030807.D
 Acq On : 8 Mar 2012 2:49 pm
 Sample : C1203005-007A 90X
 Misc : Method-A305_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 08 15:10:50 2012

Vial: 7
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.49	128	21743	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.81	114	83167	1.00	ppb	0.02
44) Chlorobenzene-d5	14.75	117	57894	1.00	ppb	0.01

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	37891	0.97	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	97.00%

Target Compounds

50) Tetrachloroethylene	13.84	164	106965	1.97	ppb	Qvalue 99

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030807.D A305_1UG.M Thu Mar 15 13:20:57 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030634.D

Vial: 11

Acq On : 7 Mar 2012 7:22 am

Operator: RJP

Sample : C1203005-008A

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 07 07:44:08 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.49	128	30363	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.81	114	135122	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	94276	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	70542m/n	1.11	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	111.00%

Target Compounds

					Qvalue
38) Trichloroethene	10.50	130	22447	0.28	ppb 91
50) Tetrachloroethylene	13.84	164	4752337	53.66	ppb 97

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030634.D A305_1UG.M Thu Mar 15 13:19:40 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030808.D
Acq On : 8 Mar 2012 3:21 pm
Sample : C1203005-008A 90X
Misc : Method-A305_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 08 15:43:04 2012

Vial: 8
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Mar 06 11:26:26 2012
Response via : Initial Calibration
DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.50	128	21869	1.00	ppb	0.03
30) 1,4-difluorobenzene	9.82	114	79749	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	57046	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	40047	1.04	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	104.00%

Target Compounds

50) Tetrachloroethylene	13.84	164	50165	0.94	ppb	Qvalue 98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
AJ030808.D A305_1UG.M Thu Mar 15 13:21:01 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030635.D Vial: 12
 Acq On : 7 Mar 2012 7:57 am Operator: RJP
 Sample : C1203005-009A Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 07 08:18:16 2012 Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.49	128	27709	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.81	114	123160	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	86103	1.00	ppb	0.00

System Monitoring Compounds
 57) Bromofluorobenzene 16.30 95 69622m/1.20 ppb 0.00
 Spiked Amount 1.000 Range 70 - 130 Recovery = 120.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
38) Trichloroethene	10.51	130	46995	0.64	ppb	95
50) Tetrachloroethylene	13.84	164	5317170	65.74	ppb	98

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030635.D A305_1UG.M Thu Mar 15 13:19:44 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030716.D
 Acq On : 7 Mar 2012 10:32 pm
 Sample : C1203005-009A 40x
 Misc : Method-A305_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 07 22:54:00 2012

Vial: 62
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.50	128	26117	1.00	ppb	0.03
30) 1,4-difluorobenzene	9.82	114	104527	1.00	ppb	0.03
44) Chlorobenzene-d5	14.74	117	79712	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	53737	1.00	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	100.00%

Target Compounds

50) Tetrachloroethylene	13.84	164	138069	1.84	ppb	Qvalue 98

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030716.D A305_1UG.M Thu Mar 15 13:20:38 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030636.D

Vial: 41

Acq On : 7 Mar 2012 8:30 am

Operator: RJP

Sample : C1203005-010A

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 07 08:52:08 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.48	128	26918	1.00	ppb	0.01
30) 1,4-difluorobenzene	9.81	114	119814	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	88321	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	65992m ^m	1.11	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	111.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
38) Trichloroethene	10.50	130	1487074	20.81	ppb	94
50) Tetrachloroethylene	13.84	164	6084073	73.33	ppb	98

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030636.D A305_1UG.M Thu Mar 15 13:19:48 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030809.D Vial: 9
 Acq On : 8 Mar 2012 3:53 pm Operator: RJP
 Sample : C1203005-010A 90X Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 08 16:15:02 2012 Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.49	128	20841	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.82	114	77898	1.00	ppb	0.02
44) Chlorobenzene-d5	14.75	117	55103	1.00	ppb	0.01

System Monitoring Compounds		R.T.	QIon	Response	Conc	Units	Dev(Min)
57) Bromofluorobenzene		16.30	95	32399	0.87	ppb	0.01
Spiked Amount	1.000	Range 70 - 130		Recovery	=	87.00%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
38) Trichloroethane	10.51	130	16529m ⁿ	0.36	ppb	
50) Tetrachloroethylene	13.84	164	61711	1.19	ppb	95

Data File : C:\HPCHEM\1\DATA\AJ030637.D

Vial: 42

Acq On : 7 Mar 2012 9:03 am

Operator: RJP

Sample : C1203005-011A

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 07 09:24:14 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.52	128	28330	1.00	ppb	0.05
30) 1,4-difluorobenzene	9.83	114	123086	1.00	ppb	0.03
44) Chlorobenzene-d5	14.74	117	86674	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	68748m ¹⁰	1.18	ppb	0.01
Spiked Amount	1.000	Range 70 - 130	Recovery	=	118.00%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
38) Trichloroethene	10.52	130	711556	9.69	ppb	93
50) Tetrachloroethylene	13.84	164	5336016	65.54	ppb	98

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030637.D A305_1UG.M Thu Mar 15 13:19:52 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030718.D

Vial: 64

Acq On : 7 Mar 2012 11:37 pm

Operator: RJP

Sample : C1203005-011A 10x

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 07 23:58:39 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane	7.51	128	24020	1.00	ppb	0.04
30) 1,4-difluorobenzene	9.82	114	104794	1.00	ppb	0.03
44) Chlorobenzene-d5	14.74	117	75178	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	52539	1.04	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	104.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
38) Trichloroethene	10.51	130	76388	1.22	ppb	96
50) Tetrachloroethylene	13.84	164	578284	8.19	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030718.D A305_1UG.M Thu Mar 15 13:20:42 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030810.D

Vial: 10

Acq On : 8 Mar 2012 4:25 pm

Operator: RJP

Sample : C1203005-011A 90X

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 08 16:47:01 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.49	128	21733	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.81	114	83606	1.00	ppb	0.02
44) Chlorobenzene-d5	14.75	117	56057	1.00	ppb	0.01

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	36181	0.96	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	96.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
50) Tetrachloroethylene	13.84	164	83345	1.58	ppb	98

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030810.D A305_1UG.M Thu Mar 15 13:21:08 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030638.D Vial: 43
 Acq On : 7 Mar 2012 9:34 am Operator: RJP
 Sample : C1203005-012A Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 07 09:56:03 2012 Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.32	128	33929m	1.00	ppb	-0.15
30) 1,4-difluorobenzene	9.70	114	153193m	1.00	ppb	-0.09
44) Chlorobenzene-d5	14.72	117	108910m	1.00	ppb	-0.02

System Monitoring Compounds

57) Bromofluorobenzene	16.29	95	80881m	1.10	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	110.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
38) Trichloroethene	10.40	130	684211m	7.49	ppb	
50) Tetrachloroethylene	13.81	164	5210002m	50.92	ppb	

Data File : C:\HPCHEM\1\DATA\AJ030720.D Vial: 66
 Acq On : 8 Mar 2012 12:42 am Operator: RJP
 Sample : C1203005-012A 10x Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 08 01:03:30 2012 Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.53	128	23418	1.00	ppb	0.06
30) 1,4-difluorobenzene	9.83	114	97877	1.00	ppb	0.04
44) Chlorobenzene-d5	14.74	117	72923	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	48966	1.00	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	100.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
38) Trichloroethene	10.52	130	66134	1.13	ppb	95
50) Tetrachloroethylene	13.85	164	487405	7.12	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030720.D A305_1UG.M Thu Mar 15 13:20:46 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030811.D

Vial: 11

Acq On : 8 Mar 2012 4:58 pm

Operator: RJP

Sample : C1203005-012A 90X

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 08 17:19:15 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Nin)
1) Bromochloromethane	7.49	128	20957	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.81	114	81614	1.00	ppb	0.02
44) Chlorobenzene-d5	14.75	117	57166	1.00	ppb	0.01

System Monitoring Compounds

57) Bromofluorobenzene	16.31	95	34926	0.91	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	91.00%

Target Compounds

50) Tetrachloroethylene	13.84	164	44182	0.82	ppb	Qvalue 97

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030811.D A305_1UG.M Thu Mar 15 13:21:12 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030639.D Vial: 44
 Acq On : 7 Mar 2012 10:07 am Operator: RJP
 Sample : C1203005-013A Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 07 10:29:01 2012 Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.55	128	12292	1.00	ppb	0.08
30) 1,4-difluorobenzene	9.85	114	67777	1.00	ppb	0.06
44) Chlorobenzene-d5	14.75	117	53025	1.00	ppb	0.02

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	38139m/v	1.07	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	107.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
14) 1,1-dichloroethene	4.53	96	164102	8.83	ppb	95
24) cis-1,2-dichloroethene	7.14	61	147249	8.29	ppb	97
38) Trichloroethene	10.55	130	25191717	623.30	ppb	94
50) Tetrachloroethylene	13.85	164	3373724	67.73	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030639.D A305_1UG.M Thu Mar 15 13:20:01 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030705.D Vial: 51
 Acq On : 7 Mar 2012 4:28 pm Operator: RJP
 Sample : C1203005-013A 10x Inst : MSD #1
 Misc : Method-A305_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 07 16:49:33 2012 Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Tue Mar 06 11:26:26 2012
 Response via : Initial Calibration
 DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane	7.49	128	23369	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.81	114	96667	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	73131	1.00	ppb	0.00

System Monitoring Compounds
 57) Bromofluorobenzene 16.30 95 60188 1.22 ppb 0.00
 Spiked Amount 1.000 Range 70 - 130 Recovery = 122.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
14) 1,1-dichloroethene	4.59	96	23606	0.67	ppb	87
24) cis-1,2-dichloroethene	7.07	61	22836	0.68	ppb	99
38) Trichloroethene	10.50	130	4781175	82.94	ppb	94
50) Tetrachloroethylene	13.84	164	560544	8.16	ppb	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030705.D A305_1UG.M Thu Mar 15 13:20:10 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030706.D

Vial: 52

Acq On : 7 Mar 2012 5:01 pm

Operator: RJP

Sample : C1203005-013A 40x

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 07 17:22:28 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.50	128	23706	1.00	ppb	0.03
30) 1,4-difluorobenzene	9.82	114	89325	1.00	ppb	0.03
44) Chlorobenzene-d5	14.74	117	66375	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.31	95	43020	0.96	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	96.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
38) Trichloroethene	10.51	130	1384988	26.00	ppb	94
50) Tetrachloroethylene	13.84	164	160537	2.57	ppb	97

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AJ030706.D A305_1UG.M Thu Mar 15 13:20:15 2012 MSD1

Data File : C:\HPCHEM\1\DATA\AJ030707.D Vial: 53
Acq On : 7 Mar 2012 5:36 pm Operator: RJP
Sample : C1203005-013A 810x Inst : MSD #1
Misc : Method-A305_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 07 17:57:28 2012 Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Mar 06 11:26:26 2012
Response via : Initial Calibration
DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.49	128	29622	1.00	ppb	0.02
30) 1,4-difluorobenzene	9.81	114	117895	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	78935	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	47336	0.89	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	89.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
38) Trichloroethene	10.51	130	33637m/V	0.48	ppb	

Data File : C:\HPCHEM\1\DATA\AJ030622.D

Vial: 27

Acq On : 7 Mar 2012 12:32 am

Operator: RJP

Sample : C1203005-014A

Inst : MSD #1

Misc : Method-A305_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 07 00:53:37 2012

Quant Results File: A305_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A305_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Mar 06 11:26:26 2012

Response via : Initial Calibration

DataAcq Meth : A305_1UG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.48	128	21672	1.00	ppb	0.01
30) 1,4-difluorobenzene	9.81	114	73702	1.00	ppb	0.02
44) Chlorobenzene-d5	14.74	117	52253	1.00	ppb	0.00

System Monitoring Compounds

57) Bromofluorobenzene	16.30	95	31680	0.90	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	90.00%

Target Compounds

Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed
AJ030622.D A305_1UG.M Thu Mar 15 13:19:12 2012 MSD1

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	Aj030501.d	1.	BFB1UG	Method-A305_1UG	5 Mar 2012 12:30
2	2	Aj030502.d	1.	BFB1UG	Method-A305_1UG	5 Mar 2012 13:10
3	12	Aj030514.d	1.	A1UG_	Method-A305_1UG	5 Mar 2012 20:17
4	13	Aj030515.d	1.	A1UG_0.04	Method-A305_1UG	5 Mar 2012 20:53
5	14	Aj030516.d	1.	A1UG_	Method-A305_1UG	5 Mar 2012 21:24
6	15	Aj030517.d	1.	A1UG_0.15	Method-A305_1UG	5 Mar 2012 21:56
7	16	Aj030518.d	1.	A1UG_0.30	Method-A305_1UG	5 Mar 2012 22:28
8	17	Aj030519.d	1.	A1UG_0.5	Method-A305_1UG	5 Mar 2012 22:59
9	18	Aj030520.d	1.	A1UG_0.75	Method-A305_1UG	5 Mar 2012 23:31
10	19	Aj030521.d	1.	A1UG_	Method-A305_1UG	6 Mar 2012 00:03
11	20	Aj030522.d	1.	A1UG_1.25	Method-A305_1UG	6 Mar 2012 00:36
12	21	Aj030523.d	1.	A1UG_1.5	Method-A305_1UG	6 Mar 2012 01:09
13	22	Aj030524.d	1.	A1UG_2.0	Method-A305_1UG	6 Mar 2012 01:44
14	23	Aj030525.d	1.	A1UG_1.0	Method-A305_1UG	6 Mar 2012 02:17
15	24	Aj030526.d	1.		Method-A305_1UG	6 Mar 2012 02:49
16	25	Aj030527.d	1.		Method-A305_1UG	6 Mar 2012 03:22
17	27	Aj030601.d	1.	BFB1UG	Method-A305_1UG	6 Mar 2012 11:24
18	28	Aj030602.d	1.	A1UG	Method-A305_1UG	6 Mar 2012 12:04
19	29	Aj030603.d	1.	A1UG_1.0	Method-A305_1UG	6 Mar 2012 12:39
20	30	Aj030604.d	1.	AMB1UG-030612	Method-A305_1UG	6 Mar 2012 13:11
21	31	Aj030605.d	1.	ALOD1UG-030612	0.10 LOD Method...	6 Mar 2012 13:50
22	31	Aj030606.d	1.	ALCS1UG-030612	Method-A305_1UG	6 Mar 2012 15:06
23	29	Aj030607.d	1.	C1202057-005A	Method-A305_1UG	6 Mar 2012 16:22
24	1	Aj030608.d	1.	C1202057-001A	Method-A305_1UG	6 Mar 2012 16:55
25	2	Aj030609.d	1.	C1202057-003A	Method-A305_1UG	6 Mar 2012 17:28
26	3	Aj030610.d	1.	C1202057-004A	Method-A305_1UG	6 Mar 2012 18:01
27	4	Aj030611.d	1.	C1202057-002A	Method-A305_1UG	6 Mar 2012 18:33
28	5	Aj030612.d	1.	C1202057-001A 10X	Method-A305_1UG	6 Mar 2012 19:05
29	6	Aj030613.d	1.	C1202057-003A 10X	Method-A305_1UG	6 Mar 2012 19:38
30	7	Aj030614.d	1.	C1202057-004A 10X	Method-A305_1UG	6 Mar 2012 20:10
31	8	Aj030615.d	1.	C1202057-002A 10X	Method-A305_1UG	6 Mar 2012 20:42
32	21	Aj030616.d	1.	WAC030612A	Method-A305_1UG	6 Mar 2012 21:14
33	22	Aj030617.d	1.	WAC030612B	Method-A305_1UG	6 Mar 2012 21:45
34	23	Aj030618.d	1.	WAC030612C	Method-A305_1UG	6 Mar 2012 22:19
35	24	Aj030619.d	1.	WAC030612D	Method-A305_1UG	6 Mar 2012 22:52
36	25	Aj030620.d	1.	WAC030612E	Method-A305_1UG	6 Mar 2012 23:26
37	26	Aj030621.d	1.	WAC030612F	Method-A305_1UG	6 Mar 2012 23:59
38	27	Aj030622.d	1.	C1203005-014A	Method-A305_1UG	7 Mar 2012 00:32
39	28	Aj030623.d	1.	C1203005-	Method-A305_1UG	7 Mar 2012 01:06
40	29	Aj030624.d	1.	C1203005-001A MS	Method-A305_1UG	7 Mar 2012 01:41
41	30	Aj030625.d	1.	C1203005-001A MSD	Method-A305_1UG	7 Mar 2012 02:16
42	31	Aj030626.d	1.	ALCS1UGD-030612	Method-A305_1UG	7 Mar 2012 02:50
43	32	Aj030627.d	1.	ALCS1UGD	Method-A305_1UG	7 Mar 2012 03:24
44	5	Aj030628.d	1.	C1203005-002A	Method-A305_1UG	7 Mar 2012 03:58
45	6	Aj030629.d	1.	C1203005-003A	Method-A305_1UG	7 Mar 2012 04:32
46	7	Aj030630.d	1.	C1203005-004A	Method-A305_1UG	7 Mar 2012 05:06
47	8	Aj030631.d	1.	C1203005-005A	Method-A305_1UG	7 Mar 2012 05:40
48	9	Aj030632.d	1.	C1203005-006A	Method-A305_1UG	7 Mar 2012 06:14
49	10	Aj030633.d	1.	C1203005-007A	Method-A305_1UG	7 Mar 2012 06:48
50	11	Aj030634.d	1.	C1203005-008A	Method-A305_1UG	7 Mar 2012 07:22
51	12	Aj030635.d	1.	C1203005-009A	Method-A305_1UG	7 Mar 2012 07:57
52	41	Aj030636.d	1.	C1203005-010A	Method-A305_1UG	7 Mar 2012 08:30
53	42	Aj030637.d	1.	C1203005-011A	Method-A305_1UG	7 Mar 2012 09:03
54	43	Aj030638.d	1.	C1203005-012A	Method-A305_1UG	7 Mar 2012 09:34
55	44	Aj030639.d	1.	C1203005-013A	Method-A305_1UG	7 Mar 2012 10:07

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
56	45	Aj030640.d	1.	C1203005-001A	Method-A305_1UG	7 Mar 2012 10:40
57	46	Aj030641.d	1.	C1202052-002A	Method-A305_1UG	7 Mar 2012 11:13
58	47	Aj030701.d	1.	BFB1UG	Method-A305_1UG	7 Mar 2012 12:08
59	48	Aj030702.d	1.	A1UG_1.0	Method-A305_1UG	7 Mar 2012 14:13
60	49	Aj030703.d	1.	ALCS1UG-030712	Method-A305_1UG	7 Mar 2012 14:45
61	50	Aj030704.d	1.	AMB1UG-030712	Method-A305_1UG	7 Mar 2012 15:18
62	51	Aj030705.d	1.	C1203005-013A 10x	Method-A305_1UG	7 Mar 2012 16:28
63	52	Aj030706.d	1.	C1203005-013A 40x	Method-A305_1UG	7 Mar 2012 17:01
64	53	Aj030707.d	1.	C1203005-013A 810x	Method-A305_1UG	7 Mar 2012 17:38
65	54	Aj030708.d	1.	C1203005	Method-A305_1UG -...	7 Mar 2012 18:08
66	55	Aj030709.d	1.	C1203005-002A 40x	Method-A305_1UG	7 Mar 2012 18:42
67	56	Aj030710.d	1.	C1203005-003A 40x	Method-A305_1UG	7 Mar 2012 19:15
68	57	Aj030711.d	1.	C1203005-004A 40x	Method-A305_1UG	7 Mar 2012 19:48
69	58	Aj030712.d	1.	C1203005	Method-A305_1UG -...	7 Mar 2012 20:21
70	59	Aj030713.d	1.	C1203005-006A 20x	Method-A305_1UG	7 Mar 2012 20:54
71	60	Aj030714.d	1.	C1203005	Method-A305_1UG -...	7 Mar 2012 21:27
72	61	Aj030715.d	1.	C1203005	Method-A305_1UG -...	7 Mar 2012 22:00
73	62	Aj030716.d	1.	C1203005-009A 40x	Method-A305_1UG	7 Mar 2012 22:32
74	63	Aj030717.d	1.	C1203005	Method-A305_1UG -...	7 Mar 2012 23:04
75	64	Aj030718.d	1.	C1203005-011A 10x	Method-A305_1UG	7 Mar 2012 23:37
76	65	Aj030719.d	1.	C1203005	Method-A305_1UG -...	8 Mar 2012 00:09
77	66	Aj030720.d	1.	C1203005-012A 10x	Method-A305_1UG	8 Mar 2012 00:42
78	67	Aj030721.d	1.	C1203005	Method-A305_1UG -...	8 Mar 2012 01:14
79	68	Aj030722.d	1.	ALCS1UGD-030712	Method-A305_1UG	8 Mar 2012 01:47
80	65	Aj030723.d	1.	C1203005	Method-A305_1UG -...	8 Mar 2012 07:16
81	67	Aj030724.d	1.	C1203005	Method-A305_1UG -...	8 Mar 2012 07:49
82	68	Aj030725.d	1.	C1203005-001A 5x	Method-A305_1UG	8 Mar 2012 08:27
83	69	Aj030726.d	1.	C1203005-	Method-A305_1UG	8 Mar 2012 09:00
84	70	Aj030727.d	1.	C1203005	Method-A305_1UG	8 Mar 2012 09:32
85	71	Aj030728.d	1.	C1203005	Method-A305_1UG -...	8 Mar 2012 10:06
86	72	Aj030729.d	1.	C1203005	Method-A305_1UG -...	8 Mar 2012 10:39
87		Aj030730.d	1.	No MS or GC data present		
88	1	Aj030801.d	1.	BFB / AMB1UG-030812	Method-A305_1UG	8 Mar 2012 11:19
89	2	Aj030802.d	1.	A1UG_1.0	Method-A305_1UG	8 Mar 2012 11:55
90	3	Aj030803.d	1.	ALCS1UG-030812	Method-A305_1UG	8 Mar 2012 12:36
91	4	Aj030804.d	1.	ALCS1UG-030812	Method-A305_1UG	8 Mar 2012 13:11
92	5	Aj030805.d	1.	AMB1UG-030812	Method-A305_1UG	8 Mar 2012 13:43
93	6	Aj030806.d	1.	C1203005-005A 90X	Method-A305_1UG	8 Mar 2012 14:16
94	7	Aj030807.d	1.	C1203005-007A 90X	Method-A305_1UG	8 Mar 2012 14:49
95	8	Aj030808.d	1.	C1203005-008A 90X	Method-A305_1UG	8 Mar 2012 15:21
96	9	Aj030809.d	1.	C1203005-010A 90X	Method-A305_1UG	8 Mar 2012 15:53
97	10	Aj030810.d	1.	C1203005-011A 90X	Method-A305_1UG	8 Mar 2012 16:25
98	11	Aj030811.d	1.	C1203005-012A 90X	Method-A305_1UG	8 Mar 2012 16:58
99	12	Aj030812.d	1.	C1203008-001A	Method-A305_1UG	8 Mar 2012 17:30
100	13	Aj030813.d	1.	C1203007-001A	Method-A305_1UG	8 Mar 2012 18:03
101	14	Aj030814.d	1.	C1203007-002A	Method-A305_1UG	8 Mar 2012 18:36
102	15	Aj030815.d	1.	C1203008-001A 10X	Method-A305_1UG	8 Mar 2012 19:09
103	16	Aj030816.d	1.	C1203008-001A 40X	Method-A305_1UG	8 Mar 2012 19:42
104	16	Aj030817.d	1.	C1203007-001A 10X	Method-A305_1UG	8 Mar 2012 20:15
105	17	Aj030818.d	1.	C1203007-001A 40X	Method-A306_1UG	8 Mar 2012 20:47
106	18	Aj030819.d	1.	C1203007-002A 10X	Method-A305_1UG	8 Mar 2012 21:20
107	19	Aj030820.d	1.	C1203007-002A 40X	Method-A305_1UG	8 Mar 2012 21:52
108	20	Aj030821.d	1.	ALCS1UGD-030812	Method-A305_1UG	8 Mar 2012 22:24
109	22	Aj030822.d	1.	C1203007-001A 1080X	Method-A305_1UG	9 Mar 2012 09:54
110	23	Aj030823.d	1.	C1203007-002A 1080X	Method-A305_1UG	9 Mar 2012 10:27

Instrument: Entech 3100

Canister Number	QC Can Number	Number of Cycles	Date	QC Batch Number	Detection Limits	Leak Test 24hr (psig str/stp)	
139 ✓	368	30	2-8-12	WAZ020812A	1ug/m3+0.25	+ 30	+ 30
539 ✓						+	+
416 ✓						+	+
327						+	+
368						+	+
200 ✓	229			WAZ020812B		+	+
495 ✓						+	+
471						+	+
325						+	+
229						+	+
468	245			WAZ020812D		+	+
237						+	+
95 ✓						+	+
233 ✓						+	+
245 ✓						+	+
328 ✓	161			WAZ020812E		+	+
332 ✓						+	+
231 ✓						+	+
353						+	+
161						+	+
421 ✓	232			WAZ020812F		+	+
192 ✓						+	+
561						+	+
165 ✓						+	+
232						+	+

Cleaned by: R.T.

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Centek Laboratories, LLC

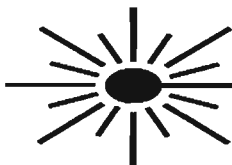
Instrument: Entech 3100

[illegible]

2000

Data Validation Report
WSP Environment and Energy
Former TTC – Glen Head, NY

SDG# MC8284



ECT.CON INC.

Environmental and Computer
Technology Consultants

3531 Fox Chase Drive
Imperial, PA 15126
(724) 695-8042
FAX (724) 695-2698
e-mail: ectconinc@comcast.net

**Data Validation Report**

SDG#	MC8284
Validation Report Date	April 4, 2012
Validation Guidance	USEPA CLP National Functional Guidelines for Organic Data Review
Client Name	WSP Environmental Strategies Consulting, LLC
Project Name	Former TTC-Glen Head, NY
Laboratory	Accutest Laboratories
Method(s) Utilized	SW 846 8260
Analytical Fraction	Volatile Organic Compounds (VOCs)

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
02/27/12	TB022712	MC8284-1	X	Aqueous
02/27/12	TB022712 SOIL	MC8284-1A	X	Aqueous
02/27/12	SB-126/1-3	MC8284-2	X	Solid
02/27/12	SB-26/1-3	MC8284-3	X	Solid
02/27/12	SB-25/1-3	MC8284-4	X	Solid
02/27/12	SB-24/1-3	MC8284-5	X	Solid
02/27/12	SB-23/1-3	MC8284-6	X	Solid
02/27/12	SB-22/1-3	MC8284-7	X	Solid
02/27/12	SB-21/1-3	MC8284-8	X	Solid
02/27/12	SB-20/1-3	MC8284-9	X	Solid
02/27/12	EB022712	MC8284-10	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. Laboratory calculations have been verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the Former TTC-Glen Head, NY site consists of 8 solid field samples, 1 equipment blank and 2 trip blanks. The samples were analyzed for the parameters as listed above.

The organic findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct.

The VOC findings are based upon the assessment of the following:

- * • Data Completeness
 - * • Holding Times
 - * • Calibration (Initial and Continuing)
 - * • Blanks
 - * • System Monitoring Compounds (Surrogate Spikes)
 - * • Laboratory Control Sample
 - * • Matrix Spike/Matrix Spike Duplicates
 - * • Internal Standards
 - * • Target Compound Identification
 - * • Compound Quantification and Reported Contract Quantitation Limits
 - * • System Performance
- * Criteria were met for this evaluation item.

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

There were not findings for volatile organic compounds. No data were qualified.

NOTES

VOLATILE ORGANIC COMPOUNDS

Matrix Spike/Matrix Spike Duplicate

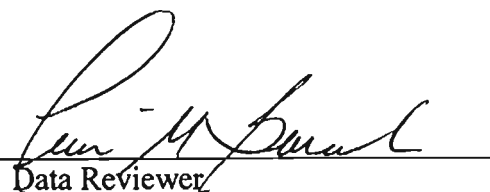
All aqueous matrix spike/matrix spike duplicate samples associated with this sample delivery group were non-project samples. For the SB-23/1-3 matrix spike duplicate the percent recovery of 1,2,4-trimethylbenzene (52%) and 1,3,5-trimethylbenzene (53%) was less than the low control limit. Also, the relative percent difference for these constituents was outside the control limit. The percent recovery of the matrix spike was within control limits. Data are not qualified on this basis.

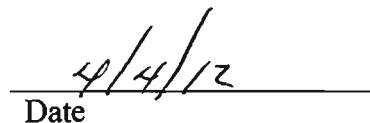
Field Duplicates

Calculate RPD for positive results only.

Sample ID	Duplicate ID	Parameter	RPD
SB-26/1-3	SB-126/1-3		
ND	ND	1,3,5-Trimethylbenene	--
ND	ND	1,2,4-Trimethylbenzene	--
92	89.1	%Solids	3.20%

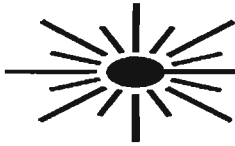
-- - RPD is not calculated because at least one sample result was not detected (ND).


Data Reviewer


Date

Glossary of Data Qualifiers

U	Not Detected.	The associated number indicates approximate sample concentration necessary to be detected.
UJ	Not Detected.	Quantitation limit may be inaccurate or imprecise.
J	Analyte Present.	Reported value may not be accurate or precise.
N	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts.
R	Unusable Result.	Analyte may or may not be present in the sample.
UR	Unusable Result.	Analyte may or may not be present in the sample.
NJ	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts. Reported value may not be accurate or precise.



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Technology Consultants

Annotated Form 1's *(Spreadsheet)*

Accutest Laboratories

Report of Analysis

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3.1

Client Sample ID:	TB022712	Date Sampled:	02/27/12
Lab Sample ID:	MC8284-1	Date Received:	02/28/12
Matrix:	SO - Trip Blank Methanol	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E58615.D	1	03/01/12	GK	n/a	n/a	MSE2299
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.0 g	10.0 ml	100 ul
Run #2			

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	250	7.9	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	250	9.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%
2037-26-5	Toluene-D8	107%		70-130%
460-00-4	4-Bromofluorobenzene	108%		70-130%

WAB
4/4/12

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

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Client Sample ID: TB022712	Date Sampled: 02/27/12
Lab Sample ID: MC8284-1A	Date Received: 02/28/12
Matrix: SO - Trip Blank Soil	Percent Solids: n/a
Method: SW846 8260B	
Project: Former TTC, 1 Robert Lane, Glen Head, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M46688.D	1	03/01/12	EK	n/a	n/a	MSM1538
Run #2							

Run #	Initial Weight	Final Volume
Run #1	5.00 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.16	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	79%		70-130%

ONB
4/4/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

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3.3

Client Sample ID:	SB-126/1-3	Date Sampled:	02/27/12
Lab Sample ID:	MC8284-2	Date Received:	02/28/12
Matrix:	SO - Soil	Percent Solids:	89.1
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M46689.D	1	03/01/12	EK	n/a	n/a	MSM1538
Run #2							

Run #	Initial Weight	Final Volume
Run #1	6.06 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	4.6	0.15	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	4.6	0.17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%		70-130%
2037-26-5	Toluene-D8	82%		70-130%
460-00-4	4-Bromofluorobenzene	82%		70-130%

Handwritten signature
3/4/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

3.3



Client Sample ID:	SB-126/1-3	Date Sampled:	02/27/12
Lab Sample ID:	MC8284-2	Date Received:	02/28/12
Matrix:	SO - Soil	Percent Solids:	89.1
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	1.1	0.45	mg/kg	1	03/05/12 14:18	MC	SW846 3060A/7186A
Redox Potential Vs H2	298		mv	1	02/28/12	CF	ASTM D1488-76M
Solids, Percent	89.1		%	1	02/29/12	BF	SM21 2540 B MOD.
pH	6.4		su	1	02/28/12	CF	SW846 9045

OMP
4/4/12.

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

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3.4

Client Sample ID:	SB-26/1-3	Date Sampled:	02/27/12
Lab Sample ID:	MC8284-3	Date Received:	02/28/12
Matrix:	SO - Soil	Percent Solids:	92.0
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M46690.D	1	03/01/12	EK	n/a	n/a	MSM1538
Run #2							

Run #	Initial Weight	Final Volume
Run #1	5.06 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	5.4	0.17	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.4	0.20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		70-130%
2037-26-5	Toluene-D8	83%		70-130%
460-00-4	4-Bromofluorobenzene	84%		70-130%

OWB
4/4/12.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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3.4

Client Sample ID:	SB-26/1-3	Date Sampled:	02/27/12
Lab Sample ID:	MC8284-3	Date Received:	02/28/12
Matrix:	SO - Soil	Percent Solids:	92.0
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.52	0.43	mg/kg	1	03/05/12 14:18	MC	SW846 3080A/7186A
Redox Potential Vs H2	412		mV	1	02/28/12	CF	ASTM D1498-76M
Solids, Percent	92		%	1	02/29/12	BF	SM21 2540 B MOD.
pH	6.6		su	1	02/28/12	CF	SW846 9045

DNB
4/4/12

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

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35

Client Sample ID: SB-25/1-3	Date Sampled: 02/27/12
Lab Sample ID: MC8284-4	Date Received: 02/28/12
Matrix: SO - Soil	Percent Solids: 84.1
Method: SW846 8260B	
Project: Former TTC, 1 Robert Lane, Glen Head, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M46691.D	1	03/01/12	EK	n/a	n/a	MSM1538
Run #2							

Run #	Initial Weight	Final Volume
Run #1	5.36 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	5.5	0.17	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.5	0.20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	79%		70-130%
460-00-4	4-Bromofluorobenzene	87%		70-130%

OMB
4/4/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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UN

Client Sample ID: SB-25/1-3

Lab Sample ID: MC8284-4

Matrix: SO - Soil

Date Sampled: 02/27/12

Date Received: 02/28/12

Percent Solids: 84.1

Project: Former TTC, 1 Robert Lane, Glen Head, NY

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.77	0.47	mg/kg	1	03/05/12 14:18	MC	SW846 3060A/7186A
Redox Potential Vs H2	326		mv	1	02/28/12	CF	ASTM D1488-76M
Solids, Percent	84.1		%	1	02/29/12	BF	SM21 2540 B MOD.
pH	6.7		su	1	02/28/12	CF	SW846 9045

MSB
4/4/12

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Page 1 of 1

3.6

Client Sample ID:	SB-24/1-3	Date Sampled:	02/27/12
Lab Sample ID:	MC8284-5	Date Received:	02/28/12
Matrix:	SO - Soil	Percent Solids:	89.5
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M46692.D	1	03/01/12	EK	n/a	n/a	MSM1538
Run #2							

Run #	Initial Weight	Final Volume
Run #1	7.28 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	3.8	0.12	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	3.8	0.14	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-130%
2037-26-5	Toluene-D8	82%		70-130%
460-00-4	4-Bromofluorobenzene	82%		70-130%

MP
4/4/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

3.6

Client Sample ID: SB-24/1-3

Lab Sample ID: MC8284-5

Matrix: SO - Soil

Date Sampled: 02/27/12

Date Received: 02/28/12

Percent Solids: 89.5

Project: Former TTC, 1 Robert Lane, Glen Head, NY

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.70	0.44	mg/kg	1	03/05/12 14:18	MC	SW846 3060A/7196A
Redox Potential Vs HZ	278		mv	1	02/28/12	CF	ASTM D1498-76M
Solids, Percent	89.5		%	1	02/29/12	BF	SM21 2540 B MOD.
pH	6.9		su	1	02/28/12	CF	SW846 9045

MB
4/4/12

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

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3.7

Client Sample ID:	SB-23/1-3	Date Sampled:	02/27/12
Lab Sample ID:	MC8284-6	Date Received:	02/28/12
Matrix:	SO - Soil	Percent Solids:	86.5
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M46693.D	1	03/01/12	EK	n/a	n/a	MSM1538
Run #2							

Run #	Initial Weight	Final Volume
Run #1	7.35 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	3.9	0.12	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	3.9	0.14	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	83%		70-130%
460-00-4	4-Bromofluorobenzene	77%		70-130%

MSB
4/4/12

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

3.7

Client Sample ID: SB-23/1-3

Lab Sample ID: MC8284-6

Matrix: SO - Soil

Date Sampled: 02/27/12

Date Received: 02/28/12

Percent Solids: 86.5

Project: Former TTC, 1 Robert Lane, Glen Head, NY

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.87	0.46	mg/kg	1	03/05/12 14:18	MC	SW846 3060A/7196A
Redox Potential Vs H2	364		mv	1	02/28/12	CF	ASTM D1498-76M
Solids, Percent	86.5		%	1	02/29/12	BF	SM21 2540 B MOD.
pH	7.1		su	1	02/28/12	CF	SW846 9045

DUB
4/4/12

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Page 1 of 1

3.8

Client Sample ID:	SB-22/1-3	Date Sampled:	02/27/12
Lab Sample ID:	MC8284-7	Date Received:	02/28/12
Matrix:	SO - Soil	Percent Solids:	91.1
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M46694.D	1	03/01/12	EK	n/a	n/a	MSM1538
Run #2							

	Initial Weight	Final Volume
Run #1	7.30 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	3.8	0.12	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	3.8	0.14	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	82%		70-130%
460-00-4	4-Bromofluorobenzene	82%		70-130%

Handwritten: 4/4/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

3.8

Client Sample ID: SB-22/1-3

Lab Sample ID: MC8284-7

Matrix: SO - Soil

Date Sampled: 02/27/12

Date Received: 02/28/12

Percent Solids: 91.1

Project: Former TTC, 1 Robert Lane, Glen Head, NY

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	<0.44	0.44	mg/kg	1	03/05/12 14:18	MC	SW846 3060A/7196A
Redox Potential Vs H2	375		mV	1	02/28/12	CF	ASTM D1498-76M
Solids, Percent	91.1		%	1	02/29/12	BF	SM21 2540 B MOD.
pH	7.2		su	1	02/28/12	CF	SW846 9045

MJB
4/4/12

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

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63

Client Sample ID: SB-21/1-3	Date Sampled: 02/27/12
Lab Sample ID: MC8284-8	Date Received: 02/28/12
Matrix: SO - Soil	Percent Solids: 91.8
Method: SW846 8260B	
Project: Former TTC, 1 Robert Lane, Glen Head, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M46695.D	1	03/01/12	EK	n/a	n/a	MSM1538
Run #2							

Run #	Initial Weight	Final Volume
Run #1	7.19 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	3.8	0.12	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	3.8	0.14	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%
2037-26-5	Toluene-D8	83%		70-130%
460-00-4	4-Bromofluorobenzene	82%		70-130%

OMP
1/14/12

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

6

Client Sample ID: SB-21/1-3

Lab Sample ID: MC8284-8

Matrix: SO - Soil

Date Sampled: 02/27/12

Date Received: 02/28/12

Percent Solids: 91.8

Project: Former TTC, 1 Robert Lane, Glen Head, NY

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	<0.43	0.43	mg/kg	1	03/05/12 14:18	MC	SW846-3060A-7196A
Redox Potential Vs H2	425		mv	1	02/28/12	CF	ASTM D1498-76M
Solids, Percent	91.8		%	1	02/29/12	BF	SM21 2540 B MOD.
pH	7.3		su	1	02/28/12	CF	SW846-8045

02/28/12

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

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3.10



Client Sample ID:	SB-20/1-3	Date Sampled:	02/27/12
Lab Sample ID:	MC8284-9	Date Received:	02/28/12
Matrix:	SO - Soil	Percent Solids:	94.5
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M46696.D	1	03/01/12	EK	n/a	n/a	MSM1538
Run #2							

	Initial Weight	Final Volume
Run #1	6.30 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	4.2	0.13	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	4.2	0.15	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%
2037-26-5	Toluene-D8	86%		70-130%
460-00-4	4-Bromofluorobenzene	76%		70-130%

OMP
4/4/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

3.10



Client Sample ID: SB-20/1-3

Lab Sample ID: MC8284-9

Matrix: SO - Soil

Date Sampled: 02/27/12

Date Received: 02/28/12

Percent Solids: 94.5

Project: Former TTC, 1 Robert Lane, Glen Head, NY

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	<0.42	0.42	mg/kg	1	03/05/12 14:18	MC	SW846 3060A/7196A
Redox Potential Vs H2	377		mV	1	02/28/12	CF	ASTM D1498-70M
Solids, Percent	94.5		%	1	02/29/12	BF	SM21 2540 B MOD.
pH	7.5		su	1	02/28/12	CF	SW846 9045

QMB
4/4/12

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Page 1 of 1

3.11

Client Sample ID:	EB0227/2	Date Sampled:	02/27/12
Lab Sample ID:	MC8284-10	Date Received:	02/28/12
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N60793.D	1	03/02/12	JP	n/a	n/a	MSN2272
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

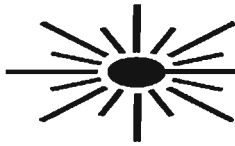
CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.98	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.90	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	84%		70-130%
2037-26-5	Toluene-D8	86%		70-130%
460-00-4	4-Bromofluorobenzene	98%		70-130%

OMB
4/4/12.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound



ECT.CON INC.

Environmental and Computer
Technology Consultants

Support Documentation

COC



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC8284

Client: WSP

Immediate Client Services Action Required: No

Date / Time Received: 2/28/2012

Delivery Method:

Client Service Action Required at Login: No

Project: GLEN HEAD

No. Coolers:

1

Airbill #s:

Cooler Security

Y or N

Y or N

1. Custody Seals Present:	☒	☐	3. COC Present:	☒	☐
2. Custody Seals Intact:	☒	☐	4. Smpl Dates/Time OK:	☒	☐

Cooler Temperature

Y or N

1. Temp criteria achieved:	☒	☐
2. Cooler temp verification:	Infrared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservation

Y or N

NA

1. Trip Blank present / cooler:	☐	☐	☒
2. Trip Blank listed on COC:	☐	☐	☒
3. Samples preserved properly:	☒	☐	
4. VOCs headspace free:	☐	☐	☒

Sample Integrity - Documentation

Y or N

1. Sample labels present on bottles:	☒	☐
2. Container labeling complete:	☒	☐
3. Sample container label / COC agree:	☒	☐

Sample Integrity - Condition

Y or N

1. Sample recvd within HT:	☒	☐
2. All containers accounted for:	☒	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions

Y or N

NA

1. Analysis requested is clear:	☒	☐	
2. Bottles received for unspecified tests:	☐	☒	
3. Sufficient volume recvd for analysis:	☒	☐	
4. Compositing instructions clear:	☐	☐	☒
5. Filtering instructions clear:	☐	☐	☒

Comments

Accutest Laboratories
V:508.481.8250

485 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www.accutest.com

MC8284: Chain of Custody
Page 2 of 2

Laboratory Case Narrative

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: WSP Environmental & Energy

Job No MC8284

Site: Former TTC, 1 Robert Lane, Glen Head, NY

Report Date 3/6/2012 5:46:06 PM

9 Sample(s), 2 Trip Blank(s) and 0 Field Blank(s) were collected on 02/27/2012 and were received at Accutest on 02/28/2012 properly preserved, at 2.4 Deg. C and intact. These Samples received an Accutest job number of MC8284. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ	Batch ID: MSN2272

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC8340-5MS, MC8340-5MSD were used as the QC samples indicated.

Matrix SO	Batch ID: MSE2299

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC8331-1MS, MC8331-1MSD were used as the QC samples indicated.

Matrix SO	Batch ID: MSM1538

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC8284-6MS, MC8284-6MSD were used as the QC samples indicated.
- Matrix Spike Duplicate Recovery(s) for 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene are outside control limits for sample MC8284-6MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.

Wet Chemistry By Method ASTM D1498-76M

Matrix SO	Batch ID: GN38005

- Sample(s) MC8284-6DUP were used as the QC samples for Redox Potential Vs H2.

Wet Chemistry By Method SM21 2540 B MOD.

Matrix SO	Batch ID: GN38010

- Sample(s) MC8284-6DUP were used as the QC samples for Solids, Percent.

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO	Batch ID: GP14224

- All samples were distilled within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC8284-6DUP, MC8284-6MS were used as the QC samples for Chromium, Hexavalent.

Tuesday, March 06, 2012

Page 1 of 2

Wet Chemistry By Method SW846 7196A

Matrix	AQ	Batch ID:	GN37996

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC8284-10DUP, MC8284-10MS were used as the QC samples for Chromium, Hexavalent.

Wet Chemistry By Method SW846 9045

Matrix	SO	Batch ID:	GN38003

- Sample(s) MC8284-6DUP were used as the QC samples for pH.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report (MC8284).

Sample Summary

WSP Environmental & Energy

Job No: MC8284

Former TTC, 1 Robert Lane, Glen Head, NY
Project No: 28873/03

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
MC8284-1	02/27/12	00:00 DC	02/28/12	SO Trip Blank Methanol	TB022712
MC8284-1A	02/27/12	00:00 DC	02/28/12	SO Trip Blank Soil	TB022712
MC8284-2	02/27/12	11:00 DC	02/28/12	SO Soil	SB-126/1-3
MC8284-3	02/27/12	12:00 DC	02/28/12	SO Soil	SB-26/1-3
MC8284-4	02/27/12	12:30 DC	02/28/12	SO Soil	SB-25/1-3
MC8284-5	02/27/12	13:00 DC	02/28/12	SO Soil	SB-24/1-3
MC8284-6	02/27/12	13:20 DC	02/28/12	SO Soil	SB-23/1-3
MC8284-6D	02/27/12	13:20 DC	02/28/12	SO Soil Dup/MSD	SB-23/1-3
MC8284-6S	02/27/12	13:20 DC	02/28/12	SO Soil Matrix Spike	SB-23/1-3
MC8284-7	02/27/12	14:30 DC	02/28/12	SO Soil	SB-22/1-3
MC8284-8	02/27/12	15:00 DC	02/28/12	SO Soil	SB-21/1-3
MC8284-9	02/27/12	15:30 DC	02/28/12	SO Soil	SB-20/1-3
MC8284-10	02/27/12	16:00 DC	02/28/12	AQ Equipment Blank	EB0227/2

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Worksheets

8280

SDG #: MC8284

Sample Temp: <8

HOLDING TIMES

14 days from collection to prep and analysis

Sample Date 2/27/12

Analyze by 3/12/12

	SAMPLE DATE	SAMPLE ID	LABORATORY ID	VOCs	MATRIX	DATE ANALYZED	DF
1	02/27/12	TB022712	MC8284-1	X	Aqueous	3/1/12	1
2	02/27/12	TB022712 SOIL	MC8284-1A	X	Aqueous	3/1/12	1
3	02/27/12	SB-126/1-3	MC8284-2	X	Solid	3/1/12	1
4	02/27/12	SB-26/1-3	MC8284-3	X	Solid	3/1/12	1
5	02/27/12	SB-25/1-3	MC8284-4	X	Solid	3/1/12	1
6	02/27/12	SB-24/1-3	MC8284-5	X	Solid	3/1/12	1
7	02/27/12	SB-23/1-3	MC8284-6	X	Solid	3/1/12	1
8	02/27/12	SB-22/1-3	MC8284-7	X	Solid	3/1/12	1
9	02/27/12	SB-21/1-3	MC8284-8	X	Solid	3/1/12	1
10	02/27/12	SB-20/1-3	MC8284-9	X	Solid	3/1/12	1
11	02/27/12	EB022712	MC8284-10	X	Aqueous	3/2/12	1

TARGET COMPOUNDS AND QUANTITATION LIMITS

Was a target compound list provided by the client?

No

Did Sample Form 1s match the target compound list?

Not Applicable

Were required quantitation limits provided by the client?

No

Did all compounds meet the required quantitation limits?

Not Applicable

SYSTEM MONITORING COMPOUNDS

SAMPLE	SURROGATE	RECOVERY	DF	ACTION
ALL	ALL	OK		

Were surrogate RTs within windows established by the ICAL?

Yes

Were there any transcription errors between the raw data and Form 2?

No

Were laboratory acceptance limits used as the basis for validation?

Yes

Did the laboratory provide CLP Form II or equivalent?

No

SAMPLE SB-21/1-3

SURR	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 2
DBFMA	47.79	50	95.6	96
Tol-d8	41.42	50	82.8	83
BFB	41.12	50	82.2	82

Recovery = (Amount Found/Amount Spiked)*100

MS/MSD RECOVERY and RELATIVE PERCENT DIFFERENCE

SAMPLE	COMPOUND	MS %R	MSD %R	RPD %R
SB-23/1-3	135-TMB	OK	53	64
	124-TMB	OK	52	67
LAB	ALL	OK	OK	OK
LAB	ALL	OK	OK	OK

2,3,4,5,6,7,8,9

1

10

0.865

0.865

42.33

25.86

7.04

8.57

5

5

34.7559774

17.44221339

Were there any transcription errors between the raw data and Form 3?

No

Were laboratory acceptance limits used as the basis for validation?

Yes

Did the laboratory provide CLP Form III or equivalent?

Yes

Were chromatograms and quan reports present for all MS/MSDs?

Yes

SAMPLE	SB-23/1-3	COMPOUND	124-TMB		
	AMOUNT FOUND	NATIVE AMOUNT	AMOUNT SPIKED	%R	FORM 3
MS	34.7559774	0	41.1	84.56442191	85
MSD	17.44221339	0	41.1	42.43847541	52
RPD	66.34			66.34	67

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

RPD = ((MS-MSD)/((MS+MSD)/2))*100

LABORATORY CONTROL SAMPLES

SAMPLE	COMPOUND	LCS %R	LCSD %R	%RPD
1538	All	OK	OK	OK
2272	All	OK	OK	OK
2299	All	OK	OK	OK

Were there any transcription errors between the raw data and Form 3? No
Were laboratory acceptance limits used as the basis for validation? Yes
Did the laboratory provide CLP Form III or equivalent? Yes
Were chromatograms and quan reports present for all LCS/LCDS? Yes

SAMPLE	1538	COMPOUND	124-TMB	
	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 3
LCS	51.37	50	102.74	103
LCSD	48.87	50	97.74	98
RPD	4.988028731		4.988028731	5

Recovery = ((Amount Found)/Amount Spiked)*100

RPD = ((LCS-LCD)/((LCS+LCSD)/2))*100

BLANKS

Were Form Is provided for all blanks? Yes
Were chromatograms and quan reports present for all blanks? Yes
Did the laboratory provide CLP Form IVs or equivalent? Yes

BLANK	COMPOUND	RESULT	5X OR 10X	ACTION LEVEL	AFFECTED SAMPLES
1538	all	nd	5	#VALUE!	
2299	all	nd	5	#VALUE!	
2272	all	nd	5	#VALUE!	
EB/TBS	all	nd	5	#VALUE!	

CALIBRATION

	ICAL	CCV	ICAL	CCV
Instrument	MSE	MSE	MSM	MSM
Date	2/23/12	3/1/12	2/29/12*	3/1/12
CCV		12:02	SUMMARY HAS 3/5/12	10:48
CCV Bonus			RAW DATA 2/29/12	

	ICAL	CCV	CCV
Instrument	MSN	MSN	MSN
Date	3/2/2012*	3/1/12	3/2/12
CCV	SUMMARY HAS 3/2/12	6:14	11:13
CCV Bonus	RAW DATA 3/1/12		

Are chromatograms and quan reports present for all ICAL standards? Yes
Are CLP Form VIs or equivalent present and complete? Yes
Any transcription or calculation errors? No
What linearity criteria was used? %RSD 30
Are RRFs greater than 0.05? No

INITIAL CALIBRATION RRF

Date 2/29/12
Instrument MSM
Compound 135-TMB
Reported RRF 2.496
Calculated RRF 2.4960

Compound Area (A1) 16525
Conc (C1) 5
Internal Std Area (A2) 66206
Conc (C2) 50

RRF = (A1/A2) * (C2/C1)

INITIAL CALIBRATION AVERAGE RRF

Date 2/29/12
Instrument MSM
Compound 135-TMB
Reported Average RRF 2.905
Calculated Average RRF 2.9048
Reported RSD 11.3000
Calculated RSD 11.3042

RRF1 2.647 0.066564
RRF2 2.496 0.167281
RRF3 2.737 0.028224
RRF4 3.129 0.050176
RRF5 3.353 0.200704
RRF6 3.067 0.026244
RRF7

SUM 17.429 0.539193
(Sum/N-1)^.5 0.32838788
((Sum/N-1)^.5)/Average RRF 0.1130423
N 6
N-1 5

CCVs

Are chromatograms and quan reports present for all CCV standards?
 Are CLP Form VIIs or equivalent present and complete?
 Any transcription or calculation errors?
 What %D criteria was used?
 Were samples analyzed within 12 hours of the tune?

Yes
 Yes
 No
 30% (trace)/25% solids (low)
 Yes

CONTINUING CALIBRATION RRF

Date 3/1/12
 Time 10:48:00 AM
 Instrument MSM
 Compound 135-TMB
 Reported RRF 2.874
 Calculated RRF 2.8739

Compound Area (A1) 230036
 Conc (C1) 50
 Internal Std Area (A2) 80043
 Conc (C2) 50

RRF = (A1/A2) * (C2/C1)

CONTINUING CALIBRATION %D

Date 3/1/12
 Time 10:48 AM
 Instrument MSM
 Compound 135-TMB
 Reported %Difference 1.1
 Calculated %Difference 1.07

ICAL RRF 2.905
 CCV RRF 2.8740

%Difference (or %Drift) = (((ICAL - CCV)/ICAL)*100

TUNE

Raw data and mass assignments correct?
 Mass listing normalized to specified m/x?
 Were all tune reports present?

Yes
 Yes
 Yes

Instrument MSM
 Date 3/1/12
 Time 10:48

m/z	Area	Calculated %	Reported %	Abundance Criteria
50	4897	16.9%	16.9	15-40% of mass 95
75	14038	48.4%	48.4	30-60% of mass 95
95	28892	100.0%	100	base peak, 100%
96	1906	6.6%	6.57	5-9% of mass 95
173	0	0.0%	0	<2% of mass 174
174	32336	111.5%	111.5	50-120% of mass 95
175	2110	6.5%	6.53	5-9% of mass 174
176	31112	96.2%	96.2	95%-101% of mass 174
177	1695	5.4%	5.45	5-9% of mass 176

INTERNAL STANDARD CHECK

CCV Date 3/1/12
 CCV Time 10:48 AM
 Instrument MSM

Shading indicates a percent recovery outside the -50% to 100% criteria.
 Shading indicates a retention time outside the +/- 0.5 minute criteria.

	PFB	RT	14-DFB	RT	CB-D5	RT
UPPER	73857	9.36	116017	10.25	65628	13.53
LOWER	147714	9.86	232034	10.75	131256	14.03
	36929	8.86	58009	9.75	32814	13.03
SB-21/1-3	54166	9	84934	10	46536	14
SB-21/1-3	73%		73%		71%	
	1,4-DFB-D4	RT	TBA-D9	RT		
UPPER	80043	16.1	36162	6.85		
LOWER	160086	16.6	72324	7.35		
	40022	15.60	18081	6.35		
SB-21/1-3	55503	16	41855	7		
SB-21/1-3	69%		116%			

RELATIVE RETENTION TIMES

Shading indicates a relative retention time outside the +/- 0.06 RRT unit criteria.

SAMPLE

SB-21/1-3

Compound	Sample RT	CCV RT	Difference
DBFMA	9.003	8.996	0.007
Toluene-d8	12.061	12.062	-0.001
bfb	14.759	14.755	0.004

FIELD DUPLICATES

Sample ID	Duplicate ID	Parameter	RPD
SB-26/1-3	SB-126/1-3		
ND	ND	1,3,5-Trimethylbenzene	#VALUE!
ND	ND	1,2,4-Trimethylbenzene	#VALUE!

Are there any transcription errors?
 Are Form1s present for all field and quality control samples?
 Are chromatograms and quan reports present for all samples?
 Are RLs adjusted to reflect sample dilutions, percent solids, etc.?

No
 Yes
 Yes
 Yes

Method Blank Summary

Page 1 of 1

Job Number: MC8284

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM1538-MB	M46687.D	1	03/01/12	EK	n/a	n/a	MSM1538

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8284-2, MC8284-3, MC8284-4, MC8284-5, MC8284-6, MC8284-7, MC8284-8, MC8284-9, MC8284-1A

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.16	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.18	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	90%	70-130%
2037-26-5	Toluene-D8	84%	70-130%
460-00-4	4-Bromofluorobenzene	82%	70-130%

5.1.1
5

Method Blank Summary

Page 1 of 1

Job Number: MC8284

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSE2299-MB	E58613.D	1	03/01/12	GK	n/a	n/a	MSE2299

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8284-1

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	250	7.9	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	250	9.1	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	107%	70-130%
460-00-4	4-Bromofluorobenzene	107%	70-130%

5.1.2

5

Method Blank Summary

Page 1 of 1

Job Number: MC8284
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2272-MB	N60786.D	1	03/02/12	JP	n/a	n/a	MSN2272

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8284-10

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.98	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.90	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	82%	70-130%
2037-26-5	Toluene-D8	86%	70-130%
460-00-4	4-Bromofluorobenzene	97%	70-130%

5.1.3

5

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: MC8284

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM1538-BS	M46685.D	1	03/01/12	EK	n/a	n/a	MSM1538
MSM1538-BSD	M46686.D	1	03/01/12	EK	n/a	n/a	MSM1538

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8284-2, MC8284-3, MC8284-4, MC8284-5, MC8284-6, MC8284-7, MC8284-8, MC8284-9, MC8284-1A

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	50	51.4	103	48.9	98	5	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	50.6	101	47.8	96	6	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	84%	84%	70-130%
2037-26-5	Toluene-D8	82%	83%	70-130%
460-00-4	4-Bromofluorobenzene	85%	82%	70-130%

5.2.1

5

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46685.D
 Acq On : 1 Mar 2012 11:19 am
 Operator : emilyk
 Sample : bs
 Misc : MS25151,MSM1537,5,,,5,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 05 14:24:17 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Thu Mar 01 11:32:45 2012
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) bromochloromethane	8.841	128	29398	50.20	ug/L	96
38) chloroform	8.880	83	98183	52.04	ug/L	99
40) Tetrahydrofuran	9.209	42	11557	54.49	ug/L	100
41) 1,1,1-trichloroethane	9.647	97	83737	48.97	ug/L	94
43) Cyclohexane	9.933	56	81767	49.21	ug/L	98
44) carbon tetrachloride	10.015	117	78844	48.90	ug/L	93
45) 1,1-dichloropropene	9.820	75	69127	48.79	ug/L	97
46) benzene	10.050	78	207502	48.87	ug/L	97
47) 1,2-dichloroethane	9.544	62	68994	51.43	ug/L	92
48) tert-amyl methyl ether	10.167	73	144797	56.32	ug/L	94
49) heptane	10.527	43	66017	49.78	ug/L	96
50) trichloroethene	10.676	95	56351	50.52	ug/L	96
51) 1,2-dichloropropane	10.640	63	51085	53.45	ug/L	100
52) dibromomethane	10.616	93	33130	52.25	ug/L	92
53) bromodichloromethane	10.729	83	75299	54.67	ug/L	97
54) Methylcyclohexane	11.199	83	96278	49.86	ug/L	95
55) 2-chloroethyl vinyl ether	11.100	63	16629	37.29	ug/L	98
56) methyl methacrylate	10.817	69	31215	53.83	ug/L	95
57) 1,4-dioxane	10.824	88	1575	218.97	ug/L	83
58) cis-1,3-dichloropropene	11.351	75	84057	49.84	ug/L	100
60) 4-methyl-2-pentanone	11.439	43	43986	53.86	ug/L	97
61) toluene	12.136	92	136280	51.64	ug/L	99
62) trans-1,3-dichloropropene	11.772	75	74111	53.02	ug/L	99
63) 1,1,2-trichloroethane	11.948	83	39306	56.08	ug/L	98
64) ethyl methacrylate	12.143	69	62413	52.49	ug/L	94
66) tetrachloroethene	12.878	166	65754	47.77	ug/L	96
67) 1,3-dichloropropane	12.185	76	78679	53.34	ug/L	93
68) dibromochloromethane	12.479	129	59995	55.21	ug/L	98
69) 1,2-dibromoethane	12.730	107	48115	50.22	ug/L	94
70) 2-hexanone	12.295	43	34992	61.52	ug/L	98
71) chlorobenzene	13.560	112	160372	51.30	ug/L	97
72) 1,1,1,2-tetrachloroethane	13.479	131	64258	52.14	ug/L	96
73) ethylbenzene	13.734	91	261813	48.23	ug/L	95
74) m,p-xylene	13.921	106	206096	96.93	ug/L	93
75) o-xylene	14.335	106	104242	48.90	ug/L	91
76) styrene	14.260	104	164484	49.10	ug/L	94
77) bromoform	14.091	173	43488	50.71	ug/L	96
78) trans-1,4-dichloro-2-b...	14.483	53	17921	52.11	ug/L #	74
80) isopropylbenzene	14.695	105	271900	60.20	ug/L	95
82) bromobenzene	14.992	156	76973	52.77	ug/L	96
83) 1,1,2,2-tetrachloroethane	14.338	83	69162	56.74	ug/L	99
84) 1,2,3-trichloropropane	14.487	75	74908	55.07	ug/L	98
85) n-propylbenzene	15.144	91	314720	52.56	ug/L	96
86) 2-chlorotoluene	15.265	91	192995	52.82	ug/L	100
87) 4-chlorotoluene	15.342	91	193133	53.53	ug/L	97
88) 1,3,5-trimethylbenzene	15.420	105	233738	50.60	ug/L	97
89) tert-butylbenzene	15.728	91	133237	53.24	ug/L	89
90) 1,2,4-trimethylbenzene	15.830	105	235987	51.37	ug/L	98
91) sec-butylbenzene	15.950	105	322391	52.61	ug/L	100
92) 1,3-dichlorobenzene	16.056	146	148741	53.10	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46686.D
 Acq On : 1 Mar 2012 11:57 am
 Operator : emilyk
 Sample : bsd
 Misc : MS25187,MSM1538,5,,,5,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 02 15:54:48 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Thu Mar 01 11:32:45 2012
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) bromochloromethane	8.834	128	28625	48.49	ug/L	94
38) chloroform	8.876	83	91992	48.37	ug/L	100
40) Tetrahydrofuran	9.202	42	12644	58.14	ug/L	87
41) 1,1,1-trichloroethane	9.643	97	80245	46.56	ug/L	97
43) Cyclohexane	9.933	56	79262	48.64	ug/L	97
44) carbon tetrachloride	10.015	117	74625	47.19	ug/L	94
45) 1,1-dichloropropene	9.820	75	65380	47.05	ug/L	97
46) benzene	10.046	78	195080	46.85	ug/L	97
47) 1,2-dichloroethane	9.541	62	66403	50.47	ug/L	94
48) tert-amyl methyl ether	10.167	73	131642	52.21	ug/L	97
49) heptane	10.527	43	62651	48.17	ug/L	95
50) trichloroethene	10.672	95	52938	48.40	ug/L	96
51) 1,2-dichloropropane	10.640	63	48181	51.41	ug/L	97
52) dibromomethane	10.616	93	31461	50.59	ug/L	88
53) bromodichloromethane	10.725	83	71040	52.60	ug/L	100
54) Methylcyclohexane	11.199	83	91798	48.48	ug/L	99
55) 2-chloroethyl vinyl ether	11.199	63	621	11.37	ug/L #	1
56) methyl methacrylate	10.814	69	32198	56.22	ug/L	97
57) 1,4-dioxane	10.835	88	1880	249.33	ug/L	96
58) cis-1,3-dichloropropene	11.351	75	78975	47.88	ug/L	100
60) 4-methyl-2-pentanone	11.439	43	46782	57.80	ug/L	96
61) toluene	12.132	92	130051	50.25	ug/L	97
62) trans-1,3-dichloropropene	11.772	75	71123	51.98	ug/L	97
63) 1,1,2-trichloroethane	11.948	83	36823	53.57	ug/L	94
64) ethyl methacrylate	12.143	69	63475	54.27	ug/L	97
66) tetrachloroethene	12.878	166	65199	47.74	ug/L	97
67) 1,3-dichloropropane	12.185	76	75065	51.30	ug/L	96
68) dibromochloromethane	12.479	129	57075	52.94	ug/L	99
69) 1,2-dibromoethane	12.730	107	46130	48.64	ug/L	100
70) 2-hexanone	12.295	43	31299	56.31	ug/L	99
71) chlorobenzene	13.564	112	154377	49.78	ug/L	97
72) 1,1,1,2-tetrachloroethane	13.483	131	60633	49.59	ug/L	96
73) ethylbenzene	13.734	91	254321	47.24	ug/L	96
74) m,p-xylene	13.921	106	200635	95.14	ug/L	90
75) o-xylene	14.335	106	102115	48.30	ug/L	92
76) styrene	14.261	104	160248	48.27	ug/L	96
77) bromoform	14.091	173	42735	50.27	ug/L	96
78) trans-1,4-dichloro-2-b...	14.483	53	18776	54.84	ug/L #	88
80) isopropylbenzene	14.699	105	273023	58.40	ug/L	98
82) bromobenzene	14.992	156	73503	48.68	ug/L	93
83) 1,1,2,2-tetrachloroethane	14.338	83	69117	54.78	ug/L	96
84) 1,2,3-trichloropropane	14.483	75	76284	54.18	ug/L	93
85) n-propylbenzene	15.144	91	309058	49.86	ug/L	97
86) 2-chlorotoluene	15.265	91	185239	48.98	ug/L	99
87) 4-chlorotoluene	15.339	91	191998	51.41	ug/L	98
88) 1,3,5-trimethylbenzene	15.420	105	228745	47.84	ug/L	98
89) tert-butylbenzene	15.728	91	128234	49.50	ug/L	92
90) 1,2,4-trimethylbenzene	15.830	105	232400	48.87	ug/L	95
91) sec-butylbenzene	15.950	105	319185	50.32	ug/L	98
92) 1,3-dichlorobenzene	16.060	146	144971	50.00	ug/L	96

M022912W.M Fri Mar 02 16:24:40 2012

Page: 2

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: MC8284

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSE2299-BS	E58610.D	1	03/01/12	GK	n/a	n/a	MSE2299
MSE2299-BSD	E58611.D	1	03/01/12	GK	n/a	n/a	MSE2299

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8284-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	2500	2350	94	2460	98	5	70-130/25
108-67-8	1,3,5-Trimethylbenzene	2500	2430	97	2520	101	4	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	91%	95%	70-130%
2037-26-5	Toluene-D8	102%	108%	70-130%
460-00-4	4-Bromofluorobenzene	103%	105%	70-130%

5.2.2

5

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: MC8284

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2272-BS	N60783.D	1	03/02/12	JP	n/a	n/a	MSN2272
MSN2272-BSD	N60784.D	1	03/02/12	JP	n/a	n/a	MSN2272

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8284-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	50	51.7	103	50.8	102	2	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	51.7	103	50.6	101	2	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	84%	84%	70-130%
2037-26-5	Toluene-D8	87%	87%	70-130%
460-00-4	4-Bromofluorobenzene	83%	83%	70-130%

5.2.3

5

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC8284

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC8331-1MS	E58621.D	1	03/01/12	GK	n/a	n/a	MSE2299
MC8331-1MSD	E58622.D	1	03/01/12	GK	n/a	n/a	MSE2299
MC8331-1	E58617.D	1	03/01/12	GK	n/a	n/a	MSE2299

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8284-1

CAS No.	Compound	MC8331-1 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	25.0		5640	5630	99	5660	100	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		5640	5700	101	5810	103	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC8331-1	Limits
1868-53-7	Dibromofluoromethane	91%	90%	93%	70-130%
2037-26-5	Toluene-D8	101%	101%	104%	70-130%
460-00-4	4-Bromofluorobenzene	100%	103%	104%	70-130%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC8284

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC8284-6MS	M46697.D	1	03/01/12	EK	n/a	n/a	MSM1538
MC8284-6MSD	M46698.D	1	03/01/12	EK	n/a	n/a	MSM1538
MC8284-6	M46693.D	1	03/01/12	EK	n/a	n/a	MSM1538

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8284-2, MC8284-3, MC8284-4, MC8284-5, MC8284-6, MC8284-7, MC8284-8, MC8284-9, MC8284-1A

CAS No.	Compound	MC8284-6 ug/kg	Spike Q	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	ND	41.1	34.8	85	17.4	52* a	67* b	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	41.1	34.7	85	17.8	53* a	64* b	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC8284-6	Limits
1868-53-7	Dibromofluoromethane	86%	86%	92%	70-130%
2037-26-5	Toluene-D8	82%	85%	83%	70-130%
460-00-4	4-Bromofluorobenzene	85%	87%	77%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46697.D
 Acq On : 1 Mar 2012 5:37 pm
 Operator : emilyk
 Sample : mc8284-6ms
 Misc : MS25187,MSM1538,7.04,,,5,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 02 16:13:21 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Thu Mar 01 11:32:45 2012
 Response via : Initial Calibration

6.4.1

6

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) bromochloromethane	8.844	128	24844	49.59	ug/L	86
38) chloroform	8.876	83	76033	47.11	ug/L	96
40) Tetrahydrofuran	9.209	42	11086	59.67	ug/L	90
41) 1,1,1-trichloroethane	9.647	97	65617	44.86	ug/L	92
43) Cyclohexane	9.937	56	62008	43.75	ug/L	97
44) carbon tetrachloride	10.015	117	60778	44.18	ug/L	99
45) 1,1-dichloropropene	9.820	75	52316	43.28	ug/L	99
46) benzene	10.050	78	157066	43.36	ug/L	98
47) 1,2-dichloroethane	9.541	62	59119	51.66	ug/L	94
48) tert-amyl methyl ether	10.167	73	104539	47.66	ug/L	96
49) heptane	10.527	43	50051	44.24	ug/L	98
50) trichloroethene	10.676	95	42666	44.84	ug/L	97
51) 1,2-dichloropropane	10.644	63	37413	45.89	ug/L	98
52) dibromomethane	10.619	93	27702	51.21	ug/L	97
53) bromodichloromethane	10.729	83	56798	48.34	ug/L	98
54) Methylcyclohexane	11.199	83	70492	42.79	ug/L	98
55) 2-chloroethyl vinyl ether	11.192	63	650	11.58	ug/L #	1
56) methyl methacrylate	10.821	69	26613	53.80	ug/L	89
57) 1,4-dioxane	10.817	88	1822	268.74	ug/L	89
58) cis-1,3-dichloropropene	11.351	75	61473	43.18	ug/L	97
60) 4-methyl-2-pentanone	11.439	43	42879	60.51	ug/L	97
61) toluene	12.132	92	101105	44.91	ug/L	97
62) trans-1,3-dichloropropene	11.775	75	57787	48.86	ug/L	94
63) 1,1,2-trichloroethane	11.948	83	31529	52.73	ug/L	89
64) ethyl methacrylate	12.143	69	52944	52.22	ug/L	97
66) tetrachloroethene	12.882	166	50062	41.83	ug/L	94
67) 1,3-dichloropropane	12.185	76	62614	48.82	ug/L	99
68) dibromochloromethane	12.479	129	46806	49.53	ug/L	95
69) 1,2-dibromoethane	12.730	107	41021	49.30	ug/L	100
70) 2-hexanone	12.298	43	30042	60.85	ug/L	100
71) chlorobenzene	13.561	112	117736	43.31	ug/L	96
72) 1,1,1,2-tetrachloroethane	13.479	131	47211	44.06	ug/L	96
73) ethylbenzene	13.737	91	191750	40.73	ug/L	97
74) m,p-xylene	13.921	106	153226	83.05	ug/L	90
75) o-xylene	14.335	106	77309	41.81	ug/L	91
76) styrene	14.261	104	114391	39.84	ug/L	94
77) bromoform	14.087	173	36122	48.66	ug/L	95
78) trans-1,4-dichloro-2-b...	14.480	53	16867	56.12	ug/L #	69
80) isopropylbenzene	14.695	105	200588	51.17	ug/L	97
82) bromobenzene	14.996	156	54474	43.03	ug/L	89
83) 1,1,1,2,2-tetrachloroethane	14.338	83	60648	57.34	ug/L	95
84) 1,2,3-trichloropropane	14.487	75	67456	57.15	ug/L	99
85) n-propylbenzene	15.144	91	226930	43.67	ug/L	96
86) 2-chlorotoluene	15.265	91	136892	43.17	ug/L	97
87) 4-chlorotoluene	15.339	91	139684	44.62	ug/L	98
88) 1,3,5-trimethylbenzene	15.420	105	169357	42.25	ug/L	96
89) tert-butylbenzene	15.728	91	95539	43.99	ug/L	86
90) 1,2,4-trimethylbenzene	15.830	105	168765	42.33	ug/L	94
91) sec-butylbenzene	15.950	105	228493	42.97	ug/L	97
92) 1,3-dichlorobenzene	16.056	146	102841	42.31	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46698.D
 Acq On : 1 Mar 2012 6:08 pm
 Operator : emilyk
 Sample : mc8284-6msd
 Misc : MS25187,MSM1538,8.57,,,5,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 02 16:14:39 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Thu Mar 01 11:32:45 2012
 Response via : Initial Calibration

6.4.4

6

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) bromochloromethane	8.837	128	22335	43.29	ug/L	97
38) chloroform	8.880	83	70997	42.71	ug/L	95
40) Tetrahydrofuran	9.212	42	10168	54.44	ug/L	87
41) 1,1,1-trichloroethane	9.650	97	62633	41.58	ug/L	98
43) Cyclohexane	9.933	56	56786	40.11	ug/L	97
44) carbon tetrachloride	10.014	117	58109	42.30	ug/L	97
45) 1,1-dichloropropene	9.824	75	49022	40.61	ug/L	95
46) benzene	10.050	78	147158	40.68	ug/L	96
47) 1,2-dichloroethane	9.544	62	51763	45.29	ug/L	92
48) tert-amyl methyl ether	10.166	73	95674	43.67	ug/L	97
49) heptane	10.527	43	35305	31.24	ug/L	95
50) trichloroethene	10.672	95	38613	40.63	ug/L	93
51) 1,2-dichloropropane	10.640	63	33852	41.57	ug/L	98
52) dibromomethane	10.615	93	24923	46.13	ug/L	99
53) bromodichloromethane	10.729	83	51682	44.04	ug/L	96
54) Methylcyclohexane	11.202	83	54764	33.29	ug/L	92
56) methyl methacrylate	10.817	69	23710	48.83	ug/L	96
57) 1,4-dioxane	10.820	88	1744	260.86	ug/L #	65
58) cis-1,3-dichloropropene	11.351	75	55112	39.08	ug/L	99
60) 4-methyl-2-pentanone	11.439	43	37827	54.30	ug/L	96
61) toluene	12.136	92	88986	39.58	ug/L	100
62) trans-1,3-dichloropropene	11.775	75	49424	42.51	ug/L	93
63) 1,1,2-trichloroethane	11.948	83	26698	44.71	ug/L	95
64) ethyl methacrylate	12.143	69	45432	45.48	ug/L	91
66) tetrachloroethene	12.878	166	41771	33.49	ug/L	93
67) 1,3-dichloropropane	12.185	76	54906	41.08	ug/L	98
68) dibromochloromethane	12.482	129	39878	40.49	ug/L	97
69) 1,2-dibromoethane	12.733	107	34732	40.64	ug/L	100
70) 2-hexanone	12.298	43	26053	52.07	ug/L	97
71) chlorobenzene	13.560	112	96042	33.90	ug/L	99
72) 1,1,1,2-tetrachloroethane	13.479	131	39728	35.57	ug/L	96
73) ethylbenzene	13.734	91	152533	31.25	ug/L	96
74) m,p-xylene	13.917	106	119944	62.68	ug/L	91
75) o-xylene	14.335	106	60639	31.63	ug/L	95
76) styrene	14.260	104	85350	29.33	ug/L	95
77) bromoform	14.091	173	28889	38.48	ug/L	98
78) trans-1,4-dichloro-2-b...	14.487	53	12728	41.61	ug/L	88
80) isopropylbenzene	14.699	105	144360	35.27	ug/L	97
82) bromobenzene	14.992	156	39953	30.23	ug/L	99
83) 1,1,2,2-tetrachloroethane	14.338	83	47409	42.93	ug/L	93
84) 1,2,3-trichloropropane	14.490	75	53571	43.47	ug/L	95
85) n-propylbenzene	15.144	91	154320	28.44	ug/L	94
86) 2-chlorotoluene	15.264	91	95132	28.74	ug/L	95
87) 4-chlorotoluene	15.342	91	94353	28.87	ug/L	96
88) 1,3,5-trimethylbenzene	15.420	105	110144	26.32	ug/L	94
89) tert-butylbenzene	15.728	91	61444	27.10	ug/L	92
90) 1,2,4-trimethylbenzene	15.830	105	107616	25.86	ug/L	97
91) sec-butylbenzene	15.950	105	137462	24.76	ug/L	97
92) 1,3-dichlorobenzene	16.056	146	63953	25.20	ug/L	98
93) p-isopropyltoluene	16.120	119	113447	24.23	ug/L	95

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC8284

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC8340-5MS	N60805.D	1	03/02/12	JP	n/a	n/a	MSN2272
MC8340-5MSD	N60806.D	1	03/02/12	JP	n/a	n/a	MSN2272
MC8340-5	N60800.D	1	03/02/12	JP	n/a	n/a	MSN2272

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8284-10

CAS No.	Compound	MC8340-5 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	ND	50	50.2	100	50.1	100	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	50	49.7	99	50.2	100	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC8340-5	Limits
1868-53-7	Dibromofluoromethane	90%	88%	85%	70-130%
2037-26-5	Toluene-D8	89%	88%	87%	70-130%
460-00-4	4-Bromofluorobenzene	83%	85%	100%	70-130%

Volatile Surrogate Recovery Summary

Page 1 of 1

Job Number: MC8284

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Method: SW846 8260B

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC8284-10	N60793.D	84.0	86.0	98.0
MC8340-5MS	N60805.D	90.0	89.0	83.0
MC8340-5MSD	N60806.D	88.0	88.0	85.0
MSN2272-BS	N60783.D	84.0	87.0	83.0
MSN2272-BSD	N60784.D	84.0	87.0	83.0
MSN2272-MB	N60786.D	82.0	86.0	97.0

Surrogate Compounds	Recovery Limits

S1 = Dibromofluoromethane 70-130%

S2 = Toluene-D8 70-130%

S3 = 4-Bromofluorobenzene 70-130%

5.6.1

5

Volatile Surrogate Recovery Summary

Page 1 of 1

Job Number: MC8284

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Method: SW846 8260B

Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC8284-1	E58615.D	96.0	107.0	108.0
MC8284-2	M46689.D	88.0	82.0	82.0
MC8284-3	M46690.D	89.0	83.0	84.0
MC8284-4	M46691.D	94.0	79.0	87.0
MC8284-5	M46692.D	91.0	82.0	82.0
MC8284-6	M46693.D	92.0	83.0	77.0
MC8284-7	M46694.D	93.0	82.0	82.0
MC8284-8	M46695.D	96.0	83.0	82.0
MC8284-9	M46696.D	95.0	86.0	76.0
MC8284-1A	M46688.D	92.0	84.0	79.0
MC8284-6MS	M46697.D	86.0	82.0	85.0
MC8284-6MSD	M46698.D	86.0	85.0	87.0
MC8331-1MS	E58621.D	91.0	101.0	100.0
MC8331-1MSD	E58622.D	90.0	101.0	103.0
MSE2299-BS	E58610.D	91.0	102.0	103.0
MSE2299-BSD	E58611.D	95.0	108.0	105.0
MSE2299-MB	E58613.D	98.0	107.0	107.0
MSM1538-BS	M46685.D	84.0	82.0	85.0
MSM1538-BSD	M46686.D	84.0	83.0	82.0
MSM1538-MB	M46687.D	90.0	84.0	82.0

Surrogate Compounds

Recovery Limits

S1 = Dibromofluoromethane
S2 = Toluene-D8
S3 = 4-Bromofluorobenzene

70-130%
70-130%
70-130%

5.6.2

5

Initial Calibration Summary

Page 4 of 4

Job Number: MC8284
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSE2293-ICC2293
Lab FileID: E58434.D

	0.342	0.310	0.289	0.292	0.279	0.293	0.308	0.302	6.83
78)	trans-1,4-dichloro-2-butene						0.145	0.139	7.55
	0.157	0.140	0.133	0.127	0.134				
79) I	1,4-dichlorobenzene-d -----ISTD-----								
80)	isopropylbenzene								
	3.178	2.842	2.836	3.140	3.164	2.957	3.077	3.028	4.90
81)	bromofluorobenzene (s)						1.007	0.982	5.10
	0.883	0.977	1.002	1.019	1.000				
82)	bromobenzene						0.829	0.828	5.43
	0.918	0.816	0.775	0.824	0.837	0.797			
83)	1,1,2,2-tetrachloroethane						0.674	0.666	4.24
	0.705	0.684	0.639	0.666	0.675	0.621			
84)	1,2,3-trichloropropane						0.719	0.739	6.37
	0.832	0.735	0.677	0.731	0.752	0.725			
85)	n-propylbenzene						3.890	3.944	6.79
	4.488	3.894	3.625	3.946	3.980	3.784			
86)	2-chlorotoluene						2.422	2.440	7.28
	2.811	2.382	2.261	2.438	2.448	2.316			
87)	4-chlorotoluene						2.378	2.398	8.65
	2.837	2.365	2.185	2.340	2.403	2.276			
88)	1,3,5-trimethylbenzene						2.795	2.770	4.79
	2.877	2.610	2.647	2.924	2.891	2.649			
89)	tert-butylbenzene						1.408	1.390	5.46
	1.451	1.270	1.345	1.463	1.462	1.330			
90)	1,2,4-trimethylbenzene						2.792	2.804	7.08
	3.195	2.695	2.628	2.860	2.844	2.614			
91)	sec-butylbenzene						3.558	3.507	7.12
	3.965	3.283	3.309	3.609	3.560	3.263			
92)	1,3-dichlorobenzene						1.542	1.520	8.65
	1.796	1.492	1.402	1.510	1.483	1.416			
93)	p-isopropyltoluene						2.670	2.656	6.80
	2.992	2.558	2.509	2.721	2.696	2.444			
94)	1,4-dichlorobenzene						1.580	1.543	8.82
	1.824	1.510	1.471	1.519	1.499	1.394			
95)	1,2-dichlorobenzene						1.400	1.391	6.73
	1.575	1.423	1.305	1.377	1.363	1.294			
96)	n-butylbenzene						2.672	2.616	6.79
	2.962	2.505	2.454	2.645	2.623	2.451			
97)	1,2-dibromo-3-chloropropane						0.090	0.084	4.27
	0.080	0.081	0.084	0.086	0.084				
98)	1,3,5-trichlorobenzene						0.918	0.934	5.89
	1.036	0.933	0.874	0.945	0.957	0.878			
99)	1,2,4-trichlorobenzene						0.755	0.795	9.37
	0.949	0.742	0.728	0.790	0.817	0.781			
100)	hexachlorobutadiene						0.375	0.366	7.85
	0.419	0.341	0.357	0.361	0.343				
101)	naphthalene						1.475	1.560	7.40
	1.656	1.398	1.455	1.591	1.657	1.686			
102)	1,2,3-trichlorobenzene						0.627	0.688	12.31
	0.862	0.646	0.612	0.663	0.690	0.720			
103)	2-methylnaphthalene						0.706	0.972	23.66
	1.419	0.843	0.820	0.954	1.040	1.024			
----- Linear regression -----							Coefficient = 0.9990		
Response Ratio = -0.04628 + 1.03696 *A									

(#) = Out of Range ### Number of calibration levels exceeded format ###

E022212M.M

Fri Feb 24 16:15:24 2012 LPT1

Continuing Calibration Summary

Page 1 of 3

Job Number: MC8284
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSE2299-CC2293
 Lab FileID: E58609.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\E58609.D
 Acq On : 1 Mar 2012 12:02 pm
 Sample : cc2293-50
 Misc : ms25183,mse2299,10,,100,10,1
 MS Integration Params: RTEINT.P

Vial: 5
 Operator: garyk
 Inst : MSE
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\E022212M.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Thu Feb 23 08:29:23 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	131	-0.02	6.62
2 M	tertiary butyl alcohol	1.127	0.975	13.5	135	-0.01	6.72
3 T	Ethanol	0.168	0.142	15.5	133	0.00	5.45
4 I	pentafluorobenzene	1.000	1.000	0.0	131	-0.01	9.10
5 M	dichlorodifluoromethane	0.546	0.502	8.1	124	-0.01	4.25
6 P	chloromethane	0.947	0.955	-0.8	140	-0.02	4.49
7 c	vinyl chloride	0.669	0.713	-6.6	148	-0.01	4.74
8 M	bromomethane	0.505	0.515	-2.0	141	-0.01	5.27
9 M	chloroethane	0.448	0.465	-3.8	141	-0.01	5.43
10 M	ethyl ether	0.457	0.462	-1.1	131	-0.01	6.35
----- True Calc. % Drift -----							
11 M	acetonitrile	50.000	42.272	15.5	119	0.00	6.00
----- AvgRF CCRF % Dev -----							
12 M	trichlorofluoromethane	0.712	0.722	-1.4	133	-0.01	6.11
13 M	freon-113	0.557	0.565	-1.4	143	-0.01	6.90
14 M	acrolein	0.013	0.010	23.1	96	-0.01	6.09
15 c	1,1-dichloroethene	0.538	0.547	-1.7	145	-0.01	6.70
----- True Calc. % Drift -----							
16 M	acetone	50.000	44.774	10.5	117	0.00	6.24
----- AvgRF CCRF % Dev -----							
17 M	Methyl Acetate	0.683	0.643	5.9	136	-0.01	6.89
18 M	methylene chloride	0.675	0.698	-3.4	146	-0.02	6.85
19 M	methyl tert butyl ether	1.279	1.253	2.0	138	-0.02	7.66
20 M	acrylonitrile	0.029	0.030	-3.4	141	-0.01	6.76
21 M	allyl chloride	1.092	1.177	-7.8	153	-0.01	6.95
----- True Calc. % Drift -----							
22 M	trans-1,2-dichloroethene	50.000	53.399	-6.8	145	-0.01	7.57
----- AvgRF CCRF % Dev -----							
23 M	iodomethane	1.013	1.056	-4.2	142	-0.01	6.76
24 M	carbon disulfide	2.018	2.167	-7.4	149	-0.02	7.13
25 M	propionitrile	0.005	0.006	-20.0	143	0.00	6.77
26 M	vinyl acetate	1.073	1.035	3.5	135	-0.01	7.93
27 M	chloroprene	0.864	0.906	-4.9	148	-0.01	8.19
28 M	di-isopropyl ether	2.300	2.414	-5.0	146	-0.01	8.24
29 M	methacrylonitrile	0.295	0.282	4.4	136	-0.01	8.36

5.7.3
5

Continuing Calibration Summary

Page 3 of 3

Job Number: MC8284
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSE2299-CC2293
 Lab FileID: E58609.D

83 P	1,1,2,2-tetrachloroethane	0.666	0.652	2.1	133	-0.01	14.05
84 M	1,2,3-trichloropropane	0.739	0.691	6.5	134	0.00	14.20
85 M	n-propylbenzene	3.944	4.160	-5.5	150	-0.01	14.85
86 M	2-chlorotoluene	2.440	2.489	-2.0	144	-0.01	14.97
87 M	4-chlorotoluene	2.398	2.476	-3.3	148	-0.01	15.05
88 M	1,3,5-trimethylbenzene	2.770	2.950	-6.5	146	0.00	15.13
89 M	tert-butylbenzene	1.390	1.462	-5.2	142	0.00	15.44
90 M	1,2,4-trimethylbenzene	2.804	2.893	-3.2	144	-0.01	15.54
91 M	sec-butylbenzene	3.507	3.638	-3.7	144	-0.01	15.65
92 M	1,3-dichlorobenzene	1.520	1.522	-0.1	142	-0.01	15.76
93 M	p-isopropyltoluene	2.656	2.750	-3.5	144	0.00	15.83
94 M	1,4-dichlorobenzene	1.543	1.516	1.7	135	-0.01	15.82
95 M	1,2-dichlorobenzene	1.391	1.296	6.8	130	-0.01	16.19
96 M	n-butylbenzene	2.616	2.730	-4.4	146	-0.01	16.24
97 M	1,2-dibromo-3-chloropropa	0.084	0.074	11.9	120	0.00	16.67
98 M	1,3,5-trichlorobenzene	0.934	0.904	3.2	136	0.00	17.49
99 M	1,2,4-trichlorobenzene	0.795	0.683	14.1	123	-0.01	18.07
100 M	hexachlorobutadiene	0.366	0.362	1.1	139	0.00	18.38
101 M	naphthalene	1.560	1.229	21.2	111	-0.01	18.35
102 M	1,2,3-trichlorobenzene	0.688	0.522	24.1	112	-0.01	18.57

		True	Calc.	% Drift			
103	2-methylnaphthalene	25.000	17.005	32.0	98	-0.01	19.87

(4.1 %) 4 of 98 compounds' %D > 20

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 E58434.D E022212M.M Thu Mar 01 14:28:14 2012 LPT1

5.7.3
5

Initial Calibration Summary

Page 1 of 6

Job Number: MC8284
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSM1537-ICC1537
Lab FileID: M46676.D

Response Factor Report GCMS M

Method : C:\msdchem\1\methods\M022912W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Mar 05 13:52:36 2012
Response via : Initial Calibration

Calibration Files

.5 =M46672.D 20 =M46675.D 2 =M46673.D 5 =M46674.D
50 =M46676.D 100 =M46677.D 200 =M46678.D 400 =M46679.D
=

Compound	.5	20	2	5	50	100	200	400	Avg	%RSD
1) I tert butyl alcohol-d9 -----ISTD-----										
2) tertiary butyl alcohol		0.952		0.932	1.123	1.193	1.322	1.238	1.127	13.95
3) Ethanol		0.123		0.048	0.119	0.138	0.154	0.132	0.119	30.95
---- Linear regression ---- Coefficient = 0.9922										
Response Ratio = 0.02770 + 0.13579 *A										
4) I pentafluorobenzene -----ISTD-----										
5) dichlorodifluoromethane		0.722	0.644	0.811	0.760	0.846	0.815	0.779	0.768	8.86
6) chloromethane		0.635		0.810	0.676	0.755	0.815	0.784	0.746	9.96
7) vinyl chloride		0.791	0.697	0.909	0.825	0.922	0.925	0.854	0.846	9.84
8) bromomethane		0.583	0.501	0.650	0.562	0.616	0.641	0.602	0.594	8.61
9) chloroethane		0.466		0.508	0.448	0.494	0.516	0.481	0.485	5.31
10) ethyl ether		0.422		0.366	0.423	0.467	0.498	0.484	0.443	11.09
11) acetonitrile		0.025		0.042	0.073	0.073	0.073		0.057	39.18
---- Linear regression ---- Coefficient = 0.9979										
Response Ratio = -0.01980 + 0.07592 *A										
12) trichlorofluoromethane		1.192	1.061	1.351	1.159	1.293	1.302	1.207	1.223	8.11
13) freon-113		0.706		0.777	0.693	0.765	0.780	0.730	0.742	5.06
14) acrolein		0.018		0.021	0.025	0.026	0.028		0.024	16.58
---- Linear regression ---- Coefficient = 0.9993										
Response Ratio = -0.03308 + 0.02873 *A										
15) 1,1-dichloroethene		0.610	0.522	0.673	0.591	0.658	0.690	0.664	0.630	9.41
16) acetone		0.127		0.125	0.124	0.151	0.150	0.163	0.140	12.09
17) Methyl Acetate		0.365		0.298	0.367	0.418	0.428	0.430	0.385	13.39
18) methylene chloride		0.811	1.585	1.112	0.715	0.774	0.789	0.746	0.933	33.91

5.7.4
5

Initial Calibration Summary

Page 5 of 6

Job Number: MC8284
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSM1537-ICC1537
 Lab FileID: M46676.D

78)	trans-1,4-dichloro-2-butene	0.231	0.183	0.234	0.275	0.278	0.277	0.246	15.40
	----- Linear regression -----	Coefficient = 0.9997							
		Response Ratio = -0.01986 + 0.28023 *A							
79)	I 1,4-dichlorobenzene-d	-----ISTD-----							
80)	isopropylbenzene	2.562	2.291	2.688	3.111	3.360	3.031	2.840	13.93
81)	bromofluorobenzene (s)	0.796	0.717	0.956	0.874	0.685	0.726	0.792	13.23
82)	bromobenzene	0.846	0.861	0.830	0.954	1.040	0.973	0.917	9.19
83)	1,1,2,2-tetrachloroethane	0.762 0.628	0.829	0.730	0.806	0.825	0.786	0.767	9.19
84)	1,2,3-trichloropropane	0.800	0.797	0.779	0.898	0.942	0.916	0.855	8.30
85)	n-propylbenzene	3.477	3.104	3.572	4.083	4.394	3.965	3.766	12.41
86)	2-chlorotoluene	2.104	2.088	2.152	2.430	2.624	2.389	2.298	9.43
87)	4-chlorotoluene	2.092	2.064	2.145	2.389	2.569	2.354	2.269	8.82
88)	1,3,5-trimethylbenzene	2.647	2.496	2.737	3.129	3.353	3.067	2.905	11.30 ✓
89)	tert-butylbenzene	1.425	1.292	1.453	1.701	1.875	1.697	1.574	13.86
90)	1,2,4-trimethylbenzene	2.672	2.401	2.725	3.099	3.347	3.090	2.889	12.05 ✓
91)	sec-butylbenzene	3.492	3.399	3.620	4.149	4.450	4.011	3.854	10.76
92)	1,3-dichlorobenzene	1.686 1.534	1.797	1.659	1.843	1.974	1.838	1.761	8.25
93)	p-isopropyltoluene	2.976	3.121	2.983	3.397	3.657	3.368	3.250	8.30
94)	1,4-dichlorobenzene	1.764 1.697	1.976	1.708	1.881	2.020	1.898	1.849	6.93
95)	1,2-dichlorobenzene	1.642 1.322	1.682	1.612	1.816	1.953	1.834	1.695	12.04
96)	n-butylbenzene	2.820	2.666	2.983	3.331	3.536	3.191	3.088	10.55
97)	1,2-dibromo-3-chloropropane	0.155	0.187	0.155	0.169	0.176	0.173	0.169	7.44
98)	1,3,5-trichlorobenzene	1.458	1.598	1.474	1.719	1.845	1.687	1.630	9.20
99)	1,2,4-trichlorobenzene	1.368	1.444	1.384	1.610	1.697	1.545	1.508	8.72
100)	hexachlorobutadiene	0.850	0.994	0.851	0.965	1.045	0.925	0.938	8.37
101)	naphthalene	2.852	2.744	2.859	3.398	3.516	3.240	3.102	10.47
102)	1,2,3-trichlorobenzene	1.293	1.428	1.302	1.520	1.589	1.443	1.429	8.20
103)	2-methylnaphthalene	1.469 1.180	1.145	1.607	2.017	2.127	2.029	1.653	24.88
	----- Linear regression -----	Coefficient = 0.9986							
		Response Ratio = -0.06983 + 2.06600 *A							

5.7.4

5

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46674.D
 Acq On : 29 Feb 2012 12:06 pm
 Operator : emilyk
 Sample : ic1537-5
 Misc : MS25151,MSM1537,5,,,5,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 29 16:17:24 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Wed Feb 29 16:16:55 2012
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.861	65	31619	500.00	ug/L	0.00
4) pentafluorobenzene	9.367	168	63093	50.00	ug/L	0.00
42) 1,4-difluorobenzene	10.248	114	99461	50.00	ug/L	0.00
65) chlorobenzene-d5	13.529	82	52996	50.00	ug/L	0.00
79) 1,4-dichlorobenzene-d4	16.092	152	66206	50.00	ug/L	0.00
System Monitoring Compounds						
39) dibromofluoromethane (s)	9.000	113	4892	5.85	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	11.70%#
59) toluene-d8 (s)	12.065	98	13844	4.30	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	8.60%#
81) bromofluorobenzene (s)	14.759	95	5694	5.43	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	10.86%#
Target Compounds						
2) tertiary butyl alcohol	6.942	59	2946	37.62	ug/L	77
3) Ethanol	5.666	45	1521	181.88	ug/L #	100
5) dichlorodifluoromethane	4.450	85	5117	5.21	ug/L	93
6) chloromethane	4.669	50	5109	5.17	ug/L	98
7) vinyl chloride	4.948	62	5736	5.33	ug/L	98
8) bromomethane ...	5.472	96	4100	5.39	ug/L	84
9) chloroethane	5.655	64	3202	5.27	ug/L	94
10) ethyl ether	6.585	59	2307	3.78	ug/L	95
12) trichlorofluoromethane	6.352	101	8524	5.60	ug/L	80
13) freon-113	7.165	101	4905	5.32	ug/L	92
15) 1,1-dichloroethene	6.949	96	4248	5.07	ug/L	93
16) acetone	6.490	43	791	3.83	ug/L #	39
17) Methyl Acetate	7.154	43	1881	3.47	ug/L	90
18) methylene chloride	7.105	84	7019	7.45	ug/L	94
19) methyl tert butyl ether	7.918	73	9607	4.07	ug/L	97
21) allyl chloride	7.200	41	5843	5.06	ug/L	93
22) trans-1,2-dichloroethene	7.826	96	4536	4.85	ug/L	92
23) iodomethane	7.013	142	8568	4.86	ug/L	88
24) carbon disulfide	7.398	76	15311	5.10	ug/L	99
26) vinyl acetate	8.197	43	4338	2.74	ug/L	70
27) chloroprene	8.452	53	5363	4.20	ug/L	86
28) di-isopropyl ether	8.501	45	11530	4.66	ug/L	89
29) methacrylonitrile	8.625	41	1505	3.44	ug/L #	60
30) 2-butanone	8.473	57	5028	4.55	ug/L	92
31) 1,1-dichloroethane	8.081	63	8102	5.33	ug/L	89
32) tert-butyl ethyl ether	8.904	59	10583	4.35	ug/L	88
33) isobutyl alcohol	8.894	43	2162	24.22	ug/L #	63
34) 2,2-dichloropropane	8.968	77	7402	5.32	ug/L	83
35) cis-1,2-dichloroethene	8.667	96	5011	5.08	ug/L	92
36) ethyl acetate	8.894	43	2408	5.39	ug/L	100
37) bromochloromethane	8.837	128	2467	4.92	ug/L	87
38) chloroform	8.876	83	8953	5.67	ug/L	97
40) Tetrahydrofuran	9.208	42	724	3.24	ug/L #	34
41) 1,1,1-trichloroethane	9.650	97	7811	5.31	ug/L	86

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46674.D
 Acq On : 29 Feb 2012 12:06 pm
 Operator : emilyk
 Sample : ic1537-5
 Misc : MS25151,MSM1537,5,,,5,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 29 16:17:24 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Wed Feb 29 16:16:55 2012
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Cyclohexane	9.930	56	6164	4.17	ug/L	90
44) carbon tetrachloride	10.011	117	7281	5.21	ug/L	97
45) 1,1-dichloropropene	9.824	75	5454	4.33	ug/L	90
46) benzene	10.046	78	18112	5.20	ug/L	88
47) 1,2-dichloroethane	9.544	62	5904	5.08	ug/L	98
48) tert-amyl methyl ether	10.166	73	9493	3.93	ug/L	89
49) heptane	10.527	43	4825	4.01	ug/L	91
50) trichloroethene	10.676	95	4805	4.91	ug/L	88
51) 1,2-dichloropropane	10.640	63	4140	4.81	ug/L	93
52) dibromomethane	10.612	93	2655	4.79	ug/L	90
53) bromodichloromethane	10.732	83	5756	4.63	ug/L	98
54) Methylcyclohexane	11.195	83	7129	4.14	ug/L	91
55) 2-chloroethyl vinyl ether	11.107	63	1154	2.27	ug/L #	44
56) methyl methacrylate	10.820	69	1464	2.61	ug/L	76
58) cis-1,3-dichloropropene	11.354	75	5699	3.82	ug/L	97
60) 4-methyl-2-pentanone	11.443	43	2343	2.99	ug/L #	77
61) toluene	12.139	92	9991	4.32	ug/L	98
62) trans-1,3-dichloropropene	11.771	75	4294	3.38	ug/L	92
63) 1,1,2-trichloroethane	11.948	83	2899	4.38	ug/L	89
64) ethyl methacrylate	12.146	69	3455	3.22	ug/L	88
66) tetrachloroethene	12.878	166	5801	5.06	ug/L	89
67) 1,3-dichloropropane	12.189	76	5823	4.74	ug/L	90
68) dibromochloromethane	12.475	129	4399	4.52	ug/L	88
69) 1,2-dibromoethane	12.737	107	3625	4.46	ug/L	94
70) 2-hexanone	12.302	43	1439	2.75	ug/L #	59
71) chlorobenzene	13.560	112	13335	5.14	ug/L	93
72) 1,1,1,2-tetrachloroethane	13.479	131	4897	4.81	ug/L	98
73) ethylbenzene	13.737	91	18624	4.28	ug/L	99
74) m,p-xylene	13.921	106	14214	8.35	ug/L #	74
75) o-xylene	14.331	106	7645	4.47	ug/L	98
76) styrene	14.260	104	9951	3.54	ug/L	82
77) bromoform	14.087	173	2895	3.83	ug/L	99
78) trans-1,4-dichloro-2-b...	14.487	53	969	3.30	ug/L #	65
80) isopropylbenzene	14.699	105	15166	3.78	ug/L	95
82) bromobenzene	14.989	156	5703	4.42	ug/L	94
83) 1,1,2,2-tetrachloroethane	14.345	83	5490	5.27	ug/L	86
84) 1,2,3-trichloropropane	14.490	75	5279	4.35	ug/L	84
85) n-propylbenzene	15.144	91	20551	3.91	ug/L	96
86) 2-chlorotoluene	15.268	91	13824	4.37	ug/L	94
87) 4-chlorotoluene	15.342	91	13662	4.38	ug/L	80
88) 1,3,5-trimethylbenzene	15.420	105	16525	4.07	ug/L	94
89) tert-butylbenzene	15.727	91	8555	3.81	ug/L #	73
90) 1,2,4-trimethylbenzene	15.830	105	15896	3.89	ug/L	99
91) sec-butylbenzene	15.950	105	22504	4.24	ug/L	97
92) 1,3-dichlorobenzene	16.056	146	11894	4.89	ug/L	90
93) p-isopropyltoluene	16.116	119	20666	4.63	ug/L	97
94) 1,4-dichlorobenzene	16.123	146	13081	5.21	ug/L	98
95) 1,2-dichlorobenzene	16.491	146	11135	4.59	ug/L	92
96) n-butylbenzene	16.537	91	17652	4.18	ug/L	97
97) 1,2-dibromo-3-chloropr...	16.972	75	1240	5.42	ug/L	77

Continuing Calibration Summary

Page 1 of 4

Job Number: MC8284
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSM1538-CC1537
 Lab FileID: M46684.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\M46684.D
 Acq On : 1 Mar 2012 10:48 am
 Sample : cc1537-50
 Misc : MS25187,MSM1538,5,,,5,1
 MS Integration Params: RTEINT.P

Vial: 2
 Operator: emilyk
 Inst : GCMS M
 Multiplr: 1.00

Method : C:\msdchem\1\methods\M022912W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Thu Mar 01 11:32:45 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	114	0.00	6.85
2 M	tertiary butyl alcohol	1.127	1.086	3.6	111	0.00	6.95
----- Amount Calc. %Drift -----							
3	Ethanol	5000.000	3052.753	38.9%	82	0.00	5.66
----- AvgRF CCRF %Dev -----							
4 I	pentafluorobenzene	1.000	1.000	0.0	109	0.00	9.36
5 M	dichlorodifluoromethane	0.768	0.773	-0.7	111	0.00	4.44
6 P	chloromethane	0.746	0.771	-3.4	125	-0.01	4.67
7 c	vinyl chloride	0.846	0.862	-1.9	114	0.00	4.96
8 M	bromomethane	0.594	0.606	-2.0	118	0.00	5.48
9 M	chloroethane	0.485	0.480	1.0	117	0.00	5.66
10 M	ethyl ether	0.443	0.475	-7.2	123	0.00	6.58
----- Amount Calc. %Drift -----							
11 M	acetonitrile	50.000	43.488	13.0	122	0.05	6.38
----- AvgRF CCRF %Dev -----							
12 M	trichlorofluoromethane	1.223	1.183	3.3	112	0.00	6.36
13 M	freon-113	0.742	0.717	3.4	113	0.00	7.16
----- Amount Calc. %Drift -----							
14 M	acrolein	250.000	258.828	-3.5	118	0.01	6.33
----- AvgRF CCRF %Dev -----							
15 c	1,1-dichloroethene	0.630	0.625	0.8	116	0.00	6.95
16 M	acetone	0.140	0.194	-38.6%	172	0.00	6.47
17 M	Methyl Acetate	0.385	0.423	-9.9	126	0.01	7.14
----- Amount Calc. %Drift -----							
18 M	methylene chloride	50.000	55.211	-10.4	132	0.00	7.11
19 M	methyl tert butyl ether	50.000	49.248	1.5	120	0.00	7.91
----- AvgRF CCRF %Dev -----							
20 M	acrylonitrile	0.036	0.036	0.0	121	0.01	7.01
21 M	allyl chloride	0.906	0.925	-2.1	119	0.00	7.20
22 M	trans-1,2-dichloroethene	0.707	0.714	-1.0	118	0.00	7.82
23 M	iodomethane	1.362	1.352	0.7	119	0.00	7.01
24 M	carbon disulfide	2.340	2.270	3.0	115	0.00	7.40

5.7.5

5

Continuing Calibration Summary

Page 3 of 4

Job Number: MC8284
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSM1538-CC1537
 Lab FileID: M46684.D

		AvgRF	CCRF	%Dev			
63 M	1,1,2-trichloroethane	0.296	0.310	-4.7	121	0.00	11.94
		Amount	Calc.	%Drift			
64 M	ethyl methacrylate	50.000	46.115	7.8	113	0.00	12.14
		AvgRF	CCRF	%Dev			
65 I	chlorobenzene-d5	1.000	1.000	0.0	109	0.00	13.53
66 M	tetrachloroethene	1.045	0.979	6.3	116	0.00	12.88
67 M	1,3-dichloropropane	1.120	1.105	1.3	117	0.00	12.19
68 M	dibromochloromethane	0.825	0.810	1.8	117	0.00	12.48
		Amount	Calc.	%Drift			
69 M	1,2-dibromoethane	50.000	46.281	7.4	116	0.00	12.73
70 M	2-hexanone	50.000	47.764	4.5	119	0.00	12.30
		AvgRF	CCRF	%Dev			
71 P	chlorobenzene	2.374	2.308	2.8	117	0.00	13.56
72 M	1,1,1,2-tetrachloroethane	0.936	0.910	2.8	117	0.00	13.48
		Amount	Calc.	%Drift			
73 c	ethylbenzene	50.000	46.628	6.7	117	0.00	13.73
74 M	m,p-xylene	100.000	92.830	7.2	115	0.00	13.92
75 M	o-xylene	50.000	47.088	5.8	119	0.00	14.33
76 M	styrene	50.000	47.193	5.6	118	0.00	14.26
77 P	bromoform	50.000	46.578	6.8	121	0.00	14.09
78 M	trans-1,4-dichloro-2-bute	50.000	49.071	1.9	119	0.00	14.48
		AvgRF	CCRF	%Dev			
79 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	109	0.00	16.10
80 M	isopropylbenzene	2.840	2.842	-0.1	115	0.00	14.70
		Amount	Calc.	%Drift			
81 S	bromofluorobenzene (s)	60.000	42.935	28.4#	71	0.00	14.76
		AvgRF	CCRF	%Dev			
82 M	bromobenzene	0.917	0.900	1.9	118	0.00	14.99
83 P	1,1,2,2-tetrachloroethane	0.767	0.775	-1.0	116	0.00	14.34
84 M	1,2,3-trichloropropane	0.855	0.847	0.9	119	0.00	14.49
85 M	n-propylbenzene	3.766	3.733	0.9	114	0.00	15.14
86 M	2-chlorotoluene	2.298	2.283	0.7	116	0.00	15.26
87 M	4-chlorotoluene	2.269	2.258	0.5	115	0.00	15.34
88 M	1,3,5-trimethylbenzene	2.905	2.874	1.1	115	0.00	15.42
89 M	tert-butylbenzene	1.574	1.527	3.0	115	0.00	15.73
90 M	1,2,4-trimethylbenzene	2.889	2.871	0.6	115	0.00	15.83
91 M	sec-butylbenzene	3.854	3.788	1.7	114	0.00	15.95
92 M	1,3-dichlorobenzene	1.761	1.747	0.8	115	0.00	16.06
93 M	p-isopropyltoluene	3.250	3.076	5.4	112	0.00	16.12
94 M	1,4-dichlorobenzene	1.849	1.800	2.7	115	0.00	16.12
95 M	1,2-dichlorobenzene	1.695	1.728	-1.9	117	0.00	16.49
96 M	n-butylbenzene	3.088	3.033	1.8	111	0.00	16.54
97 M	1,2-dibromo-3-chloropropa	0.169	0.158	6.5	112	0.00	16.97
98	1,3,5-trichlorobenzene	1.630	1.548	5.0	115	0.00	17.78
99 M	1,2,4-trichlorobenzene	1.508	1.475	2.2	116	0.00	18.33
100 M	hexachlorobutadiene	0.938	0.877	6.5	112	0.00	18.62
101 M	naphthalene	3.102	3.080	0.7	117	0.00	18.61
102 M	1,2,3-trichlorobenzene	1.429	1.398	2.2	117	0.00	18.81

5.7.5

5

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46684.D
 Acq On : 1 Mar 2012 10:48 am
 Operator : emilyk
 Sample : cc1537-50
 Misc : MS25187,MSM1538,5,,,5,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 01 11:13:10 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Thu Mar 01 11:13:01 2012
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.851	65	36162	500.00	ug/L	0.00
4) pentafluorobenzene	9.361	168	73857	50.00	ug/L	0.00
42) 1,4-difluorobenzene	10.248	114	116017	50.00	ug/L	0.00
65) chlorobenzene-d5	13.529	82	65628	50.00	ug/L	0.00
79) 1,4-dichlorobenzene-d4	16.095	152	80043	50.00	ug/L	0.00
System Monitoring Compounds						
39) dibromofluoromethane (s)	8.996	113	40634	43.65	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	87.30%		
59) toluene-d8 (s)	12.062	98	147409	41.61	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	83.22%		
81) bromofluorobenzene (s)	14.755	95	59408	42.94	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	85.88%		
Target Compounds						
					Qvalue	
2) tertiary butyl alcohol	6.949	59	39260	481.84	ug/L	97
3) Ethanol	5.659	45	30983	3052.75	ug/L #	100
5) dichlorodifluoromethane	4.439	85	57079	50.30	ug/L	92
6) chloromethane	4.673	50	56915	51.67	ug/L	99
7) vinyl chloride	4.959	62	63630	50.92	ug/L	95
8) bromomethane	5.479	96	44758	51.04	ug/L	95
9) chloroethane	5.656	64	35476	49.48	ug/L	93
10) ethyl ether	6.582	59	35073	53.59	ug/L	95
11) acetonitrile	6.380	41	3415	43.49	ug/L	94
12) trichlorofluoromethane	6.363	101	87396	48.36	ug/L	97
13) freon-113	7.162	101	52983	48.33	ug/L	95
14) acrolein	6.331	56	8541	258.83	ug/L	100
15) 1,1-dichloroethene	6.949	96	46150	49.61	ug/L	85
16) acetone	6.465	43	14358	69.31	ug/L	84
17) Methyl Acetate	7.137	43	31231	54.98	ug/L	96
18) methylene chloride	7.105	84	63720	55.21	ug/L	97
19) methyl tert butyl ether	7.915	73	129199	49.25	ug/L	96
20) acrylonitrile	7.006	53	13340	253.27	ug/L	89
21) allyl chloride	7.197	41	68331	51.06	ug/L	88
22) trans-1,2-dichloroethene	7.819	96	52725	50.49	ug/L	97
23) iodomethane	7.013	142	99876	49.64	ug/L	92
24) carbon disulfide	7.398	76	167658	48.51	ug/L	98
25) propionitrile	8.098	54	5009	59.37	ug/L	100
26) vinyl acetate	8.180	43	77767	47.74	ug/L	94
27) chloroprene	8.456	53	70732	49.53	ug/L	87
28) di-isopropyl ether	8.491	45	148755	50.46	ug/L	98
29) methacrylonitrile	8.611	41	23311	51.76	ug/L	95
30) 2-butanone	8.473	57	63801	50.41	ug/L	92
31) 1,1-dichloroethane	8.077	63	87594	50.63	ug/L	96
32) tert-butyl ethyl ether	8.897	59	138794	49.14	ug/L	98
33) isobutyl alcohol	8.905	43	25996	254.09	ug/L	85
34) 2,2-dichloropropane	8.965	77	79863	48.32	ug/L	93
35) cis-1,2-dichloroethene	8.668	96	57101	51.77	ug/L	95
36) ethyl acetate	8.905	43	25996	50.92	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46684.D
 Acq On : 1 Mar 2012 10:48 am
 Operator : emilyk
 Sample : cc1537-50
 Misc : MS25187,MSM1538,5,,,5,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 01 11:13:10 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Thu Mar 01 11:13:01 2012
 Response via : Initial Calibration

6.6.20

6

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) bromochloromethane	8.837	128	29211	50.70	ug/L	98
38) chloroform	8.876	83	93484	50.36	ug/L	97
40) Tetrahydrofuran	9.212	42	10874	52.63	ug/L	96
41) 1,1,1-trichloroethane	9.647	97	82646	49.13	ug/L	97
43) Cyclohexane	9.933	56	80173	49.27	ug/L	99
44) carbon tetrachloride	10.015	117	76749	48.60	ug/L	95
45) 1,1-dichloropropene	9.820	75	67614	48.72	ug/L	97
46) benzene	10.046	78	203539	48.94	ug/L	99
47) 1,2-dichloroethane	9.541	62	65577	49.91	ug/L	94
48) tert-amyl methyl ether	10.167	73	128006	50.83	ug/L	98
49) heptane	10.527	43	65721	50.60	ug/L	95
50) trichloroethene	10.676	95	54685	50.06	ug/L	98
51) 1,2-dichloropropane	10.640	63	49415	52.79	ug/L	97
52) dibromomethane	10.616	93	31014	49.94	ug/L	95
53) bromodichloromethane	10.729	83	69016	51.17	ug/L	98
54) Methylcyclohexane	11.199	83	93693	49.54	ug/L	99
55) 2-chloroethyl vinyl ether	11.100	63	23015	48.42	ug/L	96
56) methyl methacrylate	10.817	69	27308	48.91	ug/L	90
57) 1,4-dioxane	10.817	88	1426	208.41	ug/L	83
58) cis-1,3-dichloropropene	11.351	75	78208	47.51	ug/L	98
60) 4-methyl-2-pentanone	11.436	43	37739	48.09	ug/L	97
61) toluene	12.136	92	130574	50.52	ug/L	100
62) trans-1,3-dichloropropene	11.772	75	63290	46.83	ug/L	99
63) 1,1,2-trichloroethane	11.945	83	35950	52.37	ug/L	97
64) ethyl methacrylate	12.143	69	53030	46.11	ug/L	98
66) tetrachloroethene	12.878	166	64270	46.84	ug/L	97
67) 1,3-dichloropropane	12.185	76	72511	49.32	ug/L	100
68) dibromochloromethane	12.475	129	53190	49.10	ug/L	94
69) 1,2-dibromoethane	12.730	107	43953	46.28	ug/L	100
70) 2-hexanone	12.298	43	25827	47.76	ug/L	98
71) chlorobenzene	13.564	112	151471	48.61	ug/L	98
72) 1,1,1,2-tetrachloroethane	13.483	131	59711	48.60	ug/L	98
73) ethylbenzene	13.734	91	252200	46.63	ug/L	96
74) m,p-xylene	13.918	106	196654	92.83	ug/L	89
75) o-xylene	14.335	106	100003	47.09	ug/L	97
76) styrene	14.261	104	157214	47.19	ug/L	93
77) bromoform	14.091	173	39445	46.58	ug/L	93
78) trans-1,4-dichloro-2-b...	14.480	53	16746	49.07	ug/L #	66
80) isopropylbenzene	14.699	105	227469	50.02	ug/L	98
82) bromobenzene	14.992	156	72068	49.07	ug/L	96
83) 1,1,2,2-tetrachloroethane	14.338	83	62044	50.56	ug/L	98
84) 1,2,3-trichloropropane	14.487	75	67809	49.52	ug/L	95
85) n-propylbenzene	15.144	91	298803	49.57	ug/L	95
86) 2-chlorotoluene	15.265	91	182774	49.69	ug/L	98
87) 4-chlorotoluene	15.342	91	180774	49.77	ug/L	98
88) 1,3,5-trimethylbenzene	15.420	105	230036	49.46	ug/L	95
89) tert-butylbenzene	15.728	91	122220	48.51	ug/L	89
90) 1,2,4-trimethylbenzene	15.830	105	229819	49.69	ug/L	94
91) sec-butylbenzene	15.950	105	303221	49.15	ug/L	100
92) 1,3-dichlorobenzene	16.056	146	139838	49.59	ug/L	99

Initial Calibration Summary

Page 1 of 5

Job Number: MC8284
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2271-ICC2271
Lab FileID: N60772.D

Response Factor Report MAMSN

Method : C:\MSDCHEM\1\METHODS\N030112W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Fri Mar 02 12:34:51 2012
Response via : Initial Calibration

Calibration Files

1 =N60770.D 2 =N60769.D 5 =N60768.D 50 =N60772.D
100 =N60773.D 200 =N60774.D 400 =N60775.D 0.5 =N60771.D
25 =N60767.D =

Compound	1	2	5	50	100	200	400	0.5	25	Avg	%RSD
1) tert butyl alcohol-d9 -----ISTD-----											
2) tertiary butyl alcohol	0.895	1.128	1.044	1.092	1.138	1.088	1.065		1.033	1.061	7.19
3) Ethanol	0.198	0.237	0.212	0.209	0.197	0.192	0.185		0.208	0.205	7.79
4) I pentafluorobenzene -----ISTD-----											
5) dichlorodifluoromethane	0.572	0.735	0.676	0.588	0.556	0.530	0.485		0.662	0.600	13.88
6) chloromethane	0.889	1.094	0.879	0.740	0.719	0.729	0.736		0.786	0.821	15.71
----- Linear regression -----									0.9999		
Response Ratio = 0.00534 + 0.73302 *A											
7) vinyl chloride	0.942	1.139	0.915	0.784	0.724	0.656			0.838	0.857	18.73
----- Linear regression -----									0.9963		
Response Ratio = 0.05768 + 0.65595 *A											
8) bromomethane	0.589	0.507	0.410	0.419	0.442	0.419			0.435	0.460	14.24
9) chloroethane	0.397	0.547	0.491	0.447	0.439	0.425	0.391		0.469	0.451	11.42
10) ethyl ether	0.424	0.571	0.515	0.541	0.552	0.540	0.519		0.522	0.523	8.45
11) acetonitrile	0.510	0.660	0.571	0.222	0.118	0.083	0.235		0.357	0.344	62.58
12) trichlorofluoromethane	0.898	1.080	1.025	0.900	0.894	0.892	0.862		0.969	0.940	8.20
13) freon-113	0.516	0.696	0.582	0.525	0.517	0.517	0.507		0.554	0.552	11.52
14) acrolein	0.029	0.038	0.036	0.037	0.037	0.033	0.034		0.033	0.035	9.18
15) 1,1-dichloroethene	0.636	0.781	0.643	0.513	0.507	0.504	0.523		0.575	0.585	16.63
16) acetone	0.231	0.291	0.270	0.210	0.213	0.189	0.244		0.214	0.233	14.59
17) Methyl Acetate	0.521	0.758	0.664	0.579	0.593	0.517	0.516		0.597	0.593	14.17
18) methylene chloride	0.735	0.894	0.763	0.669	0.665	0.683	0.675		0.696	0.723	10.69
19) methyl tert butyl ether	0.972	1.259	1.184	1.345	1.566	1.603	1.575		1.239	1.343	16.70
----- Linear regression -----									0.9995		

5.7.6

5

Initial Calibration Summary

Page 5 of 5

Job Number: MC8284
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2271-ICC2271
Lab FileID: N60772.D

	3.727	5.177	4.796	4.456	4.556	4.522	4.405	4.623	4.533	8.99	
87)	2-chlorotoluene	2.688	3.437	3.113	2.646	2.711	2.703	2.665	2.823	2.848	9.91
88)	4-chlorotoluene	2.709	3.347	3.042	2.685	2.749	2.727	2.698	2.804	2.845	8.21
89)	1,3,5-trimethylbenzene	2.612	3.523	3.198	3.061	3.123	3.128	3.075	3.172	3.111	8.00
90)	tert-butylbenzene	1.643	2.155	2.000	1.826	1.876	1.856	1.765	1.916	1.880	8.15
91)	1,2,4-trimethylbenzene	2.488	3.304	3.131	3.035	3.136	3.149	3.109	3.115	3.058	7.93
92)	sec-butylbenzene	3.341	4.730	4.348	3.961	4.121	4.012	3.939	4.122	4.072	9.65
93)	1,3-dichlorobenzene	1.561	1.913	1.673	1.481	1.523	1.513	1.574	1.532	1.596	8.79
94)	p-isopropyltoluene	2.563	3.237	3.161	2.879	2.994	2.976	2.793	2.962	2.946	7.14
95)	1,4-dichlorobenzene	1.845	2.095	1.875	1.521	1.570	1.567	1.515	1.556	1.693	12.80
96)	1,2-dichlorobenzene	1.325	1.790	1.666	1.409	1.456	1.452	1.529	1.420	1.506	10.09
97)	n-butylbenzene	2.016	2.774	2.828	3.005	3.253	3.245	3.267	2.817	2.901	14.27
98)	1,2-dibromo-3-chloropropane	0.070	0.158	0.160	0.162	0.190	0.174	0.193	0.147	0.157	24.54
	----- Linear regression -----	Coefficient =						0.9976			
	Response Ratio = -0.01505 + 0.19140 *A										
99)	1,2,4-trichlorobenzene	0.616	0.724	0.917	0.921	1.036			0.585	0.800	23.03
	----- Linear regression -----	Coefficient =						0.9972			
	Response Ratio = -0.24638 + 1.04875 *A										
100)	1,3,5-trichlorobenzene	0.980	1.117	1.024	0.972	1.083	1.072	1.157	0.918	1.040	7.80
101)	hexachlorobutadiene	0.613	0.610	0.599	0.462	0.502	0.472	0.499	0.449	0.526	13.28
102)	naphthalene	0.916	1.525	2.236	2.180	2.513			1.006	1.729	39.21
	----- Linear regression -----	Coefficient =						0.9960			
	Response Ratio = -0.74868 + 2.55804 *A										
103)	1,2,3-trichlorobenzene	0.578	0.671	0.855	0.849	0.967			0.515	0.739	24.06
	----- Linear regression -----	Coefficient =						0.9966			
	Response Ratio = -0.23934 + 0.97828 *A										
104)	2-methylnaphthalene	0.575	0.615	0.484	0.357	0.469	0.613	0.888	0.359	0.545	31.59
	----- Quadratic regression -----							Coefficient =	0.9999		
	Response Ratio = 0.00005 + 0.32924 *A + 0.13980 *A^2										

(#) = Out of Range ### Number of calibration levels exceeded format ###

N030112W.M

Fri Mar 02 12:36:14 2012 RP1

Initial Calibration Verification

Page 1 of 4

Job Number: MC8284
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2271-ICV2271
 Lab FileID: N60778.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\N60778.D
 Acq On : 1 Mar 2012 6:14 pm
 Sample : ICV2271-50
 Misc : MS25182,MSN2271,,,,5,1
 MS Integration Params: RTEINT.P

Vial: 32
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\N030112W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Fri Mar 02 09:46:44 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	120	0.00	6.56
2	tertiary butyl alcohol	1.061	1.062	-0.1	116	0.00	6.66
3 T	Ethanol	0.205	0.174	15.1	99	0.00	5.42
4 I	pentafluorobenzene	1.000	1.000	0.0	131	0.00	9.02
5 M	dichlorodifluoromethane	0.600	0.699	-16.5	156	0.00	4.24
	----- True Calc. % Drift -----						
6 P	chloromethane	50.000	51.149	-2.3	134	0.00	4.49
7 c	vinyl chloride	50.000	41.178	17.6	100	0.00	4.75
	----- AvgRF CCRF % Dev -----						
8 M	bromomethane	0.460	0.483	-5.0	154	0.00	5.25
9 M	chloroethane	0.451	0.409	9.3	120	0.00	5.42
10 M	ethyl ether	0.523	0.501	4.2	121	0.00	6.31
11 M	acetonitrile	0.344	0.226	34.3#	133	0.00	5.97
12 M	trichlorofluoromethane	0.940	0.898	4.5	131	0.00	6.08
13 M	freon-113	0.552	0.536	2.9	134	0.00	6.86
14 M	acrolein	0.035	0.041	-17.1	143	0.00	6.06
15 c	1,1-dichloroethene	0.585	0.540	7.7	138	0.00	6.67
16 M	acetone	0.233	0.385	-65.2#	241#	0.00	6.20
17 M	Methyl Acetate	0.593	0.601	-1.3	136	0.00	6.84
18 M	methylene chloride	0.723	0.667	7.7	130	0.00	6.81
	----- True Calc. % Drift -----						
19 M	methyl tert butyl ether	50.000	41.631	16.7	122	0.00	7.60
	----- AvgRF CCRF % Dev -----						
20 M	acrylonitrile	0.043	0.043	0.0	117	0.00	6.71
21 M	allyl chloride	0.727	0.705	3.0	119	0.00	6.91
22 M	trans-1,2-dichloroethene	0.618	0.586	5.2	130	0.00	7.51
	----- True Calc. % Drift -----						
23 M	iodomethane	50.000	20.783	58.4#	55	0.00	6.73
	----- AvgRF CCRF % Dev -----						
24 M	carbon disulfide	2.041	1.995	2.3	133	0.00	7.10
	----- True Calc. % Drift -----						
25 M	propionitrile	50.000	50.528	-1.1	124	0.00	6.65
	----- AvgRF CCRF % Dev -----						

5.7.7
5

Initial Calibration Verification

Page 3 of 4

Job Number: MC8284
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2271-ICV2271
 Lab FileID: N60778.D

61 M	4-methyl-2-pentanone	0.336	0.329	2.1	123	0.00	11.08
62 c	toluene	0.876	0.873	0.3	127	0.00	11.77
----- True Calc. % Drift -----							
63 M	trans-1,3-dichloropropene	50.000	47.800	4.4	141	0.00	11.40
----- AvgRF CCRF % Dev -----							
64 M	1,1,2-trichloroethane	0.288	0.270	6.2	121	0.00	11.58
----- True Calc. % Drift -----							
65 M	ethyl methacrylate	50.000	44.048	11.9	120	0.00	11.78
----- AvgRF CCRF % Dev -----							
66 I	chlorobenzene-d5	1.000	1.000	0.0	127	0.00	13.15
67 M	tetrachloroethene	0.570	0.554	2.8	131	0.00	12.51
68 M	1,3-dichloropropane	1.091	1.016	6.9	120	0.00	11.81
----- True Calc. % Drift -----							
69 M	dibromochloromethane	50.000	48.483	3.0	131	0.00	12.11
----- AvgRF CCRF % Dev -----							
70 M	1,2-dibromoethane	0.561	0.547	2.5	124	0.00	12.36
71 M	2-hexanone	0.396	0.572	-44.4	180	0.00	11.93
72 P	chlorobenzene	1.682	1.639	2.6	131	0.00	13.19
----- True Calc. % Drift -----							
73 M	1,1,1,2-tetrachloroethane	50.000	47.540	4.9	128	0.00	13.10
----- AvgRF CCRF % Dev -----							
74 c	ethylbenzene	2.969	2.940	1.0	129	0.00	13.36
75 M	m,p-xylene	1.058	1.124	-6.2	130	0.00	13.55
76 M	o-xylene	1.035	1.077	-4.1	126	0.00	13.96
77 M	styrene	1.621	1.692	-4.4	130	0.00	13.89
----- True Calc. % Drift -----							
78 P	bromoform	50.000	45.736	8.5	130	0.00	13.71
79 M	trans-1,4-dichloro-2-bute	50.000	45.185	9.6	128	0.00	14.10
----- AvgRF CCRF % Dev -----							
80 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	121	0.00	15.71
81 M	isopropylbenzene	3.161	3.681	-16.5	149	0.00	14.32
82 S	bromofluorobenzene (s)	1.389	1.313	5.5	128	0.00	14.38
83 M	bromobenzene	0.853	0.812	4.8	126	0.00	14.61
84 P	1,1,2,2-tetrachloroethane	1.132	1.046	7.6	119	0.00	13.96
85 M	1,2,3-trichloropropane	1.034	0.948	8.3	120	0.00	14.10
86 M	n-propylbenzene	4.533	4.586	-1.2	125	0.00	14.76
87 M	2-chlorotoluene	2.848	2.726	4.3	125	0.00	14.89
88 M	4-chlorotoluene	2.845	2.869	-0.8	130	0.00	14.96
89 M	1,3,5-trimethylbenzene	3.111	3.112	-0.0	123	0.00	15.04
90 M	tert-butylbenzene	1.880	1.890	-0.5	126	0.00	15.35
91 M	1,2,4-trimethylbenzene	3.058	3.098	-1.3	124	0.00	15.45
92 M	sec-butylbenzene	4.072	4.159	-2.1	127	0.00	15.57
93 M	1,3-dichlorobenzene	1.596	1.560	2.3	128	0.00	15.67
94 M	p-isopropyltoluene	2.946	3.131	-6.3	132	0.00	15.74
95 M	1,4-dichlorobenzene	1.693	1.621	4.3	129	0.00	15.74
96 M	1,2-dichlorobenzene	1.506	1.477	1.9	127	0.00	16.11
97 M	n-butylbenzene	2.901	3.171	-9.3	128	0.00	16.16

5.7.7
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Continuing Calibration Summary

Page 1 of 4

Job Number: MC8284
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2272-CC2271
 Lab FileID: N60782.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\N60782.D
 Acq On : 2 Mar 2012 11:13 am
 Sample : cc2271-50
 Misc : MS25182,MSN2272,,,,,5,1
 MS Integration Params: RTEINT.P

Vial: 17
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\N030112W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Fri Mar 02 12:34:51 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	105	0.00	6.57
2	tertiary butyl alcohol	1.061	1.191	-12.3	114	0.00	6.65
3 T	Ethanol	0.205	0.215	-4.9	108	0.00	5.42
4 I	pentafluorobenzene	1.000	1.000	0.0	124	0.00	9.02
5 M	dichlorodifluoromethane	0.600	0.578	3.7	122	0.00	4.24
	----- True Calc. % Drift -----						
6 P	chloromethane	50.000	50.615	-1.2	125	0.00	4.49
7 c	vinyl chloride	50.000	50.898	-1.8	115	0.00	4.75
	----- AvgRF CCRF % Dev -----						
8 M	bromomethane	0.460	0.472	-2.6	143	0.00	5.25
9 M	chloroethane	0.451	0.436	3.3	121	0.00	5.42
10 M	ethyl ether	0.523	0.529	-1.1	122	0.00	6.31
11 M	acetonitrile	0.344	0.241	29.9	135	0.00	5.97
12 M	trichlorofluoromethane	0.940	0.916	2.6	127	0.00	6.08
13 M	freon-113	0.552	0.529	4.2	125	0.00	6.86
14 M	acrolein	0.035	0.033	5.7	108	0.00	6.07
15 c	1,1-dichloroethene	0.585	0.515	12.0	125	0.00	6.67
16 M	acetone	0.233	0.195	16.3	116	0.00	6.20
17 M	Methyl Acetate	0.593	0.521	12.1	112	0.00	6.84
18 M	methylene chloride	0.723	0.671	7.2	125	0.00	6.81
	----- True Calc. % Drift -----						
19 M	methyl tert butyl ether	50.000	43.560	12.9	121	0.00	7.60
20 M	acrylonitrile	250.000	239.307	4.3	121	0.00	6.71
	----- AvgRF CCRF % Dev -----						
21 M	allyl chloride	0.727	0.763	-5.0	123	0.00	6.91
22 M	trans-1,2-dichloroethene	0.618	0.605	2.1	127	0.00	7.51
	----- True Calc. % Drift -----						
23 M	iodomethane	50.000	23.790	52.4	61	0.00	6.72
	----- AvgRF CCRF % Dev -----						
24 M	carbon disulfide	2.041	1.974	3.3	125	0.00	7.10
	----- True Calc. % Drift -----						
25 M	propionitrile	50.000	49.608	0.8	116	0.00	6.64
	----- AvgRF CCRF % Dev -----						

5.7.8

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Continuing Calibration Summary

Page 3 of 4

Job Number: MC8284
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2272-CC2271
Lab FileID: N60782.D

61 M	4-methyl-2-pentanone	0.336	0.318	5.4	113	0.00	11.08
62 c	toluene	0.876	0.896	-2.3	124	0.00	11.77
63 M	trans-1,3-dichloropropene	50.000	45.785	8.4	128	0.00	11.40
64 M	1,1,2-trichloroethane	0.288	0.284	1.4	121	0.00	11.57
65 M	ethyl methacrylate	50.000	45.143	9.7	117	0.00	11.78
66 I	chlorobenzene-d5	1.000	1.000	0.0	122	0.00	13.15
67 M	tetrachloroethene	0.570	0.564	1.1	127	0.00	12.50
68 M	1,3-dichloropropane	1.091	1.064	2.5	120	0.00	11.81
69 M	dibromochloromethane	50.000	49.173	1.7	127	0.00	12.11
70 M	1,2-dibromoethane	0.561	0.560	0.2	122	0.00	12.36
71 M	2-hexanone	0.396	0.384	3.0	115	0.00	11.93
72 P	chlorobenzene	1.682	1.646	2.1	126	0.00	13.19
73 M	1,1,1,2-tetrachloroethane	50.000	50.194	-0.4	129	0.00	13.10
74 c	ethylbenzene	2.969	3.036	-2.3	127	0.00	13.36
75 M	m,p-xylene	1.058	1.134	-7.2	125	0.00	13.55
76 M	o-xylene	1.035	1.094	-5.7	122	0.00	13.96
77 M	styrene	1.621	1.707	-5.3	125	0.00	13.89
78 P	bromoform	50.000	47.124	5.8	128	0.00	13.71
79 M	trans-1,4-dichloro-2-bute	50.000	46.384	7.2	127	0.00	14.10
80 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	119	0.00	15.71
81 M	isopropylbenzene	3.161	3.169	-0.3	126	0.00	14.32
82 S	bromofluorobenzene (s)	1.389	1.295	6.8	124	0.00	14.38
83 M	bromobenzene	0.853	0.812	4.8	124	0.00	14.61
84 P	1,1,2,2-tetrachloroethane	1.132	1.055	6.8	118	0.00	13.96
85 M	1,2,3-trichloropropane	1.034	0.968	6.4	120	0.00	14.10
86 M	n-propylbenzene	4.533	4.603	-1.5	123	0.00	14.76
87 M	2-chlorotoluene	2.848	2.769	2.8	125	0.00	14.89
88 M	4-chlorotoluene	2.845	2.791	1.9	124	0.00	14.96
89 M	1,3,5-trimethylbenzene	3.111	3.184	-2.3	124	0.00	15.04
90 M	tert-butylbenzene	1.880	1.883	-0.2	123	0.00	15.35
91 M	1,2,4-trimethylbenzene	3.058	3.144	-2.8	123	0.00	15.45
92 M	sec-butylbenzene	4.072	4.123	-1.3	124	0.00	15.57
93 M	1,3-dichlorobenzene	1.596	1.536	3.8	124	0.00	15.67
94 M	p-isopropyltoluene	2.946	3.017	-2.4	125	0.00	15.74
95 M	1,4-dichlorobenzene	1.693	1.595	5.8	125	0.00	15.74
96 M	1,2-dichlorobenzene	1.506	1.442	4.2	122	0.00	16.11
97 M	n-butylbenzene	2.901	3.169	-9.2	126	0.00	16.16

5.7.8

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Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC8284
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSE2293-BFB	Injection Date: 02/22/12
Lab File ID: E58429.D	Injection Time: 11:48
Instrument ID: GCMSE	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	5433	16.5	Pass
75	30.0 - 60.0% of mass 95	12880	39.1	Pass
95	Base peak, 100% relative abundance	32912	100.0	Pass
96	5.0 - 9.0% of mass 95	2117	6.43	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	27736	84.3	Pass
175	5.0 - 9.0% of mass 174	2217	6.74 (7.98) ^a	Pass
176	95.0 - 101.0% of mass 174	26360	80.1 (95.0) ^a	Pass
177	5.0 - 9.0% of mass 176	1902	5.78 (7.22) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSE2293-IC2293	E58432.D	02/22/12	13:15	01:27	Initial cal 5
MSE2293-IC2293	E58433.D	02/22/12	13:44	01:56	Initial cal 25
MSE2293-ICC2293	E58434.D	02/22/12	14:14	02:26	Initial cal 50
MSE2293-IC2293	E58435.D	02/22/12	14:43	02:55	Initial cal 100
MSE2293-IC2293	E58436.D	02/22/12	15:12	03:24	Initial cal 200
MSE2293-IC2293	E58442.D	02/22/12	18:10	06:22	Initial cal 0.5
MSE2293-IC2293	E58443.D	02/22/12	18:37	06:49	Initial cal 2
MSE2293-IC2293	E58444.D	02/22/12	19:06	07:18	Initial cal 400

5.4.1

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Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC8284

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSE2299-BFB

Injection Date: 03/01/12

Lab File ID: E58608.D

Injection Time: 11:33

Instrument ID: GCMSE

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	7049	17.7	Pass
75	30.0 - 60.0% of mass 95	16276	40.9	Pass
95	Base peak, 100% relative abundance	39776	100.0	Pass
96	5.0 - 9.0% of mass 95	2684	6.75	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	30042	75.5	Pass
175	5.0 - 9.0% of mass 174	2673	6.72 (8.90) ^a	Pass
176	95.0 - 101.0% of mass 174	29160	73.3 (97.1) ^a	Pass
177	5.0 - 9.0% of mass 176	1787	4.49 (6.13) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSE2299-CC2293	E58609.D	03/01/12	12:02	00:29	Continuing cal 50
MSE2299-BS	E58610.D	03/01/12	12:29	00:56	Blank Spike
MSE2299-BSD	E58611.D	03/01/12	12:58	01:25	Blank Spike Duplicate
MSE2299-MB	E58613.D	03/01/12	13:55	02:22	Method Blank
ZZZZZZ	E58614.D	03/01/12	14:17	02:44	(unrelated sample)
MC8284-1	E58615.D	03/01/12	14:50	03:17	TB022712
ZZZZZZ	E58616.D	03/01/12	15:19	03:46	(unrelated sample)
MC8331-1	E58617.D	03/01/12	15:48	04:15	(used for QC only; not part of job MC8284)
ZZZZZZ	E58618.D	03/01/12	16:16	04:43	(unrelated sample)
ZZZZZZ	E58619.D	03/01/12	16:39	05:06	(unrelated sample)
ZZZZZZ	E58620.D	03/01/12	17:10	05:37	(unrelated sample)
MC8331-1MS	E58621.D	03/01/12	17:38	06:05	Matrix Spike
MC8331-1MSD	E58622.D	03/01/12	18:07	06:34	Matrix Spike Duplicate

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC8284

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSM1537-BFB

Injection Date: 02/29/12

Lab File ID: M46670.D

Injection Time: 10:01

Instrument ID: GCMSM

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	7714	18.5	Pass
75	30.0 - 60.0% of mass 95	19776	47.5	Pass
95	Base peak, 100% relative abundance	41616	100.0	Pass
96	5.0 - 9.0% of mass 95	2662	6.40	Pass
173	Less than 2.0% of mass 174	210	0.50 (0.51) ^a	Pass
174	50.0 - 150.0% of mass 95	40824	98.1	Pass
175	5.0 - 9.0% of mass 174	2981	7.16 (7.30) ^a	Pass
176	95.0 - 101.0% of mass 174	39152	94.1 (95.9) ^a	Pass
177	5.0 - 9.0% of mass 176	2585	6.21 (6.60) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSM1537-IC1537	M46672.D	02/29/12	11:05	01:04	Initial cal 0.5
MSM1537-IC1537	M46673.D	02/29/12	11:36	01:35	Initial cal 2
MSM1537-IC1537	M46674.D	02/29/12	12:06	02:05	Initial cal 5
MSM1537-IC1537	M46675.D	02/29/12	12:36	02:35	Initial cal 20
MSM1537-IC1537	M46676.D	02/29/12	13:14	03:13	Initial cal 50
MSM1537-ICC1537	M46676.D	02/29/12	13:14	03:13	Initial cal 50
MSM1537-IC1537	M46677.D	02/29/12	13:45	03:44	Initial cal 100
MSM1537-IC1537	M46678.D	02/29/12	14:15	04:14	Initial cal 200
MSM1537-IC1537	M46679.D	02/29/12	14:46	04:45	Initial cal 400

5.4.3

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Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC8284
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample:	MSM1538-BFB	Injection Date:	03/01/12
Lab File ID:	M46684.D	Injection Time:	10:48
Instrument ID:	GCMSM		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	4897	16.9	Pass
75	30.0 - 60.0% of mass 95	14038	48.4	Pass
95	Base peak, 100% relative abundance	28992	100.0	Pass
96	5.0 - 9.0% of mass 95	1906	6.57	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	32336	111.5	Pass
175	5.0 - 9.0% of mass 174	2110	7.28 (6.53) ^a	Pass
176	95.0 - 101.0% of mass 174	31112	107.3 (96.2) ^a	Pass
177	5.0 - 9.0% of mass 176	1695	5.85 (5.45) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSM1538-CC1537	M46684.D	03/01/12	10:48	00:00	Continuing cal 50
MSM1538-BS	M46685.D	03/01/12	11:19	00:31	Blank Spike
MSM1538-BSD	M46686.D	03/01/12	11:57	01:09	Blank Spike Duplicate
MSM1538-MB	M46687.D	03/01/12	12:29	01:41	Method Blank
MC8284-1A	M46688.D	03/01/12	13:03	02:15	TB022712
MC8284-2	M46689.D	03/01/12	13:34	02:46	SB-126/1-3
MC8284-3	M46690.D	03/01/12	14:04	03:16	SB-26/1-3
MC8284-4	M46691.D	03/01/12	14:35	03:47	SB-25/1-3
MC8284-5	M46692.D	03/01/12	15:05	04:17	SB-24/1-3
MC8284-6	M46693.D	03/01/12	15:36	04:48	SB-23/1-3
MC8284-7	M46694.D	03/01/12	16:06	05:18	SB-22/1-3
MC8284-8	M46695.D	03/01/12	16:37	05:49	SB-21/1-3
MC8284-9	M46696.D	03/01/12	17:07	06:19	SB-20/1-3
MC8284-6MS	M46697.D	03/01/12	17:37	06:49	Matrix Spike
MC8284-6MSD	M46698.D	03/01/12	18:08	07:20	Matrix Spike Duplicate
ZZZZZZ	M46699.D	03/01/12	18:38	07:50	(unrelated sample)
ZZZZZZ	M46700.D	03/01/12	19:09	08:21	(unrelated sample)
ZZZZZZ	M46701.D	03/01/12	19:39	08:51	(unrelated sample)
ZZZZZZ	M46702.D	03/01/12	20:10	09:22	(unrelated sample)
ZZZZZZ	M46703.D	03/01/12	20:40	09:52	(unrelated sample)

5.4.4

5

Scan 2950 (14.763 min): M46684.D\data.ms
bfb

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	267	55.90	321	74.00	4284	90.80	206
37.00	1406	56.90	576	75.00	14038	92.00	861
38.00	1197	59.90	186	76.00	1099	93.00	953
39.00	439	60.90	1186	76.90	276	94.00	3503
39.90	358	62.00	1150	77.80	269	95.00	28992
43.90	475	62.90	959	78.90	837	96.00	1906
44.80	155	68.00	2886	79.80	318	105.20	223
47.00	404	69.00	3283	80.90	660	106.00	163
49.00	1063	69.90	244	81.80	159	140.80	185
50.00	4897	71.80	152	87.00	1500	142.90	431
51.00	1853	73.00	1167	87.90	1108	155.00	162

Scan 2950 (14.763 min): M46684.D\data.ms
bfb

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
173.90	32336						
174.90	2110						
175.90	31112						
176.90	1695						
207.00	298						

6.5.4

6

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC8284
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample:	MSN2271-BFB	Injection Date:	03/01/12
Lab File ID:	N60766.D	Injection Time:	12:35
Instrument ID:	GCMSN		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	15753	19.2	Pass
75	30.0 - 60.0% of mass 95	39672	48.3	Pass
95	Base peak, 100% relative abundance	82184	100.0	Pass
96	5.0 - 9.0% of mass 95	5531	6.73	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	57656	70.2	Pass
175	5.0 - 9.0% of mass 174	4116	5.01 (7.14) ^a	Pass
176	95.0 - 101.0% of mass 174	56712	69.0 (98.4) ^a	Pass
177	5.0 - 9.0% of mass 176	3979	4.84 (7.02) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSN2271-IC2271	N60767.D	03/01/12	13:03	00:28	Initial cal 25
MSN2271-IC2271	N60768.D	03/01/12	13:31	00:56	Initial cal 5
MSN2271-IC2271	N60769.D	03/01/12	14:00	01:25	Initial cal 2
MSN2271-IC2271	N60770.D	03/01/12	14:28	01:53	Initial cal 1
MSN2271-IC2271	N60771.D	03/01/12	14:56	02:21	Initial cal 0.5
MSN2271-ICC2271	N60772.D	03/01/12	15:24	02:49	Initial cal 50
MSN2271-IC2271	N60773.D	03/01/12	15:53	03:18	Initial cal 100
MSN2271-IC2271	N60774.D	03/01/12	16:21	03:46	Initial cal 200
MSN2271-IC2271	N60775.D	03/01/12	16:49	04:14	Initial cal 400
MSN2271-ICV2271	N60778.D	03/01/12	18:14	05:39	Initial cal verification 50

5.4.5
5

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC8284
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample:	MSN2272-BFB	Injection Date:	03/02/12
Lab File ID:	N60782.D	Injection Time:	11:13
Instrument ID:	GCMSN		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	17736	18.8	Pass
75	30.0 - 60.0% of mass 95	45216	47.9	Pass
95	Base peak, 100% relative abundance	94360	100.0	Pass
96	5.0 - 9.0% of mass 95	7349	7.79	Pass
173	Less than 2.0% of mass 174	316	0.33 (0.55) ^a	Pass
174	50.0 - 150.0% of mass 95	57152	60.6	Pass
175	5.0 - 9.0% of mass 174	4863	5.15 (8.51) ^a	Pass
176	95.0 - 101.0% of mass 174	57088	60.5 (99.9) ^a	Pass
177	5.0 - 9.0% of mass 176	3959	4.20 (6.93) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSN2272-CC2271	N60782.D	03/02/12	11:13	00:00	Continuing cal 50
MSN2272-BS	N60783.D	03/02/12	11:41	00:28	Blank Spike
MSN2272-BSD	N60784.D	03/02/12	12:10	00:57	Blank Spike Duplicate
MSN2272-MB	N60786.D	03/02/12	13:06	01:53	Method Blank
ZZZZZZ	N60787.D	03/02/12	13:34	02:21	(unrelated sample)
ZZZZZZ	N60788.D	03/02/12	14:03	02:50	(unrelated sample)
ZZZZZZ	N60789.D	03/02/12	14:31	03:18	(unrelated sample)
ZZZZZZ	N60790.D	03/02/12	14:59	03:46	(unrelated sample)
ZZZZZZ	N60792.D	03/02/12	15:56	04:43	(unrelated sample)
MC8284-10	N60793.D	03/02/12	16:24	05:11	EB0227/2
ZZZZZZ	N60794.D	03/02/12	16:52	05:39	(unrelated sample)
ZZZZZZ	N60795.D	03/02/12	17:20	06:07	(unrelated sample)
ZZZZZZ	N60796.D	03/02/12	17:49	06:36	(unrelated sample)
ZZZZZZ	N60797.D	03/02/12	18:17	07:04	(unrelated sample)
ZZZZZZ	N60798.D	03/02/12	18:45	07:32	(unrelated sample)
ZZZZZZ	N60799.D	03/02/12	19:13	08:00	(unrelated sample)
MC8340-5	N60800.D	03/02/12	19:42	08:29	(used for QC only; not part of job MC8284)
ZZZZZZ	N60801.D	03/02/12	20:10	08:57	(unrelated sample)
ZZZZZZ	N60802.D	03/02/12	20:38	09:25	(unrelated sample)
ZZZZZZ	N60803.D	03/02/12	21:06	09:53	(unrelated sample)
ZZZZZZ	N60804.D	03/02/12	21:35	10:22	(unrelated sample)
MC8340-5MS	N60805.D	03/02/12	22:03	10:50	Matrix Spike
MC8340-5MSD	N60806.D	03/02/12	22:31	11:18	Matrix Spike Duplicate

5.4.6

5

Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: MC8284
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Check Std:	MSE2299-CC2293	Injection Date:	03/01/12
Lab File ID:	E58609.D	Injection Time:	12:02
Instrument ID:	GCMSE	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	144277	9.10	262197	9.98	108890	13.24	89624	15.80	48289	6.62
Upper Limit ^a	288554	9.60	524394	10.48	217780	13.74	179248	16.30	96578	7.12
Lower Limit ^b	72139	8.60	131099	9.48	54445	12.74	44812	15.30	24145	6.12

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSE2299-BS	145935	9.10	254037	9.98	105807	13.24	87848	15.80	47254	6.62
MSE2299-BSD	140918	9.10	248503	9.98	104408	13.24	86927	15.80	45455	6.62
MSE2299-MB	138472	9.11	241120	9.98	98028	13.24	87769	15.80	45206	6.63
ZZZZZZ	146030	9.10	249319	9.97	99946	13.24	87624	15.80	41197	6.63
MC8284-1	137478	9.10	234663	9.98	97887	13.24	86017	15.80	38980	6.63
ZZZZZZ	139800	9.10	231407	9.97	97058	13.24	88415	15.80	40998	6.63
MC8331-1	142336	9.10	244371	9.97	102292	13.24	89970	15.80	40362	6.62
ZZZZZZ	141131	9.10	238786	9.97	99656	13.24	88540	15.79	38518	6.63
ZZZZZZ	132239	9.10	237011	9.98	99072	13.24	86935	15.80	46345	6.62
ZZZZZZ	146349	9.10	263563	9.97	111753	13.23	97575	15.80	47095	6.62
MC8331-1MS	141521	9.09	257565	9.97	108592	13.23	87734	15.79	45368	6.61
MC8331-1MSD	137813	9.10	249057	9.97	105853	13.24	85403	15.79	43342	6.62

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: MC8284
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Check Std:	MSM1538-CC1537	Injection Date:	03/01/12
Lab File ID:	M46684.D	Injection Time:	10:48
Instrument ID:	GCMSM	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	73857	9.36	116017	10.25	65628	13.53	80043	16.10	36162	6.85
Upper Limit ^a	147714	9.86	232034	10.75	131256	14.03	160086	16.60	72324	7.35
Lower Limit ^b	36929	8.86	58009	9.75	32814	13.03	40022	15.60	18081	6.35

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSM1538-BS	75076	9.36	118456	10.25	65835	13.53	79506	16.10	37781	6.86
MSM1538-BSD	75673	9.36	116169	10.25	65312	13.53	82299	16.10	47558	6.85
MSM1538-MB	68506	9.36	105041	10.25	57155	13.53	70963	16.10	33237	6.86
MC8284-1A	66711	9.36	104312	10.25	57088	13.53	73307	16.10	44723	6.86
MC8284-2	63692	9.36	97789	10.25	54493	13.53	68193	16.10	57487	6.85
MC8284-3	61776	9.36	95731	10.25	54375	13.53	63490	16.10	47376	6.85
MC8284-4	59777	9.36	90067	10.25	44319	13.53	41780	16.10	46556	6.86
MC8284-5	58618	9.36	90208	10.25	50981	13.53	57523	16.10	45179	6.85
MC8284-6	59534	9.36	91394	10.25	51553	13.53	66508	16.10	49811	6.86
MC8284-7	55636	9.36	88145	10.25	49183	13.53	56627	16.10	38771	6.86
MC8284-8	54166	9.36	84934	10.25	46536	13.53	55503	16.10	41855	6.86
MC8284-9	56631	9.37	87280	10.25	50856	13.53	65544	16.10	43166	6.85
MC8284-6MS	64222	9.37	101054	10.25	57245	13.53	68997	16.09	42717	6.86
MC8284-6MSD	66138	9.37	100927	10.24	59660	13.53	72037	16.10	48892	6.86
ZZZZZZ	60382	9.36	91154	10.25	51881	13.53	65325	16.10	46726	6.85
ZZZZZZ	58243	9.37	90270	10.25	51123	13.53	66711	16.10	46257	6.85
ZZZZZZ	56883	9.36	88438	10.24	49875	13.53	63095	16.10	42047	6.86
ZZZZZZ	56109	9.36	85465	10.25	49438	13.53	62263	16.10	38241	6.85
ZZZZZZ	52599	9.37	80362	10.25	46191	13.53	57572	16.10	43921	6.86

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: MC8284
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Check Std:	MSN2272-CC2271	Injection Date:	03/02/12
Lab File ID:	N60782.D	Injection Time:	11:13
Instrument ID:	GCMSN	Method:	SW846 8260B

	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
Check Std	297377	9.02	523503	9.89	287848	13.15	220328	15.71	135571	6.57
Upper Limit ^a	594754	9.52	1047006	10.39	575696	13.65	440656	16.21	271142	7.07
Lower Limit ^b	148689	8.52	261752	9.39	143924	12.65	110164	15.21	67786	6.07

Lab	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
Sample ID	AREA		AREA		AREA		AREA		AREA	
MSN2272-BS	304840	9.02	529747	9.89	293439	13.15	219213	15.71	174785	6.57
MSN2272-BS	310371	9.02	541987	9.89	295849	13.15	224829	15.71	148844	6.57
MSN2272-MB	294131	9.02	511160	9.90	261043	13.16	160797	15.72	155406	6.58
ZZZZZZ	282241	9.02	497124	9.90	257265	13.15	159265	15.72	135142	6.58
ZZZZZZ	285266	9.02	506222	9.89	263708	13.15	187551	15.71	132003	6.58
ZZZZZZ	281062	9.02	493985	9.89	259498	13.15	184663	15.71	144422	6.58
ZZZZZZ	283105	9.02	496428	9.89	262314	13.15	189553	15.71	149948	6.57
ZZZZZZ	272049	9.02	478565	9.90	248697	13.15	154154	15.72	126211	6.58
MC8284-10	266403	9.03	468593	9.90	241363	13.16	148010	15.72	136819	6.58
ZZZZZZ	259488	9.02	465672	9.90	242293	13.15	144044	15.71	155602	6.58
ZZZZZZ	258061	9.02	461621	9.89	239685	13.16	143970	15.72	117035	6.58
ZZZZZZ	253544	9.02	454135	9.89	235779	13.16	139947	15.72	122931	6.58
ZZZZZZ	247370	9.02	445286	9.90	231049	13.15	140126	15.71	135832	6.58
ZZZZZZ	244585	9.02	431964	9.90	232992	13.16	138812	15.72	134318	6.57
ZZZZZZ	242277	9.02	430707	9.90	227316	13.15	131714	15.72	107429	6.58
MC8340-5	235624	9.02	416281	9.89	218177	13.15	128068	15.72	110915	6.58
ZZZZZZ	234340	9.03	429078	9.90	222794	13.15	131170	15.71	133100	6.57
ZZZZZZ	233545	9.03	421555	9.90	222614	13.16	133790	15.72	120805	6.58
ZZZZZZ	234855	9.03	419082	9.90	218793	13.15	129872	15.72	90517	6.58
ZZZZZZ	232471	9.02	410740	9.90	217160	13.16	126942	15.72	123511	6.57
MC8340-5MS	240770	9.02	436498	9.89	254778	13.15	188973	15.71	125877	6.57
MC8340-5MSD	255864	9.02	465283	9.89	256800	13.15	192508	15.71	125036	6.56

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46695.D
 Acq On : 1 Mar 2012 4:37 pm
 Operator : emilyk
 Sample : mc8284-8
 Misc : MS25187,MSM1538,7.19,,,5,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 02 16:11:06 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Thu Mar 01 11:32:45 2012
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.861	65	41855	500.00	ug/L	0.00
4) pentafluorobenzene	9.364	168	54166	50.00	ug/L	0.00
42) 1,4-difluorobenzene	10.248	114	84934	50.00	ug/L	0.00
65) chlorobenzene-d5	13.532	82	46536	50.00	ug/L	0.00
79) 1,4-dichlorobenzene-d4	16.095	152	55503	50.00	ug/L	0.00
System Monitoring Compounds						
39) dibromofluoromethane (s)	9.003	113	32621	47.79	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	95.58%
59) toluene-d8 (s)	12.061	98	107517	41.42	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	82.84%
81) bromofluorobenzene (s)	14.759	95	39771	41.12	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	82.24%
Target Compounds						
16) acetone	6.472	43	5065	33.34	ug/L	Qvalue 88
61) toluene	12.136	92	4507	2.38	ug/L #	64
74) m,p-xylene	13.910	106	740	1.68	ug/L #	69
101) naphthalene	18.609	128	1592	0.46	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

6.1.9
6

Standards Data

Daily Saved File

Lot #	Description	Conc
MS8581	MSD	2000
77	SOX	2000
122	MSD	2000
71	BS	2000

Tune File 1: E58429
Tune file 2:
Initial Cal: 2/13/12 2:22:12 Batch ID: MSE2293
ID File: E021812M-M/022212M-M
ICAL Verified: E58429/E58440
Sequence verified:

Date: 2-22-12

Analysts: CT

Signature: [Signature]

*Note: If sample matrix is soil - method SW846 5035 used for preparation. SW846 5039 is purge and trap method for soil and water

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	% Sol	Dil. Fact.	pH	Comments
E58429	BLK	-	-	NA	1	-	-	-	-	-	
24	IC2285-50	2	MS8582	1	2						
2720	IC2285-50	2			2						
2720	BS	2	MS8571		3						
E58429	BLK	-	-		4						
29	BS	1	MS8572		5						
30	IC2285-50	2	MS8582		6						RR - do the water
31	-2	1			7						NE
32	-5	1			8						
33	-25	1			9						
34	IC2285-50	2			10						
35	IC2285-50	2			11						
36	-200	2			12						
37	-400	2			13						RR - Degraded
38	BLK	-	-		14						
39	BLK	-	-		15						
40	IC2285-50	2	MS8571	✓	16	✓	✓	✓	✓	✓	
41	MS8101-2				17				50		soil screens 25x
42	IC2285-50	2			18						
43	IC2285-50	2			19						
44	IC2285-50	2			20						
45	-100	2			21						25x
46	-24	2			22						25x
47	-16	2			23						1
48	-23	2			24						100
49	-24	2			25						1
50	-25	2			26						1
51	-24	2			27						1
52	-34	2			28						25x
53	-4	2			29						1
54	-8	2			30						1

MTX = Matrix: Designate W for water, S for soil, O for oil.
Sample amount is reported in grams (wet) for soil and oil, ml for water.

MS001-04 Date: 12/02/08

Review: [Signature] 2/24/12

6.7.1 6

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
MS8581	VCX200 (MSD)	250 ppb
77	Surf	250 ppb
72	Cal STD	
71	BS	

Daily Saved File

Tune file 1: E584108
Tune file 2:
Initial Cal: 2-22-12
IC File: E0022212.M.M
ICAL Verified: E58470
Sequence verified: CT

Date: 2-23-12

Batch ID: MS2294

Analyst: CT

Signature: *[Signature]*

*Note: If sample matrix is soil - method SW846 8035 used for preparation. SW846 8030 is purge and trap method for soil and water

6.7.2

6

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	% Sol	Dil. Fact.	pH	Comments
E584108	VCX200				1	method					
	MS2293-50				2	soil extract					
	70 BS/KV				3						
	71 BS				4						
	72 MB				5						
	73 MB				6						
	74 MC 8001-2	2	MS25130	VCX200	7		12.0g/10ml				excess - sample flows
	75 -3	2			8		12.73g				not run, need for excess
	76 -4	2			9		12.41g				excess
	77 -5	2			10		12.32g				
	78 -8	2			11		12.49g				
	79 -10	2			12		12.70g				OK
	80 -14	2			13		13.83g				OK
	81 -15	2			14		14.20g				OK
	82 -19	2			15		10.83g				OK
	83 -32	2			16		9.08g				
	84 -34	2			17		7.76g/10ml				
	85 -3	2			18		12.73g				OK
	86 MS1118-13				19						SOIL SCREENS
	87 -14				20						
	88 -15				21						
	89 -10				22						
	90 -19				23						
	91 -20				24						SOIL

MTX = Matrix: Designate W for water, S for soil, O for oil
 Sample amount is reported in grams (wet) for soil and oil, ml for water.

MS801-04 Date: 12/02/08

Review: *[Signature]*

3

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc.
MS8581	8260 IS	200 ppb
8577	SS	200 ppb
8562	SAL	
8571	BS	

Daily Saved File

Tune File 1:	K58608
Tune File 2:	
Initial Cal:	E02222m.m
ID File:	MSE2293
ICAL Verified:	K58609
Sequence verified:	OK

Date: 3-1-12

Batch ID: MSE2299

Analysts OK

Signature: *[Signature]*

*Note: If sample matrix is soil - method SW846 8035 used for preparation. SW846 8031 is purge and trap method for soil and water

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	# Sol	Dil. Fact.	pH	Comments
E58605	Blank	—	MS25183	8260	1	S	5ml	NA	50X	NA	✓ c/o
	06	↓			2						✓ clean
	07	↓			3						✓ ↓
	08	2			4						✓ 11:33am
	09	↓			5						✓
	10	3			6						✓
	11	↓			7						✓
	12	—			8						✓ c/o
	13	2			9						✓
	14	2			10				25X		✓
	15				11				50X		✓
	16				12						✓
	17	↓			13						✓
	18	1			14						✓
	19	2	MS25175		15				200X		✓
	20	3			16				1000X		✓
	21	2	MS25183		17				50X		✓
	22	↓			18						✓ 6:07pm
	23	—			19						✓

OK 3-5-12

MTX = Matrix: Designate W for water, B for soil, O for oil.
Sample amount is reported in grams (wet) for soil and oil; ml for water.

MS001-04 Date: 12/20/08

Review: *[Signature]* 3/5/12

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
MS 8549	V8260 DEL STD	200
8571	V8260 BS	200
8561	V8260 IS	250
8552	V8260 SS	250

Daily Saved File

Tune file 1: M44670
Tune file 2: NA
Initial Cal: 2/29/12
TD File: M02412W-4
ICAT Verified:
Sequence verified: 2/29/12

Date: 2/29/12

Batch ID: MSM1537

Analysts: ECK

Signature: ECK

*Note: If sample matrix is soil - method SW846 5035 used for preparation. SW846 5036 is purge and trap method for soil and water

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	# Sol	Dil. Fact.	pH	Comments
M44670	BLK (bld)	NA	NA	NA	1	NA	5mL	NA	1.1	NA	
71	BLK	↓	↓		2						
72	MS537-05	1	MS8549		3						
73	-2				4						
74	-5				5						
75	-20				6						
76	-50				7						
77	-100				8						
78	-200				9						
79	↓ -400	↓	↓		10						
80	BLK	NA	NA		11						
81	BLK	↓	↓		12						
82	MS537-50	3	MS8571	↓	13	↓	↓	↓	↓	↓	RL, mis. g. Kcl

MTX = Matrix: Designate W for water, S for soil, O for oil.
 Sample amount is reported in grams (wt) for soil and oil; mL for water.

MS001-04 Date: 12/02/08

Review: *[Signature]* 3/5/12

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
MS8561	2000 Std	250ppm
MS8572	2000 Std	250ppm
MS8594	2000 Std	250ppm
MS8571	2000 Std	250ppm

Daily Saved File

Tune File 1:	M4604
Tune File 2:	M4604
Initial Cal:	2/24/11
ID File:	M0229120.M
ICAL Verified:	M4604
Sequence verified:	OT

Date: 3/1/12

Batch ID: MSMD38

Analysts: DT

Signature: [Signature]

*Note: If sample matrix is soil - method SW846 8035 used for preparation. SW846 8030 is purge and trap method for soil and water

6.7.5
6

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	% Sol	Dil. Fact.	pH	Comments
M4604	flame blank				1						
81	MS8571-50	1	MS8571		2						
85	BS	3	MS8571		3						
86	BS	3	MS8571		4						
87	MS				5						
88	MS8571-1A	2	MS8571	Verbo 50	6	SSFO					SC = 1.2 x 1.15
89	-2	3			7	Soil	6.06g				Removal/Control
90	-3	4			8		5.06g				
91	-4	3			9		5.36g				
92	-5	4			10		7.28g				
93	-6	10			11		7.35g				
94	-7	3			12		7.20g				
95	-P	4			13		7.19g				
96	-9	4			14		6.36g				
97	-(A)	7			15		7.07g				
98	-6450	9			16		6.57g				
99	MS8571-1	2			17		6.49g				
100	-2	2			18		6.57g				
01	-3	2			19		5.77g				
02	-4	3			20		6.25g				
03	-5	2			21		5.86g				
04					22						
05					23						
06					24						
07					25						

MTX = Matrix: Designate W for water, S for soil, C for oil.
 Sample amount is reported in grams (wet) for soil and oil; mL for water.

MS001-04 Date: 12/02/09

Review: [Signature] 3/1/12 8

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
M38599	V2260 Cal Std	200 ppb
M38599	" B2000 D1H	" "
M38577	" Suncoke-1H	" "
M38560	" Int. Std	125 ppb

Daily Saved File

Tune file 1:	N60766
Tune file 2:	N/A
Initial Cal:	03/01/12
ID File:	N030112W.M
ICAL Verified:	N60778
Sequence verified:	THP

Date: 03/01/2012

Batch ID: MSN2271

Analysts

Signature: THP

*Note: If sample matrix is soil - method SW846 5035 used for preparation. SW846 5030 is purge and trap method for soil and water.

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	Res Cl.	Dil. Fact.	pH	Comments
N60761	Blame	N/A	N/A	N/A	15	N/A	5ml	N/A	1:1	N/A	
62	Blame				16						
63	Blame				17						
64	Blame				18						
65	BFB	2	M38577		19						
66	BFB	2	M38577		20						
67	CH2271-25	2/1	M38577		21						
68	-5				22						
69	-2				23						
70	-1				24						
71	-0.5				25						
72	1002271-50				26						
73	1002271-100				27						
74	-200				28						
75	-400				29						
76	Blame	N/A	N/A		30						
77	1002271-50	2/1	M38577		31						
78	1002271-50	2/1	M38577		32						
79	Blame	N/A	N/A		33						

MTX = Matrix: Designate W for water, S for soil, O for oil.

Sample amount is reported in grams (wet) for soil and oil, ml for water.

MS901-04 Date: 12/02/03

Review: THP 3/2/12

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
MS 8539	Verbo cul. sp	200 ppb
MS 8603	" BSC 03.24	1.4
MS 8588	" 2.1.53	125 ppb

Daily Saved File

Tune file 1:	1168782
Tune file 2:	N/A
Initial Cal:	03/01/12
ID File:	N030112.M
ICAL Verified:	N60378
Sequence verified:	JHP

Date: 03/02/2012

Batch ID: MSN2272

Analysts

Signature: JHP

*Note: If sample matrix is soil - method SW846 5035 used for preparation. SW846 5030 is purge and trap method for soil and water.

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MEX	Samp Amt.	Res Cl.	Dil. Fact.	pH	Comments
N 80780	Blame	N/A	N/A	N/A	15	N/A	5ml	N/A	1.1	N/A	
	81 Blame	1	1		15						
	82 CC2271-10	1	MS8579		16						
	83 BS	1	MS8603		17						
	84 BSD	1	MS8603		18						
	85 Blame	N/A	N/A		19						
	86 MB	1	1		20						
	87 MCS340-11	1	MS8579	Verbo cul	21	WTP				2.2	
	88 MCS21-6	2	MS8576	Verbo cul	22	WTP			1.10		
	89 -11	1			23				1.10		
	90 -10	1			24				1.5		
	91 MCS350-8	1	MS8579	Verbo cul	25	WTP			1.1		
	92 MCS338-20	1			26						
	93 MCS240-10	4		Verbo cul	27						
	94 MCS240-2	1		Verbo cul	28	WTP					
	95 -1	1			29				1.10		
	96 MCS340-1	1		Verbo cul	30				1.1		
	97 -2	1			31						
	98 -3	1			32						
	99 -4	1			33						
	802 -5	1			34						
	01 -6	1			35						
	02 -7	1			36						
	03 -8	1			37						
	04 -9	1			38						
	05 -5ml 0.314				39	WTP					
	06 1-5ml 0.314				40	WTP					
	07 Blame	N/A	N/A	N/A	41	N/A				N/A	

MTX = Matrix: Designate W for water, S for soil, O for oil.

Sample amount is reported in grams (wet) for soil and oil, ml for water.

MS001-04 Date: 12/02/08

Review: JHP

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PERCENT SOLIDS**HOLDING TIMES**

Cooler Temp: <6 C

7 days from collection to prep and analysis

Sample Date 2/27/12 Analyze by 3/5/12

BOLD OUTSIDE HOLD TIME

	SAMPLE DATE	SAMPLE ID	LABORATORY ID	Date analyzed
1	02/27/12	TB022712	MC8284-1	
2	02/27/12	TB022712 SOIL	MC8284-1A	
3	02/27/12	SB-126/1-3	MC8284-2	2/29/12
4	02/27/12	SB-26/1-3	MC8284-3	2/29/12
5	02/27/12	SB-25/1-3	MC8284-4	2/29/12
6	02/27/12	SB-24/1-3	MC8284-5	2/29/12
7	02/27/12	SB-23/1-3	MC8284-6	2/29/12
8	02/27/12	SB-22/1-3	MC8284-7	2/29/12
9	02/27/12	SB-21/1-3	MC8284-8	2/29/12
10	02/27/12	SB-20/1-3	MC8284-9	2/29/12
11	02/27/12	EB022712	MC8284-10	

DUPLICATE RELATIVE PERCENT DIFFERENCE

NONE

SAMPLE CALCULATION

	A	C	B		
Sample ID	Sample & Tare Wet Weight	Tare Weight	Dry Sample & Tare	% Moisture	% solids
SB-26/1-3	33.893	24.075	33.15	7.6%	92.4%

$$\% \text{ Solids} = [1 - ((A - C) - (B - C) / (A - C))] * 100$$

FIELD DUPLICATES

Sample ID	Duplicate ID	Parameter	PRD
SB-26/1-3	SB-126/1-3		
92	89.1	%Solids	3.20%

Percent Solids Raw Data Summary

Page 1 of 2

Job Number: MC8284
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MC8284-2 Analyzed: 29-FEB-12 by BF Method: SM21 2540 B MOD.
ClientID: SB-126/1-3

Wet Weight (Total)	30.486	g
Tare Weight	21.39	g
Dry Weight (Total)	29.493	g
Solids, Percent	89.1	%

Sample: MC8284-3 Analyzed: 29-FEB-12 by BF Method: SM21 2540 B MOD.
ClientID: SB-26/1-3

Wet Weight (Total)	33.893	g
Tare Weight	24.075	g
Dry Weight (Total)	33.105	g
Solids, Percent	92	%

Sample: MC8284-4 Analyzed: 29-FEB-12 by BF Method: SM21 2540 B MOD.
ClientID: SB-25/1-3

Wet Weight (Total)	26.459	g
Tare Weight	18.875	g
Dry Weight (Total)	25.255	g
Solids, Percent	84.1	%

Sample: MC8284-5 Analyzed: 29-FEB-12 by BF Method: SM21 2540 B MOD.
ClientID: SB-24/1-3

Wet Weight (Total)	32.631	g
Tare Weight	23.193	g
Dry Weight (Total)	31.639	g
Solids, Percent	89.5	%

Sample: MC8284-6 Analyzed: 29-FEB-12 by BF Method: SM21 2540 B MOD.
ClientID: SB-23/1-3

Wet Weight (Total)	33.171	g
Tare Weight	23.285	g
Dry Weight (Total)	31.834	g
Solids, Percent	86.5	%

Sample: MC8284-7 Analyzed: 29-FEB-12 by BF Method: SM21 2540 B MOD.
ClientID: SB-22/1-3

Wet Weight (Total)	28.486	g
Tare Weight	20.576	g
Dry Weight (Total)	27.779	g
Solids, Percent	91.1	%

Percent Solids Raw Data Summary

Page 2 of 2

Job Number: MC8284
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MC8284-8 Analyzed: 29-FEB-12 by BF Method: SM21 2540 B MOD.
ClientID: SB-21/1-3

Wet Weight (Total)	29.064	g
Tare Weight	18.997	g
Dry Weight (Total)	28.238	g
Solids, Percent	97.8	%

Sample: MC8284-9 Analyzed: 29-FEB-12 by BF Method: SM21 2540 B MOD.
ClientID: SB-20/1-3

Wet Weight (Total)	33.149	g
Tare Weight	22.494	g
Dry Weight (Total)	32.563	g
Solids, Percent	94.5	%

7.5

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Data Validation Report

**WSP Environment and Energy
Former TTC – Glen Head, NY**

SDG# MC8297



ECT.CON INC.

Environmental and Computer
Technology Consultants

3531 Fox Chase Drive
Imperial, PA 15126
(724) 695-8042
FAX (724) 695-2698
e-mail: ectconinc@comcast.net

**Data Validation Report**

SDG#	MC8297
Validation Report Date	April 3, 2012
Validation Guidance	USEPA CLP National Functional Guidelines for Organic Data Review
Client Name	WSP Environmental Strategies Consulting, LLC
Project Name	Former TTC-Glen Head, NY
Laboratory	Accutest Laboratories
Method(s) Utilized	SW 846 8260
Analytical Fraction	Volatile Organic Compounds (VOCs)

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
02/28/12	SB-19/1-3	MC8297-1	X	Solid
02/28/12	SB-18/1-3	MC8297-2	X	Solid
02/28/12	SB-17/1-3	MC8297-3	X	Solid
02/28/12	SB-16/1-3	MC8297-4	X	Solid
02/28/12	SB-15/1-3	MC8297-5	X	Solid
02/28/12	EB022812	MC8297-6	X	Aqueous
02/28/12	TB022812	MC8297-7	X	Aqueous
02/28/12	TB022812 SOIL	MC8297-7A	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. Laboratory calculations have been verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the Former TTC-Glen Head, NY site consists of 5 solid field samples, 1 equipment blank and 2 trip blanks. The samples were analyzed for the parameters as listed above.

The organic findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct.

The VOC findings are based upon the assessment of the following:

- * • Data Completeness
 - * • Holding Times
 - * • Calibration (Initial and Continuing)
 - * • Blanks
 - * • System Monitoring Compounds (Surrogate Spikes)
 - * • Laboratory Control Sample
 - * • Matrix Spike/Matrix Spike Duplicates
 - * • Internal Standards
 - * • Target Compound Identification
 - * • Compound Quantification and Reported Contract Quantitation Limits
 - * • System Performance
- * Criteria were met for this evaluation item.

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

There were not findings for volatile organic compounds. No data were qualified.

NOTES

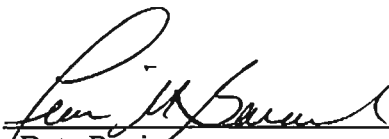
VOLATILE ORGANIC COMPOUNDS

Matrix Spike/Matrix Spike Duplicate

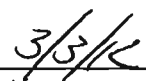
All of the matrix spike/matrix spike duplicate samples associated with this sample delivery group were non-project samples. For the solid lab matrix spike duplicate the percent recovery of 1,2,4-trimethylbenzene (52%) and 1,3,5-trimethylbenzene (53%) was less than the low control limit. Also, the relative percent difference for these constituents was outside the control limit. The percent recovery of the matrix spike was within control limits. Data are not qualified on this basis.

Field Duplicates

No field duplicates were associated with this sample delivery group.



Data Reviewer



Date

Glossary of Data Qualifiers

U	Not Detected.	The associated number indicates approximate sample concentration necessary to be detected.
UJ	Not Detected.	Quantitation limit may be inaccurate or imprecise.
J	Analyte Present.	Reported value may not be accurate or precise.
N	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts.
R	Unusable Result.	Analyte may or may not be present in the sample.
UR	Unusable Result.	Analyte may or may not be present in the sample.
NJ	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts. Reported value may not be accurate or precise.



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Annotated Form 1's *(Spreadsheet)*

Accutest Laboratories

Report of Analysis

Page 1 of 1

3-1



Client Sample ID:	SB-19/1-3	Date Sampled:	02/28/12
Lab Sample ID:	MC8297-1	Date Received:	02/28/12
Matrix:	SO - Soil	Percent Solids:	88.7
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M46699.D	1	03/01/12	EK	n/a	n/a	MSM1538
Run #2							

	Initial Weight	Final Volume
Run #1	6.49 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	4.3	0.14	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	4.3	0.16	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	78%		70-130%

MB
3/3/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

3.1

Client Sample ID: SB-19/1-3

Lab Sample ID: MC8297-1

Matrix: SO - Soil

Date Sampled: 02/28/12

Date Received: 02/28/12

Percent Solids: 88.7

Project: Former TTC, 1 Robert Lane, Glen Head, NY

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.58	0.44	mg/kg	1	03/05/12 14:18	MC	SW846 3060A/7188A
Redox Potential Vs H2	381		mV	1	02/29/12	CF	ASTM D1498-76M
Solids, Percent	88.7		%	1	02/29/12	BF	SM21 2540 B MOD.
pH	7.0		su	1	02/29/12	CF	SW846 9045

OMB
3/3/12

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Page 1 of 1

3.2

3

Client Sample ID:	SB-18/1-3	Date Sampled:	02/28/12
Lab Sample ID:	MC8297-2	Date Received:	02/28/12
Matrix:	SO - Soil	Percent Solids:	91.8
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M46700.D	1	03/01/12	EK	n/a	n/a	MSM1538
Run #2							

Run #	Initial Weight	Final Volume
Run #1	6.51 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	4.2	0.13	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	4.2	0.15	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	78%		70-130%

DMB
3/3/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

3.2



Client Sample ID: SB-18/1-3	Date Sampled: 02/28/12
Lab Sample ID: MC8297-2	Date Received: 02/28/12
Matrix: SO - Soil	Percent Solids: 91.8
Project: Former TTC, 1 Robert Lane, Glen Head, NY	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	<0.43	0.43	mg/kg	1	03/05/12 14:18	MC	SW846-3060A/7196A
Redox Potential Vs H2	390		mv	1	02/29/12	CF	ASTM-D1498-76M
Solids, Percent	91.8		%	1	02/29/12	BF	SM21 2540 B MOD.
pH	7.4		su	1	02/29/12	CF	SW846-9045

DMB
3/3/12

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

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3.3

Client Sample ID:	SB-17/1-3	Date Sampled:	02/28/12
Lab Sample ID:	MC8297-3	Date Received:	02/28/12
Matrix:	SO - Soil	Percent Solids:	88.8
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M46701.D	1	03/01/12	EK	n/a	n/a	MSM1538
Run #2							

Run #	Initial Weight	Final Volume
Run #1	5.77 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	4.9	0.15	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	4.9	0.18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	76%		70-130%

OMB
3/3/12

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

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33

Client Sample ID: SB-17/1-3

Lab Sample ID: MC8297-3

Matrix: SO - Soil

Date Sampled: 02/28/12

Date Received: 02/28/12

Percent Solids: 88.8

Project: Former TTC, 1 Robert Lane, Glen Head, NY

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.51	0.45	mg/kg	1	03/05/12 14:21	MC	SW846 3060A/7198A
Redox Potential Vs H2	344		mv	1	02/29/12	CF	ASTM D1498-76M
Solids, Percent	88.8		%	1	02/29/12	BF	SM21 2540 B MOD.
pH	6.2		su	1	02/29/12	CF	SW846 8045

MB
3/3/12

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

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3.4

Client Sample ID:	SB-16/1-3	Date Sampled:	02/28/12
Lab Sample ID:	MC8297-4	Date Received:	02/28/12
Matrix:	SO - Soil	Percent Solids:	89.7
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M46702.D	1	03/01/12	EK	n/a	n/a	MSM1538
Run #2							

Run #	Initial Weight	Final Volume
Run #1	6.25 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	4.5	0.14	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	4.5	0.16	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	88%		70-130%
460-00-4	4-Bromofluorobenzene	78%		70-130%

MB
3/3/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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3.4

Client Sample ID: SB-16/1-3

Lab Sample ID: MC8297-4

Matrix: SO - Soil

Date Sampled: 02/28/12

Date Received: 02/28/12

Percent Solids: 89.7

Project: Former TTC, 1 Robert Lane, Glen Head, NY

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.55	0.44	mg/kg	1	03/05/12 14:21	MC	SW846-3060A/7198A
Redox Potential Vs H2	432		mv	1	02/29/12	CF	ASTM D1488-76M
Solids, Percent	89.7		%	1	02/29/12	BF	SM21 2540 B MOD.
pH	6.4		su	1	02/29/12	CF	SW846 9045

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Page 1 of 1

3.5

Client Sample ID:	SB-15/1-3	Date Sampled:	02/28/12
Lab Sample ID:	MC8297-5	Date Received:	02/28/12
Matrix:	SO - Soil	Percent Solids:	87.6
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M46703.D	1	03/01/12	EK	n/a	n/a	MSM1538
Run #2							

Run #	Initial Weight	Final Volume
Run #1	5.96 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	4.8	0.15	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	4.8	0.17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	85%		70-130%
460-00-4	4-Bromofluorobenzene	77%		70-130%

MB
3/13/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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3.5



Client Sample ID: SB-15/1-3

Lab Sample ID: MC8297-5

Matrix: SO - Soil

Date Sampled: 02/28/12

Date Received: 02/28/12

Percent Solids: 87.6

Project: Former TTC, 1 Robert Lane, Glen Head, NY

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.79	0.44	mg/kg	1	03/05/12 14:21	MC	SW846 3060A/7186A
Redox Potential Vs H2	309		mv	1	02/29/12	CF	ASTM D1498-76M
Solids, Percent	87.6		%	1	02/29/12	BF	SM21 2540 B MOD.
pH	7.4		su	1	02/29/12	CF	SW846 9045

OK
3/3/12

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Page 1 of 1

3.6

Client Sample ID:	EB022812	Date Sampled:	02/28/12
Lab Sample ID:	MC8297-6	Date Received:	02/28/12
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N60741.D	1	02/29/12	JP	n/a	n/a	MSN2270
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	84%		70-130%
2037-26-5	Toluene-D8	87%		70-130%
460-00-4	4-Bromofluorobenzene	97%		70-130%

MB
3/3/12

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

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3.7

3

Client Sample ID:	TB022812	Date Sampled:	02/28/12
Lab Sample ID:	MC8297-7	Date Received:	02/28/12
Matrix:	SO - Trip Blank Methanol	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E58616.D	1	03/01/12	GK	n/a	n/a	MSE2299
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.0 g	10.0 ml	100 ul
Run #2			

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	250	7.9	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	250	9.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

MB
3/3/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Page 1 of 1

3.8

Client Sample ID:	TB022812	Date Sampled:	02/28/12
Lab Sample ID:	MC8297-7A	Date Received:	02/28/12
Matrix:	SO - Trip Blank Soil	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

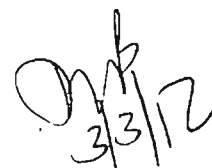
Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V5861.D	1	03/05/12	AMY	n/a	n/a	MSV261
Run #2							

Run #	Initial Weight	Final Volume
Run #1	5.00 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.16	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	93%		70-130%


 3/3/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound



ECT.CON INC.

Environmental and Computer
Technology Consultants

Support Documentation

COC



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC8297

Client: WSP

Immediate Client Services Action Required: No

Date / Time Received: 2/28/2012

Delivery Method:

Client Service Action Required at Login: No

Project: TTC/GLEN HEAD

No. Coolers: 1

Airbill #s:

Cooler Security

Y or N

Y or N

1. Custody Seals Present:	☒	☐	3. COC Present:	☒	☐
2. Custody Seals Intact:	☒	☐	4. Smpl Dates/Time OK:	☒	☐

Cooler Temperature

Y or N

1. Temp criteria achieved:	☒	☐
2. Cooler temp verification:	Infrared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservation

Y or N

N/A

1. Trip Blank present / cooler:	☒	☐	☐
2. Trip Blank listed on COC:	☒	☐	☐
3. Samples preserved properly:	☒	☐	☐
4. VOCs headspace free:	☒	☐	☐

Sample Integrity - Documentation

Y or N

1. Sample labels present on bottles:	☒	☐
2. Container labeling complete:	☒	☐
3. Sample container label / COC agree:	☒	☐

Sample Integrity - Condition

Y or N

1. Sample recvd within HT:	☒	☐
2. All containers accounted for:	☒	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions

Y or N

N/A

1. Analysis requested is clear:	☒	☐	
2. Bottles received for unspecified tests:	☐	☒	
3. Sufficient volume recvd for analysis:	☒	☐	
4. Compositing instructions clear:	☐	☐	☒
5. Filtering instructions clear:	☐	☐	☒

Comments

Accutest Laboratories
V-508.481.0200

485 Technology Center West, Bldg One
P: 508.481.7753

Marlborough, MA
www.accutest.com

MC8297: Chain of Custody
Page 2 of 2

Laboratory Case Narrative

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: WSP Environmental & Energy

Job No MC8297

Site: Former TTC, 1 Robert Lane, Glen Head, NY

Report Date 3/6/2012 5:55:40 PM

6 Sample(s), 2 Trip Blank(s) and 0 Field Blank(s) were collected on 02/28/2012 and were received at Accutest on 02/28/2012 properly preserved, at 0.2 Deg. C and intact. These Samples received an Accutest job number of MC8297. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ	Batch ID: MSN2270

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC8287-7MS, MC8287-7MSD were used as the QC samples indicated.

Matrix SO	Batch ID: MSE2299

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC8331-1MS, MC8331-1MSD were used as the QC samples indicated.

Matrix SO	Batch ID: MSM1538

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC8284-6MS, MC8284-6MSD were used as the QC samples indicated.
- Matrix Spike Duplicate Recovery(s) for 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene are outside control limits for sample MC8284-6MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.

Matrix SO	Batch ID: MSV261

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC8303-4MS, MC8303-4MSD were used as the QC samples indicated.
- MC8303-4MSD has internal standard outside control limits. Outside control limits due to possible matrix interference. Confirmed by MS/MSD.

Wet Chemistry By Method ASTM D1498-76M

Matrix SO	Batch ID: GN38006

- Sample(s) MC8297-3DUP were used as the QC samples for Redox Potential Vs H2.

Wet Chemistry By Method SM21 2540 B MOD.

Matrix SO	Batch ID: GN38010

- Sample(s) MC8284-6DUP were used as the QC samples for Solids, Percent.

Wet Chemistry By Method SW846 3060A/7196A

Matrix	SO	Batch ID:	GP14224

- All samples were distilled within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC8284-6DUP, MC8284-6MS were used as the QC samples for Chromium, Hexavalent.

Wet Chemistry By Method SW846 7196A

Matrix	AQ	Batch ID:	GN37996

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC8284-10DUP, MC8284-10MS were used as the QC samples for Chromium, Hexavalent.

Wet Chemistry By Method SW846 9045

Matrix	SO	Batch ID:	GN38004

- Sample(s) MC8297-3DUP were used as the QC samples for pH.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report (MC8297).

Sample Summary

WSP Environmental & Energy

Job No: MC8297

Former TTC, 1 Robert Lane, Glen Head, NY

Project No: 28873/03

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
MC8297-1	02/28/12	09:10	NSG	02/28/12	SO Soil	SB-19/1-3
MC8297-2	02/28/12	09:30	NSG	02/28/12	SO Soil	SB-18/1-3
MC8297-3	02/28/12	10:30	NSG	02/28/12	SO Soil	SB-17/1-3
MC8297-4	02/28/12	11:15	NSG	02/28/12	SO Soil	SB-16/1-3
MC8297-5	02/28/12	11:45	NSG	02/28/12	SO Soil	SB-15/1-3
MC8297-6	02/28/12	12:40	NSG	02/28/12	AQ Equipment Blank	EB022812
MC8297-7	02/28/12	12:45	NSG	02/28/12	SO Trip Blank Methanol	TB022812
MC8297-7A	02/28/12	12:45	NSG	02/28/12	SO Trip Blank Soil	TB022812

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Worksheets

8280

SDG #: MC8297

Sample Temp: <8

HOLDING TIMES

14 days from collection to prep and analysis
 Sample Date 2/28/12 Analyze by 3/13/12

	SAMPLE DATE	SAMPLE ID	LABORATORY ID	VOCs	MATRIX	DATE ANALYZED	DF
1	02/28/12	SB-19/1-3	MC8297-1	X	Solid	3/1/12	1
2	02/28/12	SB-18/1-3	MC8297-2	X	Solid	3/1/12	1
3	02/28/12	SB-17/1-3	MC8297-3	X	Solid	3/1/12	1
4	02/28/12	SB-16/1-3	MC8297-4	X	Solid	3/1/12	1
5	02/28/12	SB-15/1-3	MC8297-5	X	Solid	3/1/12	1
6	02/28/12	EB022812	MC8297-6	X	Aqueous	2/29/12	1
7	02/28/12	TB022812	MC8297-7	X	Aqueous	3/1/12	1
8	02/28/12	TB022812 SOIL	MC8297-7A	X	Aqueous	3/5/12	1

TARGET COMPOUNDS AND QUANTITATION LIMITS

Was a target compound list provided by the client?

No

Did Sample Form 1s match the target compound list?

Not Applicable

Were required quantitation limits provided by the client?

No

Did all compounds meet the required quantitation limits?

Not Applicable

SYSTEM MONITORING COMPOUNDS

SAMPLE	SURROGATE	RECOVERY	DF	ACTION
ALL	ALL	OK		

Were surrogate RTs within windows established by the ICAL?

Yes

Were there any transcription errors between the raw data and Form 2?

No

Were laboratory acceptance limits used as the basis for validation?

Yes

Did the laboratory provide CLP Form II or equivalent?

No

SAMPLE SB-16/1-3

SURR	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 2
DBFMA	47.13	50	94.3	94
Tol-dB	44.05	50	88.1	88
BFB	39.14	50	78.3	78

Recovery = (Amount Found/Amount Spiked)*100

MS/MSD RECOVERY and RELATIVE PERCENT DIFFERENCE

SAMPLE	COMPOUND	MS %R	MSD %R	RPD %R
LAB	ALL	OK	OK	OK
LAB	ALL	OK	OK	OK
LAB	135-TMB	OK	53	64
	124-TMB	OK	52	67
LAB	ALL	OK	OK	OK

7
 6
 1,2,3,4,5
 7A

Were there any transcription errors between the raw data and Form 3?

No

50.18

Were laboratory acceptance limits used as the basis for validation?

Yes

100

Did the laboratory provide CLP Form III or equivalent?

Yes

10

Were chromatograms and quan reports present for all MS/MSDs?

Yes

501.8

SAMPLE	LAB	COMPOUND	124-TMB		
	AMOUNT FOUND	NATIVE AMOUNT	AMOUNT SPIKED	%R	FORM 3
MS	5640	25	5640	99.55673759	99
MSD	5660	25	5640	99.91134752	100
RPD	-0.35			-0.36	1

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

RPD = ((MS-MSD)/((MS+MSD)/2))*100

LABORATORY CONTROL SAMPLES

SAMPLE	COMPOUND	LCS %R	LCSD %R	%RPD
1538	All	OK	OK	OK
261	All	OK	NA	NA
2270	All	OK	OK	OK
2299	All	OK	OK	OK

Were there any transcription errors between the raw data and Form 3?

No

Were laboratory acceptance limits used as the basis for validation?

Yes

Did the laboratory provide CLP Form III or equivalent?

Yes

Were chromatograms and quan reports present for all LCS/LCDS?

Yes

SAMPLE	1538	COMPOUND	124-TMB	
	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 3
LCS	51.37	50	102.74	103
LCSD	48.87	50	97.74	98
RPD	4.988028731		4.988028731	5

Recovery = ((Amount Found)/Amount Spiked)*100

RPD = ((LCS-LCD)/((LCS+LCSD)/2))*100

BLANKS

Were Form Is provided for all blanks?

Yes

Were chromatograms and quan reports present for all blanks?

Yes

Did the laboratory provide CLP Form IVs or equivalent?

Yes

BLANK	COMPOUND	RESULT	5X OR 10X	ACTION LEVEL	AFFECTED SAMPLES
2270	all	nd	5	#VALUE!	
1538	all	nd	5	#VALUE!	
2299	all	nd	5	#VALUE!	
261	all	nd	5	#VALUE!	
EB/TBS	all	nd	5	#VALUE!	

CALIBRATION

	ICAL	CCV	ICAL	CCV	ICAL	CCV
Instrument	MSE	MSE	MSM	MSM	MSN	MSN
Date	2/23/12	3/1/12	2/29/12*	3/1/12	2/15/12	2/29/12
CCV		12:02	SUMMARY HAS 3/5/12	12:02		2:08
CCV Bonus			RAW DATA 2/29/12			

	ICAL	CCV
Instrument	MSV	MSV
Date	2/10/12	3/5/12
CCV		10:02
CCV Bonus		

Are chromatograms and quan reports present for all ICAL standards?

Yes

Are CLP Form VIs or equivalent present and complete?

Yes

Any transcription or calculation errors?

No

What linearity criteria was used?

%RSD 30

Are RRFs greater than 0.05?

No

INITIAL CALIBRATION RRF

Date	2/29/12
Instrument	MSM
Compound	135-TMB
Reported RRF	2.496
Calculated RRF	2.4960

Compound	Area (A1)	16525
	Conc (C1)	5
Internal Std	Area (A2)	66206
	Conc (C2)	50

RRF = (A1/A2) * (C2/C1)

INITIAL CALIBRATION AVERAGE RRF

Date		2/29/12
Instrument		MSM
Compound		135-TMB
Reported Average RRF		2.905
Calculated Average RRF		2.9048
Reported RSD		11.3000
Calculated RSD		11.3042
		(RRF-(avg)RRF)^2
RRF1	2.647	0.066564
RRF2	2.496	0.167281
RRF3	2.737	0.028224
RRF4	3.129	0.050176
RRF5	3.353	0.200704
RRF6	3.087	0.026244
RRF7		
SUM	17.429	0.539193
	(Sum/N-1)^.5	0.32838788
((Sum/N-1)^.5)/Average RRF		0.1130423
N		6
N-1		5

CCVs

Are chromatograms and quan reports present for all CCV standards?
 Are CLP Form Vils or equivalent present and complete?
 Any transcription or calculation errors?
 What %D criteria was used?
 Were samples analyzed within 12 hours of the tune?

Yes
 Yes
 No
 30% (trace)/25% solids (low)
 Yes

CONTINUING CALIBRATION RRF

Date 3/1/12
 Time 10:48:00 AM
 Instrument MSM
 Compound 135-TMB
 Reported RRF 2.874
 Calculated RRF 2.8739

Compound Area (A1) 230036
 Conc (C1) 50
 Internal Std Area (A2) 80043
 Conc (C2) 50

RRF = (A1/A2) * (C2/C1)

TUNE

Raw data and mass assignments correct?
 Mass listing normalized to specified m/x?
 Were all tune reports present?

Yes
 Yes
 Yes

Instrument MSM
 Date 3/1/12
 Time 10:48

m/z	Area	Calculated %	Reported %	Abundance Criteria
50	4897	16.9%	16.9	15-40% of mass 95
75	14038	48.4%	48.4	30-60% of mass 95
95	28992	100.0%	100	base peak, 100%
96	1906	6.6%	6.57	5-9% of mass 95
173	0	0.0%	0	<2% of mass 174
174	32336	111.5%	111.5	50-120% of mass 95
175	2110	6.5%	6.53	5-9% of mass 174
176	31112	96.2%	96.2	95%-101% of mass 174
177	1895	5.4%	5.45	5-9% of mass 176

INTERNAL STANDARD CHECK

CCV Date 3/1/12
 CCV Time 10:48 AM
 Instrument MSM

Shading indicates a percent recovery outside the -50% to 100% criteria.
 Shading Indicates a retention time outside the +/- 0.5 minute criteria.

	PFB	RT	14-DFB	RT	CB-D5	RT
	73857	9.36	116017	10.25	65628	13.53
UPPER	147714	9.88	232034	10.75	131256	14.03
LOWER	36929	8.86	58009	9.75	32814	13.03
SB-16/1-3	56109	9	85485	10	49438	14
SB-16/1-3	76%		74%		75%	
	1,4-DFB-D4	RT	TBA-D9	RT		
	80043	16.1	38162	6.85		
UPPER	160086	16.6	72324	7.35		
LOWER	40022	15.60	18081	6.35		
SB-6(0-2)	62263	16	38241	7		
SB-16/1-3	78%		106%			

RELATIVE RETENTION TIMES

Shading indicates a relative retention time outside the +/- 0.06 RRT unit criteria.

SAMPLE

SB-16/1-3

Compound	Sample RT	CCV RT	Difference
DBFMA	9.004	8.996	0.008
Toluene-d8	12.062	12.062	0.000
bfb	14.759	14.755	0.004

FIELD DUPLICATES NONE

SAMPLE CALCULATION ALL ND

Are there any transcription errors?
 Are Form1s present for all field and quality control samples?
 Are chromatograms and quan reports present for all samples?
 Are RLs adjusted to reflect sample dilutions, percent solids, etc.?

No
 Yes
 Yes
 Yes

Method Blank Summary

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2270-MB	N60739.D	1	02/29/12	JP	n/a	n/a	MSN2270

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8297-6

CAS No.	Compound	Result	RL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	85%	70-130%
2037-26-5	Toluene-D8	86%	70-130%
460-00-4	4-Bromofluorobenzene	97%	70-130%

5.1.1
5

Method Blank Summary

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM1538-MB	M46687.D	1	03/01/12	EK	n/a	n/a	MSM1538

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8297-1, MC8297-2, MC8297-3, MC8297-4, MC8297-5

CAS No.	Compound	Result	RL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	90%	70-130%
2037-26-5	Toluene-D8	84%	70-130%
460-00-4	4-Bromofluorobenzene	82%	70-130%

5.1.2

5

Method Blank Summary

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSE2299-MB	E58613.D	1	03/01/12	GK	n/a	n/a	MSE2299

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8297-7

CAS No.	Compound	Result	RL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	250	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	250	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	107%	70-130%
460-00-4	4-Bromofluorobenzene	107%	70-130%

Method Blank Summary

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV261-MB	V5858.D	1	03/05/12	AMY	n/a	n/a	MSV261

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8297-7A

CAS No.	Compound	Result	RL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	94% 70-130%
2037-26-5	Toluene-D8	97% 70-130%
460-00-4	4-Bromofluorobenzene	94% 70-130%

5.1.4

5

Blank Spike Summary

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV261-BS	V5856.D	1	03/05/12	AMY	n/a	n/a	MSV261

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8297-7A

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
95-63-6	1,2,4-Trimethylbenzene	50	52.0	104	70-130
108-67-8	1,3,5-Trimethylbenzene	50	53.1	106	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	92%	70-130%

5.2.1
5

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2270-BS	N60736.D	1	02/29/12	JP	n/a	n/a	MSN2270
MSN2270-BSD	N60737.D	1	02/29/12	JP	n/a	n/a	MSN2270

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8297-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	50	51.1	102	50.3	101	2	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	51.4	103	50.7	101	1	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	87%	86%	70-130%
2037-26-5	Toluene-D8	87%	87%	70-130%
460-00-4	4-Bromofluorobenzene	86%	88%	70-130%

5.3.1

5

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM1538-BS	M46685.D	1	03/01/12	EK	n/a	n/a	MSM1538
MSM1538-BSD	M46686.D	1	03/01/12	EK	n/a	n/a	MSM1538

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8297-1, MC8297-2, MC8297-3, MC8297-4, MC8297-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	50	51.4	103	48.9	98	5	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	50.6	101	47.8	96	6	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	84%	84%	70-130%
2037-26-5	Toluene-D8	82%	83%	70-130%
460-00-4	4-Bromofluorobenzene	85%	82%	70-130%

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46685.D
 Acq On : 1 Mar 2012 11:19 am
 Operator : emilyk
 Sample : bs
 Misc : MS25151,MSM1537,5,,,5,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 05 14:24:17 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Thu Mar 01 11:32:45 2012
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) bromochloromethane	8.841	128	29398	50.20	ug/L	96
38) chloroform	8.880	83	98183	52.04	ug/L	99
40) Tetrahydrofuran	9.209	42	11557	54.49	ug/L	100
41) 1,1,1-trichloroethane	9.647	97	83737	48.97	ug/L	94
43) Cyclohexane	9.933	56	81767	49.21	ug/L	98
44) carbon tetrachloride	10.015	117	78844	48.90	ug/L	93
45) 1,1-dichloropropene	9.820	75	69127	48.79	ug/L	97
46) benzene	10.050	78	207502	48.87	ug/L	97
47) 1,2-dichloroethane	9.544	62	68994	51.43	ug/L	92
48) tert-amyl methyl ether	10.167	73	144797	56.32	ug/L	94
49) heptane	10.527	43	66017	49.78	ug/L	96
50) trichloroethene	10.676	95	56351	50.52	ug/L	96
51) 1,2-dichloropropane	10.640	63	51085	53.45	ug/L	100
52) dibromomethane	10.616	93	33130	52.25	ug/L	92
53) bromodichloromethane	10.729	83	75299	54.67	ug/L	97
54) Methylcyclohexane	11.199	83	96278	49.86	ug/L	95
55) 2-chloroethyl vinyl ether	11.100	63	16629	37.29	ug/L	98
56) methyl methacrylate	10.817	69	31215	53.83	ug/L	95
57) 1,4-dioxane	10.824	88	1575	218.97	ug/L	83
58) cis-1,3-dichloropropene	11.351	75	84057	49.84	ug/L	100
60) 4-methyl-2-pentanone	11.439	43	43986	53.86	ug/L	97
61) toluene	12.136	92	136280	51.64	ug/L	99
62) trans-1,3-dichloropropene	11.772	75	74111	53.02	ug/L	99
63) 1,1,2-trichloroethane	11.948	83	39306	56.08	ug/L	98
64) ethyl methacrylate	12.143	69	62413	52.49	ug/L	94
66) tetrachloroethene	12.878	166	65754	47.77	ug/L	96
67) 1,3-dichloropropane	12.185	76	78679	53.34	ug/L	93
68) dibromochloromethane	12.479	129	59995	55.21	ug/L	98
69) 1,2-dibromoethane	12.730	107	48115	50.22	ug/L	94
70) 2-hexanone	12.295	43	34992	61.52	ug/L	98
71) chlorobenzene	13.560	112	160372	51.30	ug/L	97
72) 1,1,1,2-tetrachloroethane	13.479	131	64258	52.14	ug/L	96
73) ethylbenzene	13.734	91	261813	48.23	ug/L	95
74) m,p-xylene	13.921	106	206096	96.93	ug/L	93
75) o-xylene	14.335	106	104242	48.90	ug/L	91
76) styrene	14.260	104	164484	49.10	ug/L	94
77) bromoform	14.091	173	43488	50.71	ug/L	96
78) trans-1,4-dichloro-2-b...	14.483	53	17921	52.11	ug/L #	74
80) isopropylbenzene	14.695	105	271900	60.20	ug/L	95
82) bromobenzene	14.992	156	76973	52.77	ug/L	96
83) 1,1,2,2-tetrachloroethane	14.338	83	69162	56.74	ug/L	99
84) 1,2,3-trichloropropane	14.487	75	74908	55.07	ug/L	98
85) n-propylbenzene	15.144	91	314720	52.56	ug/L	96
86) 2-chlorotoluene	15.265	91	192995	52.82	ug/L	100
87) 4-chlorotoluene	15.342	91	193133	53.53	ug/L	97
88) 1,3,5-trimethylbenzene	15.420	105	233738	50.60	ug/L	97
89) tert-butylbenzene	15.728	91	133237	53.24	ug/L	89
90) 1,2,4-trimethylbenzene	15.830	105	235987	51.37	ug/L	98
91) sec-butylbenzene	15.950	105	322391	52.61	ug/L	100
92) 1,3-dichlorobenzene	16.056	146	148741	53.10	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46686.D
 Acq On : 1 Mar 2012 11:57 am
 Operator : emilyk
 Sample : bsd
 Misc : MS25187,MSM1538,5,,,5,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 02 15:54:48 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Thu Mar 01 11:32:45 2012
 Response via : Initial Calibration

6.3.4

6

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) bromochloromethane	8.834	128	28625	48.49	ug/L	94
38) chloroform	8.876	83	91992	48.37	ug/L	100
40) Tetrahydrofuran	9.202	42	12644	58.14	ug/L	87
41) 1,1,1-trichloroethane	9.643	97	80245	46.56	ug/L	97
43) Cyclohexane	9.933	56	79262	48.64	ug/L	97
44) carbon tetrachloride	10.015	117	74625	47.19	ug/L	94
45) 1,1-dichloropropene	9.820	75	65380	47.05	ug/L	97
46) benzene	10.046	78	195080	46.85	ug/L	97
47) 1,2-dichloroethane	9.541	62	66403	50.47	ug/L	94
48) tert-amyl methyl ether	10.167	73	131642	52.21	ug/L	97
49) heptane	10.527	43	62651	48.17	ug/L	95
50) trichloroethene	10.672	95	52938	48.40	ug/L	96
51) 1,2-dichloropropane	10.640	63	48181	51.41	ug/L	97
52) dibromomethane	10.616	93	31461	50.59	ug/L	88
53) bromodichloromethane	10.725	83	71040	52.60	ug/L	100
54) Methylcyclohexane	11.199	83	91798	48.48	ug/L	99
55) 2-chloroethyl vinyl ether	11.199	63	621	11.37	ug/L #	1
56) methyl methacrylate	10.814	69	32198	56.22	ug/L	97
57) 1,4-dioxane	10.835	88	1880	249.33	ug/L	96
58) cis-1,3-dichloropropene	11.351	75	78975	47.88	ug/L	100
60) 4-methyl-2-pentanone	11.439	43	46782	57.80	ug/L	96
61) toluene	12.132	92	130051	50.25	ug/L	97
62) trans-1,3-dichloropropene	11.772	75	71123	51.98	ug/L	97
63) 1,1,2-trichloroethane	11.948	83	36823	53.57	ug/L	94
64) ethyl methacrylate	12.143	69	63475	54.27	ug/L	97
66) tetrachloroethene	12.878	166	65199	47.74	ug/L	97
67) 1,3-dichloropropane	12.185	76	75065	51.30	ug/L	96
68) dibromochloromethane	12.479	129	57075	52.94	ug/L	99
69) 1,2-dibromoethane	12.730	107	46130	48.64	ug/L	100
70) 2-hexanone	12.295	43	31299	56.31	ug/L	99
71) chlorobenzene	13.564	112	154377	49.78	ug/L	97
72) 1,1,1,2-tetrachloroethane	13.483	131	60633	49.59	ug/L	96
73) ethylbenzene	13.734	91	254321	47.24	ug/L	96
74) m,p-xylene	13.921	106	200635	95.14	ug/L	90
75) o-xylene	14.335	106	102115	48.30	ug/L	92
76) styrene	14.261	104	160248	48.27	ug/L	96
77) bromoform	14.091	173	42735	50.27	ug/L	96
78) trans-1,4-dichloro-2-b...	14.483	53	18776	54.84	ug/L #	88
80) isopropylbenzene	14.699	105	273023	58.40	ug/L	98
82) bromobenzene	14.992	156	73503	48.68	ug/L	93
83) 1,1,2,2-tetrachloroethane	14.338	83	69117	54.78	ug/L	96
84) 1,2,3-trichloropropane	14.483	75	76284	54.18	ug/L	93
85) n-propylbenzene	15.144	91	309058	49.86	ug/L	97
86) 2-chlorotoluene	15.265	91	185239	48.98	ug/L	99
87) 4-chlorotoluene	15.339	91	191998	51.41	ug/L	98
88) 1,3,5-trimethylbenzene	15.420	105	228745	47.84	ug/L	98
89) tert-butylbenzene	15.728	91	128234	49.50	ug/L	92
90) 1,2,4-trimethylbenzene	15.830	105	232400	48.87	ug/L	95
91) sec-butylbenzene	15.950	105	319185	50.32	ug/L	98
92) 1,3-dichlorobenzene	16.060	146	144971	50.00	ug/L	96

M022912W.M Fri Mar 02 16:24:40 2012

Page: 2

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSE2299-BS	E58610.D	1	03/01/12	GK	n/a	n/a	MSE2299
MSE2299-BSD	E58611.D	1	03/01/12	GK	n/a	n/a	MSE2299

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8297-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	2500	2350	94	2460	98	5	70-130/25
108-67-8	1,3,5-Trimethylbenzene	2500	2430	97	2520	101	4	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	91%	95%	70-130%
2037-26-5	Toluene-D8	102%	108%	70-130%
460-00-4	4-Bromofluorobenzene	103%	105%	70-130%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC8287-7MS	N60758.D	5	03/01/12	JP	n/a	n/a	MSN2270
MC8287-7MSD	N60759.D	5	03/01/12	JP	n/a	n/a	MSN2270
MC8287-7	N60757.D	1	03/01/12	JP	n/a	n/a	MSN2270

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8297-6

CAS No.	Compound	MC8287-7 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	ND	250	240	96	244	98	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	250	243	97	246	98	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC8287-7	Limits
1868-53-7	Dibromofluoromethane	87%	87%	85%	70-130%
2037-26-5	Toluene-D8	89%	88%	85%	70-130%
460-00-4	4-Bromofluorobenzene	85%	86%	98%	70-130%

5.4.1

5

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC8331-1MS	E58621.D	1	03/01/12	GK	n/a	n/a	MSE2299
MC8331-1MSD	E58622.D	1	03/01/12	GK	n/a	n/a	MSE2299
MC8331-1	E58617.D	1	03/01/12	GK	n/a	n/a	MSE2299

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8297-7

CAS No.	Compound	MC8331-1 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	25.0		5640	5630	99	5660	100	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		5640	5700	101	5810	103	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC8331-1	Limits
1868-53-7	Dibromofluoromethane	91%	90%	93%	70-130%
2037-26-5	Toluene-D8	101%	101%	104%	70-130%
460-00-4	4-Bromofluorobenzene	100%	103%	104%	70-130%

5.4.2

5

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\E58622.D
 Acq On : 1 Mar 2012 6:07 pm
 Sample : mc8331-1msd
 Misc : ms25183,mse2299,7.172,,100,10,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 9:13 2012

Vial: 18
 Operator: garyk
 Inst : MSE
 Multiplr: 1.00

Quant Results File: E022212M.RES

Quant Method : C:\HPCHEM\1\METHODS\E022212M.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Thu Feb 23 08:29:23 2012
 Response via : Initial Calibration
 DataAcq Meth : E8260

6.4.5

6

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) chloroform	8.61	83	136656	51.29	ppb	98
40) Tetrahydrofuran	8.95	42	14346	47.50	ppb	97
41) 1,1,1-trichloroethane	9.36	97	95742	49.12	ppb	95
43) Cyclohexane	9.64	56	139111	48.49	ppb	98
44) carbon tetrachloride	9.73	117	77641	47.08	ppb	97
45) 1,1-dichloropropene	9.54	75	106817	47.01	ppb	98
46) benzene	9.76	78	307458	46.62	ppb	99
47) 1,2-dichloroethane	9.27	62	76389	45.86	ppb	97
48) tert-amyl methyl ether	9.89	73	201035	49.30	ppb	94
49) heptane	10.25	43	106494	47.13	ppb	98
50) trichloroethene	10.40	95	77141	46.92	ppb	96
51) 1,2-dichloropropane	10.36	63	79557	49.41	ppb	99
52) dibromomethane	10.34	93	39422	44.66	ppb	96
53) bromodichloromethane	10.45	83	90406	48.84	ppb	100
54) Methylcyclohexane	10.91	83	129966	50.05	ppb	98
55) 2-chloroethyl vinyl ether	10.83	63	16407	27.92	ppb	98
56) methyl methacrylate	10.56	69	27786	47.52	ppb	93
57) 1,4-dioxane	10.56	88	2220	236.37	ppb	76
58) cis-1,3-dichloropropene	11.07	75	108591	48.85	ppb	98
60) 4-methyl-2-pentanone	11.17	43	49971	50.15	ppb	98
61) toluene	11.85	92	178669	50.37	ppb	99
62) trans-1,3-dichloropropene	11.49	75	80979	50.97	ppb	99
63) 1,1,2-trichloroethane	11.66	83	42750	50.05	ppb	93
64) ethyl methacrylate	11.88	69	60135	52.01	ppb	90
66) tetrachloroethene	12.59	166	65524	44.33	ppb	97
67) 1,3-dichloropropane	11.90	76	82028	45.07	ppb	99
68) dibromochloromethane	12.19	129	53471	45.96	ppb	100
69) 1,2-dibromoethane	12.44	107	47492	44.85	ppb	98
70) 2-hexanone	12.06	43	30705	54.00	ppb	99
71) chlorobenzene	13.27	112	190086	48.52	ppb	99
72) 1,1,1,2-tetrachloroethane	13.19	131	66284	49.16	ppb	95
73) ethylbenzene	13.44	91	314704	48.49	ppb	98
74) m,p-xylene	13.62	106	253043	98.69	ppb	100
75) o-xylene	14.04	106	127715	50.43	ppb	97
76) styrene	13.97	104	193995	48.84	ppb	100
77) bromoform	13.79	173	28770	45.03	ppb	93
78) trans-1,4-dichloro-2-buten	14.19	53	13211	44.78	ppb	97
80) isopropylbenzene	14.40	105	317105	61.32	ppb	98
82) bromobenzene	14.70	156	68496	48.43	ppb	94
83) 1,1,2,2-tetrachloroethane	14.05	83	53125	46.68	ppb	98
84) 1,2,3-trichloropropane	14.19	75	60348	47.81	ppb	97
85) n-propylbenzene	14.85	91	350043	51.97	ppb	99
86) 2-chlorotoluene	14.97	91	213656	51.27	ppb	99
87) 4-chlorotoluene	15.04	91	210113	51.30	ppb	98
88) 1,3,5-trimethylbenzene	15.13	105	243394	51.43	ppb	99
89) tert-butylbenzene	15.43	91	126836	53.43	ppb	87
90) 1,2,4-trimethylbenzene	15.53	105	240339	50.18	ppb	99
91) sec-butylbenzene	15.65	105	316621	52.86	ppb	97
92) 1,3-dichlorobenzene	15.75	146	126004	48.53	ppb	99

(#)=qualifier out of range (m)=manual integration

E58622.D E022212M.M

Mon Mar 05 09:15:38 2012

LPT1

Page 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46698.D
 Acq On : 1 Mar 2012 6:08 pm
 Operator : emilyk
 Sample : mc8284-6msd
 Misc : MS25187,MSM1538,8.57,,,5,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 02 16:14:39 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Thu Mar 01 11:32:45 2012
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) bromochloromethane	8.837	128	22335	43.29	ug/L	97
38) chloroform	8.880	83	70997	42.71	ug/L	95
40) Tetrahydrofuran	9.212	42	10168	54.44	ug/L	87
41) 1,1,1-trichloroethane	9.650	97	62633	41.58	ug/L	98
43) Cyclohexane	9.933	56	56786	40.11	ug/L	97
44) carbon tetrachloride	10.014	117	58109	42.30	ug/L	97
45) 1,1-dichloropropene	9.824	75	49022	40.61	ug/L	95
46) benzene	10.050	78	147158	40.68	ug/L	96
47) 1,2-dichloroethane	9.544	62	51763	45.29	ug/L	92
48) tert-amyl methyl ether	10.166	73	95674	43.67	ug/L	97
49) heptane	10.527	43	35305	31.24	ug/L	95
50) trichloroethene	10.672	95	38613	40.63	ug/L	93
51) 1,2-dichloropropane	10.640	63	33852	41.57	ug/L	98
52) dibromomethane	10.615	93	24923	46.13	ug/L	99
53) bromodichloromethane	10.729	83	51682	44.04	ug/L	96
54) Methylcyclohexane	11.202	83	54764	33.29	ug/L	92
56) methyl methacrylate	10.817	69	23710	48.83	ug/L	96
57) 1,4-dioxane	10.820	88	1744	260.86	ug/L #	65
58) cis-1,3-dichloropropene	11.351	75	55112	39.08	ug/L	99
60) 4-methyl-2-pentanone	11.439	43	37827	54.30	ug/L	96
61) toluene	12.136	92	88986	39.58	ug/L	100
62) trans-1,3-dichloropropene	11.775	75	49424	42.51	ug/L	93
63) 1,1,2-trichloroethane	11.948	83	26698	44.71	ug/L	95
64) ethyl methacrylate	12.143	69	45432	45.48	ug/L	91
66) tetrachloroethene	12.878	166	41771	33.49	ug/L	93
67) 1,3-dichloropropane	12.185	76	54906	41.08	ug/L	98
68) dibromochloromethane	12.482	129	39878	40.49	ug/L	97
69) 1,2-dibromoethane	12.733	107	34732	40.64	ug/L	100
70) 2-hexanone	12.298	43	26053	52.07	ug/L	97
71) chlorobenzene	13.560	112	96042	33.90	ug/L	99
72) 1,1,1,2-tetrachloroethane	13.479	131	39728	35.57	ug/L	96
73) ethylbenzene	13.734	91	152533	31.25	ug/L	96
74) m,p-xylene	13.917	106	119944	62.68	ug/L	91
75) o-xylene	14.335	106	60639	31.63	ug/L	95
76) styrene	14.260	104	85350	29.33	ug/L	95
77) bromoform	14.091	173	28889	38.48	ug/L	98
78) trans-1,4-dichloro-2-b...	14.487	53	12728	41.61	ug/L	88
80) isopropylbenzene	14.699	105	144360	35.27	ug/L	97
82) bromobenzene	14.992	156	39953	30.23	ug/L	99
83) 1,1,2,2-tetrachloroethane	14.338	83	47409	42.93	ug/L	93
84) 1,2,3-trichloropropane	14.490	75	53571	43.47	ug/L	95
85) n-propylbenzene	15.144	91	154320	28.44	ug/L	94
86) 2-chlorotoluene	15.264	91	95132	28.74	ug/L	95
87) 4-chlorotoluene	15.342	91	94353	28.87	ug/L	96
88) 1,3,5-trimethylbenzene	15.420	105	110144	26.32	ug/L	94
89) tert-butylbenzene	15.728	91	61444	27.10	ug/L	92
90) 1,2,4-trimethylbenzene	15.830	105	107616	25.86	ug/L	97
91) sec-butylbenzene	15.950	105	137462	24.76	ug/L	97
92) 1,3-dichlorobenzene	16.056	146	63953	25.20	ug/L	98
93) p-isopropyltoluene	16.120	119	113447	24.23	ug/L	95

M022912W.M Fri Mar 02 16:14:54 2012

Page: 2

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC8284-6MS	M46697.D	1	03/01/12	EK	n/a	n/a	MSM1538
MC8284-6MSD	M46698.D	1	03/01/12	EK	n/a	n/a	MSM1538
MC8284-6	M46693.D	1	03/01/12	EK	n/a	n/a	MSM1538

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8297-1, MC8297-2, MC8297-3, MC8297-4, MC8297-5

CAS No.	Compound	MC8284-6 ug/kg	Spike Q	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	ND	41.1	34.8	85	17.4	52* ^a	67* ^b	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	41.1	34.7	85	17.8	53* ^a	64* ^b	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC8284-6	Limits
1868-53-7	Dibromofluoromethane	86%	86%	92%	70-130%
2037-26-5	Toluene-D8	82%	85%	83%	70-130%
460-00-4	4-Bromofluorobenzene	85%	87%	77%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC8303-4MS	V5870.D	1	03/05/12	AMY	n/a	n/a	MSV261
MC8303-4MSD	V5871.D	1	03/05/12	AMY	n/a	n/a	MSV261
MC8303-4	V5862.D	1	03/05/12	AMY	n/a	n/a	MSV261

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8297-7A

CAS No.	Compound	MC8303-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	ND		68.8	65.9	96	68.1	104	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		68.8	76.2	111	83.2	127	9	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC8303-4	Limits
1868-53-7	Dibromofluoromethane	97%	97%	93%	70-130%
2037-26-5	Toluene-D8	96%	94%	95%	70-130%
460-00-4	4-Bromofluorobenzene	116%	116%	95%	70-130%

5.4.4

5

Volatile Surrogate Recovery Summary

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Method: SW846 8260B

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC8297-6	N60741.D	84.0	87.0	97.0
MC8287-7MS	N60758.D	87.0	89.0	85.0
MC8287-7MSD	N60759.D	87.0	88.0	86.0
MSN2270-BS	N60736.D	87.0	87.0	86.0
MSN2270-BSD	N60737.D	86.0	87.0	88.0
MSN2270-MB	N60739.D	85.0	86.0	97.0

Surrogate Compounds	Recovery Limits

S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

5.7.1

5

Volatile Surrogate Recovery Summary

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Method: SW846 8260B

Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC8297-1	M46699.D	92.0	84.0	78.0
MC8297-2	M46700.D	94.0	84.0	78.0
MC8297-3	M46701.D	93.0	84.0	76.0
MC8297-4	M46702.D	94.0	88.0	78.0
MC8297-5	M46703.D	93.0	85.0	77.0
MC8297-7	E58616.D	91.0	103.0	100.0
MC8297-7A	V5861.D	95.0	99.0	93.0
MC8284-6MS	M46697.D	86.0	82.0	85.0
MC8284-6MSD	M46698.D	86.0	85.0	87.0
MC8303-4MS	V5870.D	97.0	96.0	116.0
MC8303-4MSD	V5871.D	97.0	94.0	116.0
MC8331-1MS	E58621.D	91.0	101.0	100.0
MC8331-1MSD	E58622.D	90.0	101.0	103.0
MSE2299-BS	E58610.D	91.0	102.0	103.0
MSE2299-BSD	E58611.D	95.0	108.0	105.0
MSE2299-MB	E58613.D	98.0	107.0	107.0
MSM1538-BS	M46685.D	84.0	82.0	85.0
MSM1538-BSD	M46686.D	84.0	83.0	82.0
MSM1538-MB	M46687.D	90.0	84.0	82.0
MSV261-BS	V5856.D	95.0	99.0	92.0
MSV261-MB	V5858.D	94.0	97.0	94.0

Surrogate Compounds

Recovery Limits

S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

5.7.2

5

Initial Calibration Summary

Page 1 of 4

Job Number: MC8297
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSE2293-ICC2293
 Lab FileID: E58434.D

Response Factor Report MSE

Method : C:\HPCHEM\1\METHODS\E022212M.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Thu Feb 23 08:29:23 2012
 Response via : Initial Calibration

Calibration Files

2.0 =E58443.D 5 =E58432.D 50 =E58434.D 100 =E58435.D
 200 =E58436.D 400 =E58444.D 0.5 =E58442.D 25 =E58433.D
 = =

Compound	2.0	5	50	100	200	400	0.5	25	Avg	%RSD
1) I tert butyl alcohol-d9 -----ISTD-----										
2) tertiary butyl alcohol	1.319	1.084	0.943	1.126	1.109	1.119		1.188	1.127	10.02
3) Ethanol		0.161	0.139	0.169	0.186	0.188		0.164	0.168	10.68
4) I pentafluorobenzene -----ISTD-----										
5) dichlorodifluoromethane	0.557	0.564	0.531	0.567	0.519	0.467		0.616	0.546	8.50
6) chloromethane	1.214	1.010	0.899	0.907	0.880	0.772		0.946	0.947	14.57
7) vinyl chloride	0.792	0.703	0.632	0.669	0.599	0.546		0.742	0.669	12.67
8) bromomethane	0.601	0.553	0.479	0.503	0.452	0.420		0.526	0.505	12.15
9) chloroethane	0.505	0.451	0.433	0.465	0.417	0.390		0.475	0.448	8.57
10) ethyl ether	0.548	0.477	0.465	0.427	0.430	0.394		0.458	0.457	10.70
11) acetonitrile	0.096	0.065	0.064	0.088	0.085		0.066		0.077	18.28
----- Linear regression ----- Coefficient = 0.9948										
Response Ratio = -0.01488 + 0.08682 *A										
12) trichlorofluoromethane	0.779	0.732	0.713	0.708	0.653	0.628		0.769	0.712	7.82
13) freon-113	0.659	0.544	0.521	0.559	0.515	0.502		0.600	0.557	9.98
14) acrolein		0.012	0.014	0.013	0.013	0.012		0.012	0.013	4.98
15) 1,1-dichloroethene	0.681	0.554	0.498	0.523	0.496	0.464		0.550	0.538	13.17
16) acetone	0.176	0.129	0.122	0.113	0.101		0.128		0.128	20.03
----- Linear regression ----- Coefficient = 0.9961										
Response Ratio = 0.02579 + 0.09984 *A										
17) Methyl Acetate	0.858	0.722	0.620	0.666	0.642	0.597		0.676	0.683	12.73
18) methylene chloride	0.789	0.759	0.627	0.662	0.631	0.569		0.689	0.675	11.46
19) methyl tert butyl ether	1.502	1.313	1.191	1.243	1.265	1.157		1.282	1.279	8.73
20) acrylonitrile										

5.8.1
5

Initial Calibration Summary

Page 4 of 4

Job Number: MC8297
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSE2293-ICC2293
 Lab FileID: E58434.D

	0.342	0.310	0.289	0.292	0.279	0.293	0.308	0.302	6.83
78) trans-1,4-dichloro-2-butene	0.157	0.140	0.133	0.127	0.134		0.145	0.139	7.55
79) I 1,4-dichlorobenzene-d -----ISTD-----									
80) isopropylbenzene	3.178	2.842	2.836	3.140	3.164	2.957	3.077	3.028	4.90
81) bromofluorobenzene (s)	0.883	0.977	1.002	1.019	1.000		1.007	0.982	5.10
82) bromobenzene	0.918	0.816	0.775	0.824	0.837	0.797	0.829	0.828	5.43
83) 1,1,2,2-tetrachloroethane	0.705	0.684	0.639	0.666	0.675	0.621	0.674	0.666	4.24
84) 1,2,3-trichloropropane	0.832	0.735	0.677	0.731	0.752	0.725	0.719	0.739	6.37
85) n-propylbenzene	4.488	3.894	3.625	3.946	3.980	3.784	3.890	3.944	6.79
86) 2-chlorotoluene	2.811	2.382	2.261	2.438	2.448	2.316	2.422	2.440	7.28
87) 4-chlorotoluene	2.837	2.365	2.185	2.340	2.403	2.276	2.378	2.398	8.65
88) 1,3,5-trimethylbenzene	2.877	2.610	2.647	2.924	2.891	2.649	2.795	2.770	4.79
89) tert-butylbenzene	1.451	1.270	1.345	1.463	1.462	1.330	1.408	1.390	5.46
90) 1,2,4-trimethylbenzene	3.195	2.695	2.628	2.860	2.844	2.614	2.792	2.804	7.08
91) sec-butylbenzene	3.965	3.283	3.309	3.609	3.560	3.263	3.558	3.507	7.12
92) 1,3-dichlorobenzene	1.796	1.492	1.402	1.510	1.483	1.416	1.542	1.520	8.65
93) p-isopropyltoluene	2.992	2.558	2.509	2.721	2.696	2.444	2.670	2.656	6.80
94) 1,4-dichlorobenzene	1.824	1.510	1.471	1.519	1.499	1.394	1.580	1.543	8.82
95) 1,2-dichlorobenzene	1.575	1.423	1.305	1.377	1.363	1.294	1.400	1.391	6.73
96) n-butylbenzene	2.962	2.505	2.454	2.645	2.623	2.451	2.672	2.616	6.79
97) 1,2-dibromo-3-chloropropane	0.080	0.081	0.084	0.086	0.084		0.090	0.084	4.27
98) 1,3,5-trichlorobenzene	1.036	0.933	0.874	0.945	0.957	0.878	0.918	0.934	5.89
99) 1,2,4-trichlorobenzene	0.949	0.742	0.728	0.790	0.817	0.781	0.755	0.795	9.37
100) hexachlorobutadiene	0.419	0.341	0.357	0.361	0.343		0.375	0.366	7.85
101) naphthalene	1.656	1.398	1.455	1.591	1.657	1.686	1.475	1.560	7.40
102) 1,2,3-trichlorobenzene	0.862	0.646	0.612	0.663	0.690	0.720	0.627	0.688	12.31
103) 2-methylnaphthalene	1.419	0.843	0.820	0.954	1.040	1.024	0.706	0.972	23.66
----- Linear regression ----- Coefficient = 0.9990									
Response Ratio = -0.04628 + 1.03696 *A									

(#) = Out of Range ### Number of calibration levels exceeded format ###

E022212M.M

Fri Feb 24 16:15:24 2012 LPT1

Continuing Calibration Summary

Page 1 of 3

Job Number: MC8297
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSE2299-CC2293
 Lab FileID: E58609.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\E58609.D
 Acq On : 1 Mar 2012 12:02 pm
 Sample : cc2293-50
 Misc : ms25183,mse2299,10,,100,10,1
 MS Integration Params: RTEINT.P

Vial: 5
 Operator: garyk
 Inst : MSE
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\E022212M.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Thu Feb 23 08:29:23 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	131	-0.02	6.62
2 M	tertiary butyl alcohol	1.127	0.975	13.5	135	-0.01	6.72
3 T	Ethanol	0.168	0.142	15.5	133	0.00	5.45
4 I	pentafluorobenzene	1.000	1.000	0.0	131	-0.01	9.10
5 M	dichlorodifluoromethane	0.546	0.502	8.1	124	-0.01	4.25
6 P	chloromethane	0.947	0.955	-0.8	140	-0.02	4.49
7 c	vinyl chloride	0.669	0.713	-6.6	148	-0.01	4.74
8 M	bromomethane	0.505	0.515	-2.0	141	-0.01	5.27
9 M	chloroethane	0.448	0.465	-3.8	141	-0.01	5.43
10 M	ethyl ether	0.457	0.462	-1.1	131	-0.01	6.35
----- True Calc. % Drift -----							
11 M	acetonitrile	50.000	42.272	15.5	119	0.00	6.00
----- AvgRF CCRF % Dev -----							
12 M	trichlorofluoromethane	0.712	0.722	-1.4	133	-0.01	6.11
13 M	freon-113	0.557	0.565	-1.4	143	-0.01	6.90
14 M	acrolein	0.013	0.010	23.1	96	-0.01	6.09
15 c	1,1-dichloroethene	0.538	0.547	-1.7	145	-0.01	6.70
----- True Calc. % Drift -----							
16 M	acetone	50.000	44.774	10.5	117	0.00	6.24
----- AvgRF CCRF % Dev -----							
17 M	Methyl Acetate	0.683	0.643	5.9	136	-0.01	6.89
18 M	methylene chloride	0.675	0.698	-3.4	146	-0.02	6.85
19 M	methyl tert butyl ether	1.279	1.253	2.0	138	-0.02	7.66
20 M	acrylonitrile	0.029	0.030	-3.4	141	-0.01	6.76
21 M	allyl chloride	1.092	1.177	-7.8	153	-0.01	6.95
----- True Calc. % Drift -----							
22 M	trans-1,2-dichloroethene	50.000	53.399	-6.8	145	-0.01	7.57
----- AvgRF CCRF % Dev -----							
23 M	iodomethane	1.013	1.056	-4.2	142	-0.01	6.76
24 M	carbon disulfide	2.018	2.167	-7.4	149	-0.02	7.13
25 M	propionitrile	0.005	0.006	-20.0	143	0.00	6.77
26 M	vinyl acetate	1.073	1.035	3.5	135	-0.01	7.93
27 M	chloroprene	0.864	0.906	-4.9	148	-0.01	8.19
28 M	di-isopropyl ether	2.300	2.414	-5.0	146	-0.01	8.24
29 M	methacrylonitrile	0.295	0.282	4.4	136	-0.01	8.36

5.8.3
5

Initial Calibration Verification

Page 3 of 3

Job Number: MC8297

Sample: MSE2294-ICV2293

Account: WSPNYC WSP Environmental & Energy

Lab FileID: E58470.D

Project: Former TTC, 1 Robert Lane, Glen Head, NY

83 P	1,1,2,2-tetrachloroethane	0.666	0.732	-9.9	131	0.01	14.08
84 M	1,2,3-trichloropropane	0.739	0.776	-5.0	131	0.01	14.22
85 M	n-propylbenzene	3.944	4.352	-10.3	138	0.01	14.88
86 M	2-chlorotoluene	2.440	2.647	-8.5	134	0.01	15.00
87 M	4-chlorotoluene	2.398	2.673	-11.5	140	0.01	15.07
88 M	1,3,5-trimethylbenzene	2.770	3.059	-10.4	133	0.01	15.15
89 M	tert-butylbenzene	1.390	1.582	-13.8	135	0.01	15.45
90 M	1,2,4-trimethylbenzene	2.804	3.008	-7.3	131	0.01	15.56
91 M	sec-butylbenzene	3.507	3.965	-13.1	137	0.01	15.68
92 M	1,3-dichlorobenzene	1.520	1.599	-5.2	131	0.01	15.78
93 M	p-isopropyltoluene	2.656	3.005	-13.1	137	0.01	15.85
94 M	1,4-dichlorobenzene	1.543	1.638	-6.2	128	0.01	15.85
95 M	1,2-dichlorobenzene	1.391	1.518	-9.1	133	0.01	16.22
96 M	n-butylbenzene	2.616	2.884	-10.2	135	0.00	16.26
97 M	1,2-dibromo-3-chloropropa	0.084	0.099	-17.9	141	0.01	16.69
98 M	1,3,5-trichlorobenzene	0.934	1.039	-11.2	136	0.01	17.51
99 M	1,2,4-trichlorobenzene	0.795	0.856	-7.7	135	0.00	18.08
100 M	hexachlorobutadiene	0.366	0.408	-11.5	138	0.00	18.39
101 M	naphthalene	1.560	1.670	-7.1	132	0.00	18.37
102 M	1,2,3-trichlorobenzene	0.688	0.697	-1.3	131	0.01	18.60

		True	Calc.	% Drift			
103	2-methylnaphthalene	25.000	45.491	-82.0%	251	0.01	19.89

(5.2 %) 5 of 97 compounds'%D > 20

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

E58434.D E022212M.M

Thu Feb 23 10:46:50 2012 LPT1

Initial Calibration Summary

Page 1 of 6

Job Number: MC8297
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSM1537-ICC1537
Lab FileID: M46676.D

Response Factor Report GCMS M

Method : C:\msdchem\1\methods\M022912W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Mar 05 13:52:36 2012
Response via : Initial Calibration

*raw data
2/29/12*

Calibration Files

.5 =M46672.D 20 =M46675.D 2 =M46673.D 5 =M46674.D
50 =M46676.D 100 =M46677.D 200 =M46678.D 400 =M46679.D
= =

Compound	.5	20	2	5	50	100	200	400	Avg	%RSD
1) I tert butyl alcohol-d9 -----ISTD-----										
2) tertiary butyl alcohol										
	0.952			0.932	1.123	1.193	1.322	1.238	1.127	13.95
3) Ethanol										
	0.123			0.048	0.119	0.138	0.154	0.132	0.119	30.95
---- Linear regression ---- Coefficient = 0.9922										
Response Ratio = 0.02770 + 0.13579 *A										
4) I pentafluorobenzene -----ISTD-----										
5) dichlorodifluoromethane										
	0.722	0.644		0.811	0.760	0.846	0.815	0.779	0.768	8.86
6) chloromethane										
	0.635			0.810	0.676	0.755	0.815	0.784	0.746	9.96
7) vinyl chloride										
	0.791	0.697		0.909	0.825	0.922	0.925	0.854	0.846	9.84
8) bromomethane										
	0.583	0.501		0.650	0.562	0.616	0.641	0.602	0.594	8.61
9) chloroethane										
	0.466			0.508	0.448	0.494	0.516	0.481	0.485	5.31
10) ethyl ether										
	0.422			0.366	0.423	0.467	0.498	0.484	0.443	11.09
11) acetonitrile										
	0.025				0.042	0.073	0.073	0.073	0.057	39.18
---- Linear regression ---- Coefficient = 0.9979										
Response Ratio = -0.01980 + 0.07592 *A										
12) trichlorofluoromethane										
	1.192	1.061		1.351	1.159	1.293	1.302	1.207	1.223	8.11
13) freon-113										
	0.706			0.777	0.693	0.765	0.780	0.730	0.742	5.06
14) acrolein										
	0.018				0.021	0.025	0.026	0.028	0.024	16.58
---- Linear regression ---- Coefficient = 0.9993										
Response Ratio = -0.03308 + 0.02873 *A										
15) 1,1-dichloroethene										
	0.610	0.522		0.673	0.591	0.658	0.690	0.664	0.630	9.41
16) acetone										
	0.127			0.125	0.124	0.151	0.150	0.163	0.140	12.09
17) Methyl Acetate										
	0.365			0.298	0.367	0.418	0.428	0.430	0.385	13.39
18) methylene chloride										
	0.811	1.585		1.112	0.715	0.774	0.789	0.746	0.933	33.91

5.8.4
5

Initial Calibration Summary

Page 5 of 6

Job Number: MC8297
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSM1537-ICC1537
Lab FileID: M46676.D

78)	trans-1,4-dichloro-2-butene	0.231	0.183	0.234	0.275	0.278	0.277	0.246	15.40
		---- Linear regression ---- Coefficient = 0.9997							
		Response Ratio = -0.01986 + 0.28023 *A							
79)	I 1,4-dichlorobenzene-d	-----ISTD-----							
80)	isopropylbenzene	2.562	2.291	2.688	3.111	3.360	3.031	2.840	13.93
81)	bromofluorobenzene (s)	0.796	0.717	0.956	0.874	0.685	0.726	0.792	13.23
82)	bromobenzene	0.846	0.861	0.830	0.954	1.040	0.973	0.917	9.19
83)	1,1,2,2-tetrachloroethane	0.762 0.628	0.829	0.730	0.806	0.825	0.786	0.767	9.19
84)	1,2,3-trichloropropane	0.800	0.797	0.779	0.898	0.942	0.916	0.855	8.30
85)	n-propylbenzene	3.477	3.104	3.572	4.083	4.394	3.965	3.766	12.41
86)	2-chlorotoluene	2.104	2.088	2.152	2.430	2.624	2.389	2.298	9.43
87)	4-chlorotoluene	2.092	2.064	2.145	2.389	2.569	2.354	2.269	8.82
88)	1,3,5-trimethylbenzene	2.647	2.496	2.737	3.129	3.353	3.067	2.905	11.30
89)	tert-butylbenzene	1.425	1.292	1.453	1.701	1.875	1.697	1.574	13.86
90)	1,2,4-trimethylbenzene	2.672	2.401	2.725	3.099	3.347	3.090	2.889	12.05
91)	sec-butylbenzene	3.492	3.399	3.620	4.149	4.450	4.011	3.854	10.76
92)	1,3-dichlorobenzene	1.686 1.534	1.797	1.659	1.843	1.974	1.838	1.761	8.25
93)	p-isopropyltoluene	2.976	3.121	2.983	3.397	3.657	3.368	3.250	8.30
94)	1,4-dichlorobenzene	1.764 1.697	1.976	1.708	1.881	2.020	1.898	1.849	6.93
95)	1,2-dichlorobenzene	1.642 1.322	1.682	1.612	1.816	1.953	1.834	1.695	12.04
96)	n-butylbenzene	2.820	2.666	2.983	3.331	3.536	3.191	3.088	10.55
97)	1,2-dibromo-3-chloropropane	0.155	0.187	0.155	0.169	0.176	0.173	0.169	7.44
98)	1,3,5-trichlorobenzene	1.458	1.598	1.474	1.719	1.845	1.687	1.630	9.20
99)	1,2,4-trichlorobenzene	1.368	1.444	1.384	1.610	1.697	1.545	1.508	8.72
100)	hexachlorobutadiene	0.850	0.994	0.851	0.965	1.045	0.925	0.938	8.37
101)	naphthalene	2.852	2.744	2.859	3.398	3.516	3.240	3.102	10.47
102)	1,2,3-trichlorobenzene	1.293	1.428	1.302	1.520	1.589	1.443	1.429	8.20
103)	2-methylnaphthalene	1.469 1.180	1.145	1.607	2.017	2.127	2.029	1.653	24.88
		---- Linear regression ---- Coefficient = 0.9986							
		Response Ratio = -0.06983 + 2.06600 *A							

5.8.4
5

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46674.D
 Acq On : 29 Feb 2012 12:06 pm
 Operator : emilyk
 Sample : ic1537-5
 Misc : MS25151,MSM1537,5,,,5,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 29 16:17:24 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Wed Feb 29 16:16:55 2012
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) tert butyl alcohol-d9	6.861	65	31619	500.00	ug/L	0.00
4) pentafluorobenzene	9.367	168	63093	50.00	ug/L	0.00
42) 1,4-difluorobenzene	10.248	114	99461	50.00	ug/L	0.00
65) chlorobenzene-d5	13.529	82	52996	50.00	ug/L	0.00
79) 1,4-dichlorobenzene-d4	16.092	152	66206	50.00	ug/L	0.00
System Monitoring Compounds						
39) dibromofluoromethane (s)	9.000	113	4892	5.85	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	11.70%		
59) toluene-d8 (s)	12.065	98	13844	4.30	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	8.60%		
81) bromofluorobenzene (s)	14.759	95	5694	5.43	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	10.86%		
Target Compounds						
						Qvalue
2) tertiary butyl alcohol	6.942	59	2946	37.62	ug/L	77
3) Ethanol	5.666	45	1521	181.88	ug/L #	100
5) dichlorodifluoromethane	4.450	85	5117	5.21	ug/L	93
6) chloromethane	4.669	50	5109	5.17	ug/L	98
7) vinyl chloride	4.948	62	5736	5.33	ug/L	98
8) bromomethane ...	5.472	96	4100	5.39	ug/L	84
9) chloroethane	5.655	64	3202	5.27	ug/L	94
10) ethyl ether	6.585	59	2307	3.78	ug/L	95
12) trichlorofluoromethane	6.352	101	8524	5.60	ug/L	80
13) freon-113	7.165	101	4905	5.32	ug/L	92
15) 1,1-dichloroethene	6.949	96	4248	5.07	ug/L	93
16) acetone	6.490	43	791	3.83	ug/L #	39
17) Methyl Acetate	7.154	43	1881	3.47	ug/L	90
18) methylene chloride	7.105	84	7019	7.45	ug/L	94
19) methyl tert butyl ether	7.918	73	9607	4.07	ug/L	97
21) allyl chloride	7.200	41	5843	5.06	ug/L	93
22) trans-1,2-dichloroethene	7.826	96	4536	4.85	ug/L	92
23) iodomethane	7.013	142	8568	4.86	ug/L	88
24) carbon disulfide	7.398	76	15311	5.10	ug/L	99
26) vinyl acetate	8.197	43	4338	2.74	ug/L	70
27) chloroprene	8.452	53	5363	4.20	ug/L	86
28) di-isopropyl ether	8.501	45	11530	4.66	ug/L	89
29) methacrylonitrile	8.625	41	1505	3.44	ug/L #	60
30) 2-butanone	8.473	57	5028	4.55	ug/L	92
31) 1,1-dichloroethane	8.081	63	8102	5.33	ug/L	89
32) tert-butyl ethyl ether	8.904	59	10583	4.35	ug/L	88
33) isobutyl alcohol	8.894	43	2162	24.22	ug/L #	63
34) 2,2-dichloropropane	8.968	77	7402	5.32	ug/L	83
35) cis-1,2-dichloroethene	8.667	96	5011	5.08	ug/L	92
36) ethyl acetate	8.894	43	2408	5.39	ug/L	100
37) bromochloromethane	8.837	128	2467	4.92	ug/L	87
38) chloroform	8.876	83	8953	5.67	ug/L	97
40) Tetrahydrofuran	9.208	42	724	3.24	ug/L #	34
41) 1,1,1-trichloroethane	9.650	97	7811	5.31	ug/L	86

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46674.D
 Acq On : 29 Feb 2012 12:06 pm
 Operator : emilyk
 Sample : ic1537-5
 Misc : MS25151,MSM1537,5,,,5,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 29 16:17:24 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Wed Feb 29 16:16:55 2012
 Response via : Initial Calibration

6.6.13

6

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Cyclohexane	9.930	56	6164	4.17	ug/L	90
44) carbon tetrachloride	10.011	117	7281	5.21	ug/L	97
45) 1,1-dichloropropene	9.824	75	5454	4.33	ug/L	90
46) benzene	10.046	78	18112	5.20	ug/L	88
47) 1,2-dichloroethane	9.544	62	5904	5.08	ug/L	98
48) tert-amyl methyl ether	10.166	73	9493	3.93	ug/L	89
49) heptane	10.527	43	4825	4.01	ug/L	91
50) trichloroethene	10.676	95	4805	4.91	ug/L	88
51) 1,2-dichloropropane	10.640	63	4140	4.81	ug/L	93
52) dibromomethane	10.612	93	2655	4.79	ug/L	90
53) bromodichloromethane	10.732	83	5756	4.63	ug/L	98
54) Methylcyclohexane	11.195	83	7129	4.14	ug/L	91
55) 2-chloroethyl vinyl ether	11.107	63	1154	2.27	ug/L #	44
56) methyl methacrylate	10.820	69	1464	2.61	ug/L	76
58) cis-1,3-dichloropropene	11.354	75	5699	3.82	ug/L	97
60) 4-methyl-2-pentanone	11.443	43	2343	2.99	ug/L #	77
61) toluene	12.139	92	9991	4.32	ug/L	98
62) trans-1,3-dichloropropene	11.771	75	4294	3.38	ug/L	92
63) 1,1,2-trichloroethane	11.948	83	2899	4.38	ug/L	89
64) ethyl methacrylate	12.146	69	3455	3.22	ug/L	88
66) tetrachloroethene	12.878	166	5801	5.06	ug/L	89
67) 1,3-dichloropropane	12.189	76	5823	4.74	ug/L	90
68) dibromochloromethane	12.475	129	4399	4.52	ug/L	88
69) 1,2-dibromoethane	12.737	107	3625	4.46	ug/L	94
70) 2-hexanone	12.302	43	1439	2.75	ug/L #	59
71) chlorobenzene	13.560	112	13335	5.14	ug/L	93
72) 1,1,1,2-tetrachloroethane	13.479	131	4897	4.81	ug/L	98
73) ethylbenzene	13.737	91	18624	4.28	ug/L	99
74) m,p-xylene	13.921	106	14214	8.35	ug/L #	74
75) o-xylene	14.331	106	7645	4.47	ug/L	98
76) styrene	14.260	104	9951	3.54	ug/L	82
77) bromoform	14.087	173	2895	3.83	ug/L	99
78) trans-1,4-dichloro-2-b...	14.487	53	969	3.30	ug/L #	65
80) isopropylbenzene	14.699	105	15166	3.78	ug/L	95
82) bromobenzene	14.989	156	5703	4.42	ug/L	94
83) 1,1,2,2-tetrachloroethane	14.345	83	5490	5.27	ug/L	86
84) 1,2,3-trichloropropane	14.490	75	5279	4.35	ug/L	84
85) n-propylbenzene	15.144	91	20551	3.91	ug/L	96
86) 2-chlorotoluene	15.268	91	13824	4.37	ug/L	94
87) 4-chlorotoluene	15.342	91	13662	4.38	ug/L	80
88) 1,3,5-trimethylbenzene	15.420	105	16525	4.07	ug/L	94
89) tert-butylbenzene	15.727	91	8555	3.81	ug/L #	73
90) 1,2,4-trimethylbenzene	15.830	105	15896	3.89	ug/L	99
91) sec-butylbenzene	15.950	105	22504	4.24	ug/L	97
92) 1,3-dichlorobenzene	16.056	146	11894	4.89	ug/L	90
93) p-isopropyltoluene	16.116	119	20666	4.63	ug/L	97
94) 1,4-dichlorobenzene	16.123	146	13081	5.21	ug/L	98
95) 1,2-dichlorobenzene	16.491	146	11135	4.59	ug/L	92
96) n-butylbenzene	16.537	91	17652	4.18	ug/L	97
97) 1,2-dibromo-3-chloropr...	16.972	75	1240	5.42	ug/L	77

Continuing Calibration Summary

Page 1 of 4

Job Number: MC8297
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSM1538-CC1537
 Lab FileID: M46684.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\M46684.D
 Acq On : 1 Mar 2012 10:48 am
 Sample : cc1537-50
 Misc : MS25187,MSM1538,5,,,5,1
 MS Integration Params: RTEINT.P

Vial: 2
 Operator: emilyk
 Inst : GCMS M
 Multiplr: 1.00

Method : C:\msdchem\1\methods\M022912W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Thu Mar 01 11:32:45 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	114	0.00	6.85
2 M	tertiary butyl alcohol	1.127	1.086	3.6	111	0.00	6.95
----- Amount Calc. %Drift -----							
3	Ethanol	5000.000	3052.753	38.9%	82	0.00	5.66
----- AvgRF CCRF %Dev -----							
4 I	pentafluorobenzene	1.000	1.000	0.0	109	0.00	9.36
5 M	dichlorodifluoromethane	0.768	0.773	-0.7	111	0.00	4.44
6 P	chloromethane	0.746	0.771	-3.4	125	-0.01	4.67
7 c	vinyl chloride	0.846	0.862	-1.9	114	0.00	4.96
8 M	bromomethane	0.594	0.606	-2.0	118	0.00	5.48
9 M	chloroethane	0.485	0.480	1.0	117	0.00	5.66
10 M	ethyl ether	0.443	0.475	-7.2	123	0.00	6.58
----- Amount Calc. %Drift -----							
11 M	acetonitrile	50.000	43.488	13.0	122	0.05	6.38
----- AvgRF CCRF %Dev -----							
12 M	trichlorofluoromethane	1.223	1.183	3.3	112	0.00	6.36
13 M	freon-113	0.742	0.717	3.4	113	0.00	7.16
----- Amount Calc. %Drift -----							
14 M	acrolein	250.000	258.828	-3.5	118	0.01	6.33
----- AvgRF CCRF %Dev -----							
15 c	1,1-dichloroethene	0.630	0.625	0.8	116	0.00	6.95
16 M	acetone	0.140	0.194	-38.6%	172	0.00	6.47
17 M	Methyl Acetate	0.385	0.423	-9.9	126	0.01	7.14
----- Amount Calc. %Drift -----							
18 M	methylene chloride	50.000	55.211	-10.4	132	0.00	7.11
19 M	methyl tert butyl ether	50.000	49.248	1.5	120	0.00	7.91
----- AvgRF CCRF %Dev -----							
20 M	acrylonitrile	0.036	0.036	0.0	121	0.01	7.01
21 M	allyl chloride	0.906	0.925	-2.1	119	0.00	7.20
22 M	trans-1,2-dichloroethene	0.707	0.714	-1.0	118	0.00	7.82
23 M	iodomethane	1.362	1.352	0.7	119	0.00	7.01
24 M	carbon disulfide	2.340	2.270	3.0	115	0.00	7.40

Continuing Calibration Summary

Job Number: MC8297
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSM1538-CC1537
Lab FileID: M46684.D

Page 3 of 4

63 M	1,1,2-trichloroethane	AvgRF 0.296	CCRF 0.310	%Dev -4.7	121	0.00	11.94
64 M	ethyl methacrylate	Amount 50.000	Calc. 46.115	%Drift 7.8	113	0.00	12.14
65 I	chlorobenzene-d5	AvgRF 1.000	CCRF 1.000	%Dev 0.0	109	0.00	13.53
66 M	tetrachloroethene	1.045	0.979	6.3	116	0.00	12.88
67 M	1,3-dichloropropane	1.120	1.105	1.3	117	0.00	12.19
68 M	dibromochloromethane	0.825	0.810	1.8	117	0.00	12.48
69 M	1,2-dibromoethane	Amount 50.000	Calc. 46.281	%Drift 7.4	116	0.00	12.73
70 M	2-hexanone	50.000	47.764	4.5	119	0.00	12.30
71 P	chlorobenzene	AvgRF 2.374	CCRF 2.308	%Dev 2.8	117	0.00	13.56
72 M	1,1,1,2-tetrachloroethane	0.936	0.910	2.8	117	0.00	13.48
73 c	ethylbenzene	Amount 50.000	Calc. 46.628	%Drift 6.7	117	0.00	13.73
74 M	m,p-xylene	100.000	92.830	7.2	115	0.00	13.92
75 M	o-xylene	50.000	47.088	5.8	119	0.00	14.33
76 M	styrene	50.000	47.193	5.6	118	0.00	14.26
77 P	bromoform	50.000	46.578	6.8	121	0.00	14.09
78 M	trans-1,4-dichloro-2-bute	50.000	49.071	1.9	119	0.00	14.48
79 I	1,4-dichlorobenzene-d4	AvgRF 1.000	CCRF 1.000	%Dev 0.0	109	0.00	16.10
80 M	isopropylbenzene	2.840	2.842	-0.1	115	0.00	14.70
81 S	bromofluorobenzene (s)	Amount 60.000	Calc. 42.935	%Drift 28.4%	71	0.00	14.76
82 M	bromobenzene	AvgRF 0.917	CCRF 0.900	%Dev 1.9	118	0.00	14.99
83 P	1,1,2,2-tetrachloroethane	0.767	0.775	-1.0	116	0.00	14.34
84 M	1,2,3-trichloropropane	0.855	0.847	0.9	119	0.00	14.49
85 M	n-propylbenzene	3.766	3.733	0.9	114	0.00	15.14
86 M	2-chlorotoluene	2.298	2.283	0.7	116	0.00	15.26
87 M	4-chlorotoluene	2.269	2.258	0.5	115	0.00	15.34
88 M	1,3,5-trimethylbenzene	2.905	2.874	1.1	115	0.00	15.42
89 M	tert-butylbenzene	1.574	1.527	3.0	115	0.00	15.73
90 M	1,2,4-trimethylbenzene	2.889	2.871	0.6	115	0.00	15.83
91 M	sec-butylbenzene	3.854	3.788	1.7	114	0.00	15.95
92 M	1,3-dichlorobenzene	1.761	1.747	0.8	115	0.00	16.06
93 M	p-isopropyltoluene	3.250	3.076	5.4	112	0.00	16.12
94 M	1,4-dichlorobenzene	1.849	1.800	2.7	115	0.00	16.12
95 M	1,2-dichlorobenzene	1.695	1.728	-1.9	117	0.00	16.49
96 M	n-butylbenzene	3.088	3.033	1.8	111	0.00	16.54
97 M	1,2-dibromo-3-chloropropa	0.169	0.158	6.5	112	0.00	16.97
98	1,3,5-trichlorobenzene	1.630	1.548	5.0	115	0.00	17.78
99 M	1,2,4-trichlorobenzene	1.508	1.475	2.2	116	0.00	18.33
100 M	hexachlorobutadiene	0.938	0.877	6.5	112	0.00	18.62
101 M	naphthalene	3.102	3.080	0.7	117	0.00	18.61
102 M	1,2,3-trichlorobenzene	1.429	1.398	2.2	117	0.00	18.81

5.8.5
5

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46684.D
 Acq On : 1 Mar 2012 10:48 am
 Operator : emilyk
 Sample : cc1537-50
 Misc : MS25187,MSM1538,5,,,5,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 01 11:13:10 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Thu Mar 01 11:13:01 2012
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) tert butyl alcohol-d9	6.851	65	36162	500.00	ug/L	0.00
4) pentafluorobenzene	9.361	168	73857	50.00	ug/L	0.00
42) 1,4-difluorobenzene	10.248	114	116017	50.00	ug/L	0.00
65) chlorobenzene-d5	13.529	82	65628	50.00	ug/L	0.00
79) 1,4-dichlorobenzene-d4	16.095	152	80043	50.00	ug/L	0.00
System Monitoring Compounds						
39) dibromofluoromethane (s)	8.996	113	40634	43.65	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	87.30%
59) toluene-d8 (s)	12.062	98	147409	41.61	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	83.22%
81) bromofluorobenzene (s)	14.755	95	59408	42.94	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	85.88%
Target Compounds						
					Qvalue	
2) tertiary butyl alcohol	6.949	59	39260	481.84	ug/L	97
3) Ethanol	5.659	45	30983	3052.75	ug/L #	100
5) dichlorodifluoromethane	4.439	85	57079	50.30	ug/L	92
6) chloromethane	4.673	50	56915	51.67	ug/L	99
7) vinyl chloride	4.959	62	63630	50.92	ug/L	95
8) bromomethane ...	5.479	96	44758	51.04	ug/L	95
9) chloroethane	5.656	64	35476	49.48	ug/L	93
10) ethyl ether	6.582	59	35073	53.59	ug/L	95
11) acetonitrile	6.380	41	3415	43.49	ug/L	94
12) trichlorofluoromethane	6.363	101	87396	48.36	ug/L	97
13) freon-113	7.162	101	52983	48.33	ug/L	95
14) acrolein	6.331	56	8541	258.83	ug/L	100
15) 1,1-dichloroethene	6.949	96	46150	49.61	ug/L	85
16) acetone	6.465	43	14358	69.31	ug/L	84
17) Methyl Acetate	7.137	43	31231	54.98	ug/L	96
18) methylene chloride	7.105	84	63720	55.21	ug/L	97
19) methyl tert butyl ether	7.915	73	129199	49.25	ug/L	96
20) acrylonitrile	7.006	53	13340	253.27	ug/L	89
21) allyl chloride	7.197	41	68331	51.06	ug/L	88
22) trans-1,2-dichloroethene	7.819	96	52725	50.49	ug/L	97
23) iodomethane	7.013	142	99876	49.64	ug/L	92
24) carbon disulfide	7.398	76	167658	48.51	ug/L	98
25) propionitrile	8.098	54	5009	59.37	ug/L	100
26) vinyl acetate	8.180	43	77767	47.74	ug/L	94
27) chloroprene	8.456	53	70732	49.53	ug/L	87
28) di-isopropyl ether	8.491	45	148755	50.46	ug/L	98
29) methacrylonitrile	8.611	41	23311	51.76	ug/L	95
30) 2-butanone	8.473	57	63801	50.41	ug/L	92
31) 1,1-dichloroethane	8.077	63	87594	50.63	ug/L	96
32) tert-butyl ethyl ether	8.897	59	138794	49.14	ug/L	98
33) isobutyl alcohol	8.905	43	25996	254.09	ug/L	85
34) 2,2-dichloropropane	8.965	77	79863	48.32	ug/L	93
35) cis-1,2-dichloroethene	8.668	96	57101	51.77	ug/L	95
36) ethyl acetate	8.905	43	25996	50.92	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46684.D
 Acq On : 1 Mar 2012 10:48 am
 Operator : emilyk
 Sample : cc1537-50
 Misc : MS25187,MSM1538,5,,,5,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 01 11:13:10 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Thu Mar 01 11:13:01 2012
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) bromochloromethane	8.837	128	29211	50.70	ug/L	98
38) chloroform	8.876	83	93484	50.36	ug/L	97
40) Tetrahydrofuran	9.212	42	10874	52.63	ug/L	96
41) 1,1,1-trichloroethane	9.647	97	82646	49.13	ug/L	97
43) Cyclohexane	9.933	56	80173	49.27	ug/L	99
44) carbon tetrachloride	10.015	117	76749	48.60	ug/L	95
45) 1,1-dichloropropene	9.820	75	67614	48.72	ug/L	97
46) benzene	10.046	78	203539	48.94	ug/L	99
47) 1,2-dichloroethane	9.541	62	65577	49.91	ug/L	94
48) tert-amyl methyl ether	10.167	73	128006	50.83	ug/L	98
49) heptane	10.527	43	65721	50.60	ug/L	95
50) trichloroethene	10.676	95	54685	50.06	ug/L	98
51) 1,2-dichloropropane	10.640	63	49415	52.79	ug/L	97
52) dibromomethane	10.616	93	31014	49.94	ug/L	95
53) bromodichloromethane	10.729	83	69016	51.17	ug/L	98
54) Methylcyclohexane	11.199	83	93693	49.54	ug/L	99
55) 2-chloroethyl vinyl ether	11.100	63	23015	48.42	ug/L	96
56) methyl methacrylate	10.817	69	27308	48.91	ug/L	90
57) 1,4-dioxane	10.817	88	1426	208.41	ug/L	83
58) cis-1,3-dichloropropene	11.351	75	78208	47.51	ug/L	98
60) 4-methyl-2-pentanone	11.436	43	37739	48.09	ug/L	97
61) toluene	12.136	92	130574	50.52	ug/L	100
62) trans-1,3-dichloropropene	11.772	75	63290	46.83	ug/L	99
63) 1,1,2-trichloroethane	11.945	83	35950	52.37	ug/L	97
64) ethyl methacrylate	12.143	69	53030	46.11	ug/L	98
66) tetrachloroethene	12.878	166	64270	46.84	ug/L	97
67) 1,3-dichloropropane	12.185	76	72511	49.32	ug/L	100
68) dibromochloromethane	12.475	129	53190	49.10	ug/L	94
69) 1,2-dibromoethane	12.730	107	43953	46.28	ug/L	100
70) 2-hexanone	12.298	43	25827	47.76	ug/L	98
71) chlorobenzene	13.564	112	151471	48.61	ug/L	98
72) 1,1,1,2-tetrachloroethane	13.483	131	59711	48.60	ug/L	98
73) ethylbenzene	13.734	91	252200	46.63	ug/L	96
74) m,p-xylene	13.918	106	196654	92.83	ug/L	89
75) o-xylene	14.335	106	100003	47.09	ug/L	97
76) styrene	14.261	104	157214	47.19	ug/L	93
77) bromoform	14.091	173	39445	46.58	ug/L	93
78) trans-1,4-dichloro-2-b...	14.480	53	16746	49.07	ug/L #	66
80) isopropylbenzene	14.699	105	227469	50.02	ug/L	98
82) bromobenzene	14.992	156	72068	49.07	ug/L	96
83) 1,1,2,2-tetrachloroethane	14.338	83	62044	50.56	ug/L	98
84) 1,2,3-trichloropropane	14.487	75	67809	49.52	ug/L	95
85) n-propylbenzene	15.144	91	298803	49.57	ug/L	95
86) 2-chlorotoluene	15.265	91	182774	49.69	ug/L	98
87) 4-chlorotoluene	15.342	91	180774	49.77	ug/L	98
88) 1,3,5-trimethylbenzene	15.420	105	230036	49.46	ug/L	95
89) tert-butylbenzene	15.728	91	122220	48.51	ug/L	89
90) 1,2,4-trimethylbenzene	15.830	105	229819	49.69	ug/L	94
91) sec-butylbenzene	15.950	105	303221	49.15	ug/L	100
92) 1,3-dichlorobenzene	16.056	146	139838	49.59	ug/L	99

Initial Calibration Summary

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Job Number: MC8297
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2251-ICC2251
Lab FileID: N60252.D

Response Factor Report MAMSN

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Wed Feb 15 16:23:00 2012
Response via : Initial Calibration

Calibration Files

1 =N60250.D 2 =N60249.D 5 =N60248.D 50 =N60252.D
100 =N60253.D 200 =N60254.D 400 =N60255.D 0.5 =N60251.D
25 =N60247.D =

Compound	1	2	5	50	100	200	400	0.5	25	Avg	%RSD
1) tert butyl alcohol-d9 -----ISTD-----											
2) tertiary butyl alcohol	0.985	0.844	0.875	1.123	1.099	1.122	1.087		1.013	1.019	10.82
3) Ethanol	0.160	0.162	0.155	0.191	0.176	0.189	0.178		0.176	0.173	7.62
4) I pentafluorobenzene -----ISTD-----											
5) dichlorodifluoromethane	0.461	0.353	0.416	0.372	0.357	0.351	0.320		0.452	0.385	13.41
6) chloromethane	0.571	0.506	0.505	0.462	0.465	0.497	0.487		0.452	0.493	7.59
7) vinyl chloride	0.792	0.604	0.619	0.581	0.524	0.509			0.623	0.607	15.30
8) bromomethane	0.506	0.472	0.435	0.374	0.392	0.402	0.386		0.398	0.421	11.09
9) chloroethane	0.503	0.412	0.460	0.427	0.421	0.404	0.362		0.449	0.430	9.74
10) ethyl ether	0.585	0.433	0.536	0.541	0.553	0.542	0.518		0.540	0.531	8.25
11) acetonitrile											
	0.377	0.133	0.069	0.070	0.262				0.213	0.187	64.50
----- Quadratic regression -----											
Response Ratio = 0.14318 + -0.13111 *A + 0.04663 *A^2											
12) trichlorofluoromethane	1.013	0.780	0.906	0.858	0.856	0.849	0.812		0.929	0.875	8.31
13) freon-113	0.596	0.493	0.535	0.510	0.506	0.501	0.489		0.548	0.522	6.90
14) acrolein	0.072	0.056	0.066	0.066	0.070	0.071	0.068		0.065	0.067	7.49
15) 1,1-dichloroethene	0.640	0.538	0.548	0.492	0.508	0.506	0.510		0.536	0.535	8.75
16) acetone	0.221	0.251	0.207	0.200	0.207	0.268			0.202	0.222	11.99
17) Methyl Acetate	1.136	0.833	1.055	1.071	0.991	0.942	0.903		0.992	0.991	9.84
18) methylene chloride	0.812	0.671	0.711	0.666	0.673	0.667	0.664		0.678	0.693	7.31
19) methyl tert butyl ether	1.393	1.138	1.323	1.541	1.707	1.767	1.587		1.408	1.483	14.04
20) acrylonitrile											
	0.046	0.052	0.051	0.051	0.051				0.049	0.050	4.47
21) allyl chloride	0.707	0.594	0.728	0.821	0.821	0.770	0.709		0.811	0.745	10.43

Initial Calibration Summary

Page 4 of 5

Job Number: MC8297
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2251-ICC2251
 Lab FileID: N60252.D

----- Linear regression ----- Coefficient = 0.9987 Response Ratio = -0.05384 + 0.59995 *A											
70)	1,2-dibromoethane	0.583	0.492	0.575	0.541	0.566	0.572	0.601	0.540	0.559	6.02
71)	2-hexanone			0.384	0.431	0.446	0.464	0.478	0.377	0.430	9.67
72)	chlorobenzene	1.779	1.462	1.628	1.523	1.577	1.598	1.626	1.584	1.597	5.76
73)	1,1,1,2-tetrachloroethane	0.420	0.364	0.446	0.461	0.498	0.512	0.538	0.478	0.465	11.88
74)	ethylbenzene	3.118	2.637	3.018	2.826	2.975	3.036	3.006	3.144	2.995	5.21
75)	m,p-xylene	1.157	0.984	1.099	1.046	1.110	1.130	1.064	1.193	1.106	5.64
76)	o-xylene	1.064	0.926	1.070	1.017	1.076	1.091	1.046	0.928	1.068	6.10
77)	styrene			1.430	1.602	1.741	1.832	1.835	1.199	1.584	14.39
78)	bromoform	0.171	0.202	0.243	0.282	0.329	0.365	0.404	0.265	0.283	28.22
----- Linear regression ----- Coefficient = 0.9964 Response Ratio = -0.06393 + 0.40319 *A											
79)	trans-1,4-dichloro-2-butene	0.021	0.035	0.060	0.111	0.139	0.171	0.192	0.087	0.102	61.34
----- Linear regression ----- Coefficient = 0.9937 Response Ratio = -0.04396 + 0.19257 *A											
80)	I 1,4-dichlorobenzene-d	-----ISTD-----									
81)	isopropylbenzene	3.348	2.960	3.407	3.153	3.138	3.152	3.055	3.359	3.197	4.97
82)	bromofluorobenzene (s)			1.585	1.361	1.310	1.317	1.249	1.447	1.378	8.75
83)	bromobenzene	0.897	0.802	0.870	0.801	0.807	0.810	0.814	0.836	0.830	4.31
84)	1,1,2,2-tetrachloroethane	1.226	1.097	1.183	1.121	1.094	1.094	1.019	1.121	1.119	5.59
85)	1,2,3-trichloropropane	1.118	0.879	1.041	1.052	1.085	1.134	1.163	1.007	1.060	8.45
86)	n-propylbenzene	5.070	4.323	4.873	4.698	4.637	4.613	4.337	4.879	4.679	5.60
87)	2-chlorotoluene	3.193	2.788	3.091	2.799	2.764	2.768	2.635	2.941	2.872	6.53
88)	4-chlorotoluene	3.249	2.656	3.134	2.831	2.798	2.808	2.662	2.919	2.882	7.36
89)	1,3,5-trimethylbenzene	3.150	2.885	3.376	3.202	3.165	3.205	3.027	3.354	3.170	5.06
90)	tert-butylbenzene	2.160	1.806	2.114	1.936	1.899	1.902	1.751	2.043	1.951	7.37
91)	1,2,4-trimethylbenzene	3.433	2.853	3.218	3.182	3.187	3.240	3.041	3.283	3.180	5.40
92)	sec-butylbenzene	4.331	3.779	4.361	4.157	4.099	4.133	3.880	4.294	4.129	5.08
93)	1,3-dichlorobenzene	1.810	1.553	1.698	1.534	1.509	1.564	1.537	1.541	1.593	6.58
94)	p-isopropyltoluene	3.102	2.723	3.203	3.038	3.015	3.014	2.706	3.106	2.988	6.02
95)	1,4-dichlorobenzene										

5.8.6

5

Continuing Calibration Summary

Page 1 of 4

Job Number: MC8297
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2270-CC2251
 Lab FileID: N60736.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\N60736.D
 Acq On : 29 Feb 2012 2:08 pm
 Sample : CC2251-50
 Misc : MS25169,MSN2270,,,,5,1
 MS Integration Params: RTEINT.P

Vial: 17
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Wed Feb 15 16:23:00 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	99	-0.01	6.56
2	tertiary butyl alcohol	1.019	1.156	-13.4	102	-0.01	6.65
3 T	Ethanol	0.173	0.184	-6.4	95	0.00	5.42
4 I	pentafluorobenzene	1.000	1.000	0.0	100	0.00	9.02
5 M	dichlorodifluoromethane	0.385	0.604	-56.9	163	0.00	4.24
6 P	chloromethane	0.493	0.664	-34.7	144	0.00	4.49
7 c	vinyl chloride	0.607	0.615	-1.3	106	0.00	4.74
8 M	bromomethane	0.421	0.379	10.0	101	0.00	5.25
9 M	chloroethane	0.430	0.400	7.0	94	0.00	5.42
10 M	ethyl ether	0.531	0.513	3.4	95	0.00	6.31
----- True Calc. % Drift -----							
11 M	acetonitrile	50.000	167.550	-235.1	171	0.00	5.97
----- AvgRF CCRF % Dev -----							
12 M	trichlorofluoromethane	0.875	0.889	-1.6	104	0.00	6.08
13 M	freon-113	0.522	0.560	-7.3	110	-0.01	6.85
14 M	acrolein	0.067	0.057	14.9	86	0.00	6.07
15 c	1,1-dichloroethene	0.535	0.532	0.6	108	0.00	6.66
16 M	acetone	0.222	0.442	-99.1	214	0.00	6.20
17 M	Methyl Acetate	0.991	1.032	-4.1	96	-0.01	6.84
18 M	methylene chloride	0.693	0.657	5.2	99	-0.01	6.81
19 M	methyl tert butyl ether	1.483	1.381	6.9	90	0.00	7.60
20 M	acrylonitrile	0.050	0.050	0.0	96	0.00	6.72
21 M	allyl chloride	0.745	0.789	-5.9	96	0.00	6.91
22 M	trans-1,2-dichloroethene	0.608	0.581	4.4	98	0.00	7.51
----- True Calc. % Drift -----							
23 M	iodomethane	50.000	44.941	10.1	115	0.00	6.72
----- AvgRF CCRF % Dev -----							
24 M	carbon disulfide	1.985	1.820	8.3	92	-0.01	7.09
----- True Calc. % Drift -----							
25 M	propionitrile	50.000	87.191	-74.4	154	0.00	6.64
----- AvgRF CCRF % Dev -----							
26 M	vinyl acetate	0.993	1.032	-3.9	96	-0.01	6.84
27 M	chloroprene	0.891	0.918	-3.0	94	-0.01	8.13
28 M	di-isopropyl ether	2.168	2.271	-4.8	99	0.00	8.16
29 M	methacrylonitrile	0.440	0.470	-6.8	103	0.00	8.28

5.8.8

5

Continuing Calibration Summary

Job Number: MC8297
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2270-CC2251
Lab FileID: N60736.D
Page 3 of 4

65 M	ethyl methacrylate	0.451	0.451	0.0	99	0.00	11.78
66 I	chlorobenzene-d5	1.000	1.000	0.0	98	-0.01	13.15
67 M	tetrachloroethene	0.534	0.539	-0.9	105	-0.01	12.51
68 M	1,3-dichloropropane	1.054	1.066	-1.1	101	0.00	11.81
----- True Calc. % Drift -----							
69 M	dibromochloromethane	50.000	50.931	-1.9	110	-0.01	12.10
----- AvgRF CCRF % Dev -----							
70 M	1,2-dibromoethane	0.559	0.554	0.9	100	0.00	12.36
71 M	2-hexanone	0.430	0.604	-40.5	137	0.00	11.93
72 P	chlorobenzene	1.597	1.622	-1.6	104	-0.01	13.19
73 M	1,1,1,2-tetrachloroethane	0.465	0.511	-9.9	108	-0.01	13.10
74 C	ethylbenzene	2.973	2.976	-0.1	103	-0.01	13.36
75 M	m,p-xylene	1.099	1.117	-1.6	104	-0.01	13.55
76 M	o-xylene	1.032	1.097	-6.3	105	-0.01	13.96
77 M	styrene	1.603	1.679	-4.7	102	-0.01	13.89
----- True Calc. % Drift -----							
78 P	bromoform	50.000	48.321	3.4	113	-0.01	13.71
79 M	trans-1,4-dichloro-2-bute	50.000	36.915	26.2	86	0.00	14.10
----- AvgRF CCRF % Dev -----							
80 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	100	-0.01	15.71
81 M	isopropylbenzene	3.197	3.855	-20.6	123	-0.01	14.32
82 S	bromofluorobenzene (s)	1.378	1.310	4.9	97	-0.01	14.38
83 M	bromobenzene	0.830	0.840	-1.2	105	0.00	14.61
84 P	1,1,2,2-tetrachloroethane	1.119	1.166	-4.2	104	-0.01	13.95
85 M	1,2,3-trichloropropane	1.060	1.059	0.1	101	-0.01	14.10
86 M	n-propylbenzene	4.679	4.859	-3.8	104	-0.01	14.76
87 M	2-chlorotoluene	2.872	2.881	-0.3	103	-0.01	14.89
88 M	4-chlorotoluene	2.882	2.998	-4.0	106	-0.01	14.96
89 M	1,3,5-trimethylbenzene	3.170	3.261	-2.9	102	-0.01	15.04
90 M	tert-butylbenzene	1.951	2.025	-3.8	105	-0.01	15.35
91 M	1,2,4-trimethylbenzene	3.180	3.250	-2.2	103	-0.01	15.45
92 M	sec-butylbenzene	4.129	4.468	-8.2	108	-0.01	15.57
93 M	1,3-dichlorobenzene	1.593	1.619	-1.6	106	-0.01	15.67
94 M	p-isopropyltoluene	2.988	3.316	-11.0	110	-0.01	15.74
95 M	1,4-dichlorobenzene	1.657	1.717	-3.6	109	-0.01	15.74
96 M	1,2-dichlorobenzene	1.491	1.563	-4.8	107	-0.01	16.11
97 M	n-butylbenzene	3.204	3.501	-9.3	103	-0.01	16.16
98 M	1,2-dibromo-3-chloropropa	0.183	0.188	-2.7	101	-0.01	16.58
----- True Calc. % Drift -----							
99 M	1,2,4-trichlorobenzene	50.000	48.616	2.8	109	-0.01	17.98
----- AvgRF CCRF % Dev -----							
100 M	1,3,5-trichlorobenzene	1.074	1.121	-4.4	108	-0.01	17.41
101 M	hexachlorobutadiene	0.506	0.545	-7.7	117	-0.01	18.28
----- True Calc. % Drift -----							
102 M	naphthalene	50.000	45.258	9.5	105	-0.01	18.27
103 M	1,2,3-trichlorobenzene	50.000	47.177	5.6	107	-0.01	18.49
104 M	2-methylnaphthalene	25.000	35.953	-43.8	227	-0.01	19.79

(8.0 %) 8 of 100 compounds'%D > 30

Initial Calibration Summary

Page 1 of 5

Job Number: MC8297
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSV235-ICC235
Lab FileID: V5254.D

Response Factor Report GCMS V

Method : C:\msdchem\1\METHODS\020912s.m (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Fri Feb 10 09:17:30 2012
Response via : Initial Calibration

Calibration Files

20 =V5253.D 2 =V5250.D 5 =V5251.D 50 =V5254.D
100 =V5255.D 200 =V5256.D 400 =V5257.D 0.5 =V5249.D
10 =V5252.D =

Compound	20	2	5	50	100	200	400	0.5	10	Avg	%RSD
1) tert butyl alcohol-d9 -----ISTD-----											
2) tertiary butyl alcohol	1.274	1.337	1.335	1.355	1.410	1.419	1.445		1.271	1.356	4.79
3) Ethanol	0.075	0.092	0.084	0.091	0.085	0.087	0.093		0.100	0.088	8.53
4) I pentafluorobenzene -----ISTD-----											
5) dichlorodifluoromethane	0.642	0.671	0.695	0.716	0.703	0.662	0.649		0.649	0.673	4.13
6) chloromethane	0.522	0.551	0.562	0.552	0.549	0.534	0.514		0.537	0.540	3.00
7) vinyl chloride	0.606	0.650	0.624	0.646	0.651	0.638	0.620		0.601	0.629	3.11
8) bromomethane	0.328	0.429	0.423	0.443	0.442	0.420	0.401		0.372	0.407	9.70
9) chloroethane	0.291	0.378	0.343	0.347	0.344	0.326	0.318		0.310	0.332	8.03
10) ethyl ether	0.493	0.528	0.549	0.536	0.535	0.506	0.480		0.506	0.517	4.62
11) acetonitrile	0.828	0.722	0.818	0.932	0.941	0.896	0.837		0.791	0.846	8.77
12) trichlorofluoromethane	0.827	0.883	0.910	0.927	0.924	0.878	0.845		0.850	0.880	4.27
13) freon-113	0.614	0.623	0.660	0.653	0.650	0.634	0.618		0.607	0.633	3.15
14) acrolein	0.048	0.047	0.053	0.054	0.061	0.056	0.052		0.047	0.052	9.46
15) 1,1-dichloroethene	0.549	0.574	0.562	0.590	0.593	0.579	0.563		0.528	0.567	3.83
16) acetone	0.249		0.589	0.251	0.184	0.165	0.153		0.199	0.256	59.38
----- Linear regression ----- Coefficient = 0.9952											
Response Ratio = 0.05338 + 0.14832 *A											
17) Methyl Acetate	0.653	0.730	0.718	0.729	0.733	0.649	0.600		0.702	0.689	7.17
18) methylene chloride	1.726		3.602	0.878	0.856	0.753	0.689		2.626	1.590	71.23
----- Linear regression ----- Coefficient = 0.9983											
Response Ratio = 0.35925 + 0.64818 *A											
19) methyl tert butyl ether	1.457	1.492	1.518	1.624	1.688	1.615	1.572		1.459	1.553	5.46
20) acrylonitrile											

Initial Calibration Summary

Page 4 of 5

Job Number: MC8297
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSV235-ICC235
 Lab FileID: V5254.D

	0.383	0.353	0.445	0.493	0.446	0.418	0.363	0.415	12.23
72)	chlorobenzene								
	1.880	1.968	1.953	1.962	1.987	1.897	1.770	1.857	1.909
73)	1,1,1,2-tetrachloroethane								3.82
	0.587	0.470	0.524	0.688	0.731	0.721	0.683	0.542	0.618
	----- Linear regression -----						Coefficient =	0.9989	16.16
	Response Ratio = 0.00354 + 0.69124 *A								
74)	ethylbenzene								
	3.561	3.479	3.580	3.690	3.710	3.497	3.142	3.445	3.513
75)	m,p-xylene								5.06
	1.245	1.194	1.242	1.288	1.289	1.221	1.133	1.196	1.226
76)	o-xylene								4.26
	1.205	1.121	1.187	1.266	1.284	1.226	1.168	1.169	1.203
77)	styrene								4.50
	2.016	1.702	1.908	2.167	2.216	2.112	1.976	1.914	2.001
78)	bromoform								8.29
	0.242	0.198	0.361	0.448	0.476	0.505		0.209	0.348
	----- Linear regression -----						Coefficient =	0.9989	37.84
	Response Ratio = -0.09905 + 0.51301 *A								
79)	trans-1,4-dichloro-2-butene								
	0.185	0.179	0.225	0.248	0.236	0.227		0.175	0.211
									14.30
80)	I 1,4-dichlorobenzene-d	-----ISTD-----							
81)	isopropylbenzene								
	3.333	2.985	3.241	3.439	3.514	3.405	3.214	3.156	3.286
82)	bromofluorobenzene (s)								5.23
	1.106	1.106	1.105	1.097	1.105	1.103	1.098	1.109	1.104
83)	bromobenzene								0.35
	0.974	0.961	0.996	1.022	1.061	1.045	0.992	0.943	0.999
84)	1,1,2,2-tetrachloroethane								4.10
	0.999	0.978	1.029	1.094	1.151	1.060	0.960	1.005	1.035
85)	1,2,3-trichloropropane								6.18
	0.892	0.893	0.894	1.044	1.189	1.138	1.091	0.869	1.001
86)	n-propylbenzene								12.88
	4.979	4.692	5.022	5.069	5.140	4.889	4.419	4.854	4.883
87)	2-chlorotoluene								4.78
	2.989	2.974	3.079	3.065	3.116	2.991	2.773	2.921	2.989
88)	4-chlorotoluene								3.62
	3.429	3.411	3.526	3.509	3.546	3.376	3.073	3.343	3.402
89)	1,3,5-trimethylbenzene								4.46
	3.297	2.978	3.264	3.406	3.481	3.342	3.088	3.148	3.250
90)	tert-butylbenzene								5.19
	2.027	1.812	2.011	2.097	2.153	2.085	1.947	1.932	2.008
91)	1,2,4-trimethylbenzene								5.43
	3.316	3.081	3.305	3.428	3.491	3.373	3.145	3.200	3.292
92)	sec-butylbenzene								4.29
	4.291	3.876	4.196	4.410	4.475	4.303	3.978	4.118	4.206
93)	1,3-dichlorobenzene								4.92
	1.767	1.741	1.838	1.845	1.887	1.842	1.753	1.731	1.801
94)	p-isopropyltoluene								3.27
	3.232	2.832	3.191	3.320	3.400	3.321	3.121	3.095	3.189
95)	1,4-dichlorobenzene								5.58
	1.830	1.978	1.933	1.871	1.912	1.866	1.769	1.794	1.869
96)	1,2-dichlorobenzene								3.78
	1.696	1.767	1.780	1.770	1.814	1.732	1.588	1.678	1.728
97)	n-butylbenzene								4.17
	3.760	3.288	3.640	3.858	3.870	3.623	3.167	3.539	3.593
98)	1,2-dibromo-3-chloropropane								7.10

5.8.9
5

Continuing Calibration Summary

Page 1 of 4

Job Number: MC8297
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSV261-CC235
 Lab FileID: V5852.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V5852.D
 Acq On : 5 Mar 2012 10:02 am
 Sample : cc235-50
 Misc : MS25191,MSV261,5,,,5,1
 MS Integration Params: RTEINT.P

Vial: 3
 Operator: AMYM
 Inst : GCMS V
 Multiplr: 1.00

Method : C:\msdchem\1\METHODS\v020912s.m (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Fri Feb 10 09:17:30 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	95	0.00	3.49
2	tertiary butyl alcohol	1.356	1.320	2.7	92	0.00	3.60
3 T	Ethanol	0.088	0.092	-4.5	96	0.00	2.49
4 I	pentafluorobenzene	1.000	1.000	0.0	92	0.00	6.53
5 M	dichlorodifluoromethane	0.673	0.718	-6.7	93	0.00	1.50
6 P	chloromethane	0.540	0.582	-7.8	98	0.00	1.61
7 c	vinyl chloride	0.629	0.712	-13.2	102	0.00	1.72
8 M	bromomethane	0.407	0.459	-12.8	96	0.00	2.00
9 M	chloroethane	0.332	0.340	-2.4	91	0.00	2.10
10 M	ethyl ether	0.517	0.482	6.8	83	0.00	2.59
11 M	acetonitrile	0.846	0.766	9.5	76	0.01	3.27
12 M	trichlorofluoromethane	0.880	1.016	-15.5	101	0.00	2.34
13 M	freon-113	0.633	0.627	0.9	89	0.00	2.88
14 M	acrolein	0.052	0.027	48.1%	46%	0.00	2.74
15 c	1,1-dichloroethene	0.567	0.540	4.8	85	0.00	2.85
----- True Calc. % Drift -----							
16 M	acetone	50.000	40.362	19.3	64	0.00	2.89
----- AvgRF CCRF % Dev -----							
17 M	Methyl Acetate	0.689	0.342	50.4%	43%	0.01	3.26
----- True Calc. % Drift -----							
18 M	methylene chloride	50.000	27.036	45.9%	75	0.01	3.44
----- AvgRF CCRF % Dev -----							
19 M	methyl tert butyl ether	1.553	1.551	0.1	88	0.00	3.81
20 M	acrylonitrile	0.194	0.185	4.6	81	0.01	4.59
21 M	allyl chloride	0.846	0.766	9.5	76	0.01	3.27
22 M	trans-1,2-dichloroethene	0.668	0.638	4.5	85	0.01	3.81
23 M	iodomethane	1.045	1.068	-2.2	91	0.01	3.02
----- True Calc. % Drift -----							
24 M	carbon disulfide	50.000	46.070	7.9	86	0.01	3.10
----- AvgRF CCRF % Dev -----							
25 M	propionitrile	0.080	0.075	6.3	81	0.01	5.61
26 M	vinyl acetate	1.768	1.718	2.8	95	0.00	4.54
27 M	chloroprene	0.972	0.925	4.8	81	0.01	4.59
28 M	di-isopropyl ether	1.979	1.736	12.3	77	0.00	4.57
29 M	methacrylonitrile	0.369	0.331	10.3	78	0.01	5.89

5.8.11

5

Continuing Calibration Summary

Page 3 of 4

Job Number: MC8297
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSV261-CC235
 Lab FileID: V5852.D

		AvgRF	CCRF	% Dev			
70 M	1,2-dibromoethane	0.615	0.690	-12.2	88	0.00	10.60
71 M	2-hexanone	0.415	0.412	0.7	78	0.00	10.35
72 P	chlorobenzene	1.909	2.008	-5.2	86	0.00	11.10
		True	Calc.	% Drift			
73 M	1,1,1,2-tetrachloroethane	50.000	55.015	-10.0	93	0.00	11.21
		AvgRF	CCRF	% Dev			
74 c	ethylbenzene	3.513	3.716	-5.8	84	0.00	11.21
75 M	m,p-xylene	1.226	1.302	-6.2	85	0.00	11.34
76 M	o-xylene	1.203	1.281	-6.5	85	0.00	11.71
77 M	styrene	2.001	2.182	-9.0	84	0.00	11.73
		True	Calc.	% Drift			
78 P	bromoform	50.000	53.398	-6.8	104	0.00	11.91
		AvgRF	CCRF	% Dev			
79 M	trans-1,4-dichloro-2-bute	0.211	0.234	-10.9	87	0.00	12.13
80 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	90	0.00	13.31
81 M	isopropylbenzene	3.286	3.311	-0.8	87	0.00	12.07
82 S	bromofluorobenzene (s)	1.104	1.005	9.0	83	0.00	12.23
83 M	bromobenzene	0.999	1.038	-3.9	92	0.00	12.36
84 P	1,1,2,2-tetrachloroethane	1.035	0.998	3.6	82	0.00	12.37
85 M	1,2,3-trichloropropane	1.001	1.021	-2.0	88	0.00	12.41
86 M	n-propylbenzene	4.883	4.770	2.3	85	0.00	12.46
87 M	2-chlorotoluene	2.989	2.918	2.4	86	0.00	12.54
88 M	4-chlorotoluene	3.402	3.395	0.2	87	0.00	12.65
89 M	1,3,5-trimethylbenzene	3.250	3.369	-3.7	89	0.00	12.63
90 M	tert-butylbenzene	2.008	2.041	-1.6	88	0.00	12.92
91 M	1,2,4-trimethylbenzene	3.292	3.347	-1.7	88	0.00	12.98
92 M	sec-butylbenzene	4.206	4.214	-0.2	86	0.00	13.13
93 M	1,3-dichlorobenzene	1.801	1.860	-3.3	91	0.00	13.24
94 M	p-isopropyltoluene	3.189	3.331	-4.5	91	0.00	13.28
95 M	1,4-dichlorobenzene	1.869	1.925	-3.0	93	0.00	13.34
96 M	1,2-dichlorobenzene	1.728	1.793	-3.8	91	0.00	13.66
97 M	n-butylbenzene	3.593	3.698	-2.9	87	0.00	13.65
		True	Calc.	% Drift			
98 M	1,2-dibromo-3-chloropropa	50.000	47.109	5.8	93	0.00	14.39
		AvgRF	CCRF	% Dev			
99 M	1,3,5-trichlorobenzene	1.411	1.595	-13.0	99	0.00	14.56
100 M	1,2,4-trichlorobenzene	1.298	1.483	-14.3	99	0.00	15.15
101 M	hexachlorobutadiene	0.756	0.927	-22.6	107	0.00	15.29
102 M	naphthalene	2.772	2.974	-7.3	89	0.00	15.40
103 M	1,2,3-trichlorobenzene	1.247	1.401	-12.3	98	0.00	15.61
		True	Calc.	% Drift			
104	2-Methylnaphthalene	25.000	23.622	5.5	89	0.01	16.54
		AvgRF	CCRF	% Dev			
105	1-Methylnaphthalene	1.478	1.550	-4.9	88	0.02	16.74

(4.0 %) 4 of 101 compounds'%D > 20

5.8.11

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Instrument Performance Check (BFB)

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Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSE2293-BFB

Injection Date: 02/22/12

Lab File ID: E58429.D

Injection Time: 11:48

Instrument ID: GCMSE

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	5433	16.5	Pass
75	30.0 - 60.0% of mass 95	12880	39.1	Pass
95	Base peak, 100% relative abundance	32912	100.0	Pass
96	5.0 - 9.0% of mass 95	2117	6.43	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	27736	84.3	Pass
175	5.0 - 9.0% of mass 174	2217	6.74 (7.99) ^a	Pass
176	95.0 - 101.0% of mass 174	26360	80.1 (95.0) ^a	Pass
177	5.0 - 9.0% of mass 176	1902	5.78 (7.22) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSE2293-IC2293	E58432.D	02/22/12	13:15	01:27	Initial cal 5
MSE2293-IC2293	E58433.D	02/22/12	13:44	01:56	Initial cal 25
MSE2293-ICC2293	E58434.D	02/22/12	14:14	02:26	Initial cal 50
MSE2293-IC2293	E58435.D	02/22/12	14:43	02:55	Initial cal 100
MSE2293-IC2293	E58436.D	02/22/12	15:12	03:24	Initial cal 200
MSE2293-IC2293	E58442.D	02/22/12	18:10	06:22	Initial cal 0.5
MSE2293-IC2293	E58443.D	02/22/12	18:37	06:49	Initial cal 2
MSE2293-IC2293	E58444.D	02/22/12	19:06	07:18	Initial cal 400

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSE2299-BFB

Injection Date: 03/01/12

Lab File ID: E58608.D

Injection Time: 11:33

Instrument ID: GCMSE

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	7049	17.7	Pass
75	30.0 - 60.0% of mass 95	16276	40.9	Pass
95	Base peak, 100% relative abundance	39776	100.0	Pass
96	5.0 - 9.0% of mass 95	2684	6.75	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	30042	75.5	Pass
175	5.0 - 9.0% of mass 174	2673	6.72 (8.90) ^a	Pass
176	95.0 - 101.0% of mass 174	29160	73.3 (97.1) ^a	Pass
177	5.0 - 9.0% of mass 176	1787	4.49 (6.13) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSE2299-CC2293	E58609.D	03/01/12	12:02	00:29	Continuing cal 50
MSE2299-BS	E58610.D	03/01/12	12:29	00:56	Blank Spike
MSE2299-BSD	E58611.D	03/01/12	12:58	01:25	Blank Spike Duplicate
MSE2299-MB	E58613.D	03/01/12	13:55	02:22	Method Blank
ZZZZZZ	E58614.D	03/01/12	14:17	02:44	(unrelated sample)
ZZZZZZ	E58615.D	03/01/12	14:50	03:17	(unrelated sample)
MC8297-7	E58616.D	03/01/12	15:19	03:46	TB022812
MC8331-1	E58617.D	03/01/12	15:48	04:15	(used for QC only; not part of job MC8297)
ZZZZZZ	E58618.D	03/01/12	16:16	04:43	(unrelated sample)
ZZZZZZ	E58619.D	03/01/12	16:39	05:06	(unrelated sample)
ZZZZZZ	E58620.D	03/01/12	17:10	05:37	(unrelated sample)
MC8331-1MS	E58621.D	03/01/12	17:38	06:05	Matrix Spike
MC8331-1MSD	E58622.D	03/01/12	18:07	06:34	Matrix Spike Duplicate

Instrument Performance Check (BFB)

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Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSM1537-BFB

Injection Date: 02/29/12

Lab File ID: M46670.D

Injection Time: 10:01

Instrument ID: GCMSM

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	7714	18.5	Pass
75	30.0 - 60.0% of mass 95	19776	47.5	Pass
95	Base peak, 100% relative abundance	41616	100.0	Pass
96	5.0 - 9.0% of mass 95	2662	6.40	Pass
173	Less than 2.0% of mass 174	210	0.50 (0.51) ^a	Pass
174	50.0 - 150.0% of mass 95	40824	98.1	Pass
175	5.0 - 9.0% of mass 174	2981	7.16 (7.30) ^a	Pass
176	95.0 - 101.0% of mass 174	39152	94.1 (95.9) ^a	Pass
177	5.0 - 9.0% of mass 176	2585	6.21 (6.60) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSM1537-IC1537	M46672.D	02/29/12	11:05	01:04	Initial cal 0.5
MSM1537-IC1537	M46673.D	02/29/12	11:36	01:35	Initial cal 2
MSM1537-IC1537	M46674.D	02/29/12	12:06	02:05	Initial cal 5
MSM1537-IC1537	M46675.D	02/29/12	12:36	02:35	Initial cal 20
MSM1537-IC1537	M46676.D	02/29/12	13:14	03:13	Initial cal 50
MSM1537-IC1537	M46676.D	02/29/12	13:14	03:13	Initial cal 50
MSM1537-IC1537	M46677.D	02/29/12	13:45	03:44	Initial cal 100
MSM1537-IC1537	M46678.D	02/29/12	14:15	04:14	Initial cal 200
MSM1537-IC1537	M46679.D	02/29/12	14:46	04:45	Initial cal 400

Instrument Performance Check (BFB)

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Job Number: MC8297
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSM1538-BFB	Injection Date: 03/01/12
Lab File ID: M46684.D	Injection Time: 10:48
Instrument ID: GCMSM	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	4897	16.9	Pass
75	30.0 - 60.0% of mass 95	14038	48.4	Pass
95	Base peak, 100% relative abundance	28992	100.0	Pass
96	5.0 - 9.0% of mass 95	1906	6.57	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	32336	111.5	Pass
175	5.0 - 9.0% of mass 174	2110	7.28 (6.53) ^a	Pass
176	95.0 - 101.0% of mass 174	31112	107.3 (96.2) ^a	Pass
177	5.0 - 9.0% of mass 176	1695	5.85 (5.45) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSM1538-CC1537	M46684.D	03/01/12	10:48	00:00	Continuing cal 50
MSM1538-BS	M46685.D	03/01/12	11:19	00:31	Blank Spike
MSM1538-BSD	M46686.D	03/01/12	11:57	01:09	Blank Spike Duplicate
MSM1538-MB	M46687.D	03/01/12	12:29	01:41	Method Blank
ZZZZZZ	M46688.D	03/01/12	13:03	02:15	(unrelated sample)
ZZZZZZ	M46689.D	03/01/12	13:34	02:46	(unrelated sample)
ZZZZZZ	M46690.D	03/01/12	14:04	03:16	(unrelated sample)
ZZZZZZ	M46691.D	03/01/12	14:35	03:47	(unrelated sample)
ZZZZZZ	M46692.D	03/01/12	15:05	04:17	(unrelated sample)
MC8284-6	M46693.D	03/01/12	15:36	04:48	(used for QC only; not part of job MC8297)
ZZZZZZ	M46694.D	03/01/12	16:06	05:18	(unrelated sample)
ZZZZZZ	M46695.D	03/01/12	16:37	05:49	(unrelated sample)
ZZZZZZ	M46696.D	03/01/12	17:07	06:19	(unrelated sample)
MC8284-6MS	M46697.D	03/01/12	17:37	06:49	Matrix Spike
MC8284-6MSD	M46698.D	03/01/12	18:08	07:20	Matrix Spike Duplicate
MC8297-1	M46699.D	03/01/12	18:38	07:50	SB-19/1-3
MC8297-2	M46700.D	03/01/12	19:09	08:21	SB-18/1-3
MC8297-3	M46701.D	03/01/12	19:39	08:51	SB-17/1-3
MC8297-4	M46702.D	03/01/12	20:10	09:22	SB-16/1-3
MC8297-5	M46703.D	03/01/12	20:40	09:52	SB-15/1-3

Scan 2950 (14.763 min): M46684.D\data.ms
bfb

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	267	55.90	321	74.00	4284	90.80	206
37.00	1406	56.90	576	75.00	14038	92.00	861
38.00	1197	59.90	186	76.00	1099	93.00	953
39.00	439	60.90	1186	76.90	276	94.00	3503
39.90	358	62.00	1150	77.80	269	95.00	28992
43.90	475	62.90	959	78.90	837	96.00	1906
44.80	155	68.00	2886	79.80	318	105.20	223
47.00	404	69.00	3283	80.90	660	106.00	163
49.00	1063	69.90	244	81.80	159	140.80	185
50.00	4897	71.80	152	87.00	1500	142.90	431
51.00	1853	73.00	1167	87.90	1108	155.00	162

Scan 2950 (14.763 min): M46684.D\data.ms
bfb

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
173.90	32336						
174.90	2110						
175.90	31112						
176.90	1695						
207.00	298						

6.5.4

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Instrument Performance Check (BFB)

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Job Number: MC8297
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample:	MSN2251-BFB	Injection Date:	02/13/12
Lab File ID:	N60246.D	Injection Time:	12:34
Instrument ID:	GCMSN		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	24576	20.3	Pass
75	30.0 - 60.0% of mass 95	61872	51.0	Pass
95	Base peak, 100% relative abundance	121256	100.0	Pass
96	5.0 - 9.0% of mass 95	7246	5.98	Pass
173	Less than 2.0% of mass 174	681	0.56 (0.88) ^a	Pass
174	50.0 - 150.0% of mass 95	77064	63.6	Pass
175	5.0 - 9.0% of mass 174	5723	4.72 (7.43) ^a	Pass
176	95.0 - 101.0% of mass 174	75752	62.5 (98.3) ^a	Pass
177	5.0 - 9.0% of mass 176	5148	4.25 (6.80) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSN2251-IC2251	N60247.D	02/13/12	13:02	00:28	Initial cal 25
MSN2251-IC2251	N60248.D	02/13/12	13:31	00:57	Initial cal 5
MSN2251-IC2251	N60249.D	02/13/12	13:59	01:25	Initial cal 2
MSN2251-IC2251	N60250.D	02/13/12	14:27	01:53	Initial cal 1
MSN2251-IC2251	N60251.D	02/13/12	14:55	02:21	Initial cal 0.5
MSN2251-ICC2251	N60252.D	02/13/12	15:24	02:50	Initial cal 50
MSN2251-IC2251	N60253.D	02/13/12	15:52	03:18	Initial cal 100
MSN2251-IC2251	N60254.D	02/13/12	16:20	03:46	Initial cal 200
MSN2251-IC2251	N60255.D	02/13/12	16:48	04:14	Initial cal 400
MSN2251-ICV2251	N60257.D	02/13/12	17:45	05:11	Initial cal verification 50

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC8297
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample:	MSN2270-BFB	Injection Date:	02/29/12
Lab File ID:	N60736.D	Injection Time:	14:08
Instrument ID:	GCMSN		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	2630	27.2	Pass
75	30.0 - 60.0% of mass 95	5236	54.1	Pass
95	Base peak, 100% relative abundance	9673	100.0	Pass
96	5.0 - 9.0% of mass 95	746	7.71	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	5433	56.2	Pass
175	5.0 - 9.0% of mass 174	364	3.76 (6.70) ^a	Pass
176	95.0 - 101.0% of mass 174	5363	55.4 (98.7) ^a	Pass
177	5.0 - 9.0% of mass 176	401	4.15 (7.48) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSN2270-CC2251	N60736.D	02/29/12	14:08	00:00	Continuing cal 50
MSN2270-BS	N60736.D	02/29/12	14:08	00:00	Blank Spike
MSN2270-BSD	N60737.D	02/29/12	14:36	00:28	Blank Spike Duplicate
MSN2270-MB	N60739.D	02/29/12	15:33	01:25	Method Blank
ZZZZZZ	N60740.D	02/29/12	16:01	01:53	(unrelated sample)
MC8297-6	N60741.D	02/29/12	16:29	02:21	EB022812
ZZZZZZ	N60742.D	02/29/12	16:58	02:50	(unrelated sample)
ZZZZZZ	N60743.D	02/29/12	17:26	03:18	(unrelated sample)
ZZZZZZ	N60744.D	02/29/12	17:54	03:46	(unrelated sample)
ZZZZZZ	N60745.D	02/29/12	18:22	04:14	(unrelated sample)
ZZZZZZ	N60746.D	02/29/12	18:51	04:43	(unrelated sample)
ZZZZZZ	N60747.D	02/29/12	19:19	05:11	(unrelated sample)
ZZZZZZ	N60748.D	02/29/12	19:47	05:39	(unrelated sample)
ZZZZZZ	N60749.D	02/29/12	20:15	06:07	(unrelated sample)
ZZZZZZ	N60750.D	02/29/12	20:44	06:36	(unrelated sample)
ZZZZZZ	N60751.D	02/29/12	21:12	07:04	(unrelated sample)
ZZZZZZ	N60752.D	02/29/12	21:40	07:32	(unrelated sample)
ZZZZZZ	N60753.D	02/29/12	22:08	08:00	(unrelated sample)
ZZZZZZ	N60754.D	02/29/12	22:37	08:29	(unrelated sample)
ZZZZZZ	N60755.D	02/29/12	23:05	08:57	(unrelated sample)
ZZZZZZ	N60756.D	02/29/12	23:33	09:25	(unrelated sample)
MC8287-7	N60757.D	03/01/12	00:02	09:54	(used for QC only; not part of job MC8297)
MC8287-7MS	N60758.D	03/01/12	00:30	10:22	Matrix Spike
MC8287-7MSD	N60759.D	03/01/12	00:58	10:50	Matrix Spike Duplicate

Instrument Performance Check (BFB)

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Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSV235-BFB

Injection Date: 02/09/12

Lab File ID: V5248.D

Injection Time: 14:04

Instrument ID: GCMSV

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	19472	20.4	Pass
75	30.0 - 60.0% of mass 95	45720	48.0	Pass
95	Base peak, 100% relative abundance	95240	100.0	Pass
96	5.0 - 9.0% of mass 95	6943	7.29	Pass
173	Less than 2.0% of mass 174	354	0.37 (0.57) ^a	Pass
174	50.0 - 100.0% of mass 95	62144	65.2	Pass
175	5.0 - 9.0% of mass 174	4942	5.19 (7.95) ^a	Pass
176	95.0 - 101.0% of mass 174	61312	64.4 (98.7) ^a	Pass
177	5.0 - 9.0% of mass 176	4214	4.42 (6.87) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSV235-IC235	V5249.D	02/09/12	14:34	00:30	Initial cal 0.5
MSV235-IC235	V5250.D	02/09/12	15:04	01:00	Initial cal 2
MSV235-IC235	V5251.D	02/09/12	15:34	01:30	Initial cal 5
MSV235-IC235	V5252.D	02/09/12	16:05	02:01	Initial cal 10
MSV235-IC235	V5253.D	02/09/12	16:35	02:31	Initial cal 20
MSV235-ICC235	V5254.D	02/09/12	17:05	03:01	Initial cal 50
MSV235-IC235	V5255.D	02/09/12	17:35	03:31	Initial cal 100
MSV235-IC235	V5256.D	02/09/12	18:05	04:01	Initial cal 200
MSV235-IC235	V5257.D	02/09/12	18:35	04:31	Initial cal 400
MSV235-ICV235	V5260.D	02/09/12	20:06	06:02	Initial cal verification 50
ZZZZZZ	V5263.D	02/09/12	21:36	07:32	(unrelated sample)
ZZZZZZ	V5264.D	02/09/12	22:06	08:02	(unrelated sample)
ZZZZZZ	V5265.D	02/09/12	22:36	08:32	(unrelated sample)
ZZZZZZ	V5266.D	02/09/12	23:06	09:02	(unrelated sample)
ZZZZZZ	V5267.D	02/09/12	23:36	09:32	(unrelated sample)
ZZZZZZ	V5268.D	02/10/12	00:06	10:02	(unrelated sample)
ZZZZZZ	V5269.D	02/10/12	00:36	10:32	(unrelated sample)
ZZZZZZ	V5270.D	02/10/12	01:06	11:02	(unrelated sample)

Instrument Performance Check (BFB)

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Job Number: MC8297
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample:	MSV261-BFB	Injection Date:	03/05/12
Lab File ID:	V5852.D	Injection Time:	10:02
Instrument ID:	GCMSV		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	16092	17.6	Pass
75	30.0 - 60.0% of mass 95	45576	49.9	Pass
95	Base peak, 100% relative abundance	91368	100.0	Pass
96	5.0 - 9.0% of mass 95	6766	7.41	Pass
173	Less than 2.0% of mass 174	460	0.50 (0.66) ^a	Pass
174	50.0 - 100.0% of mass 95	69344	75.9	Pass
175	5.0 - 9.0% of mass 174	5721	6.26 (8.25) ^a	Pass
176	95.0 - 101.0% of mass 174	69800	76.4 (100.7) ^a	Pass
177	5.0 - 9.0% of mass 176	4701	5.15 (6.73) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSV261-CC235	V5852.D	03/05/12	10:02	00:00	Continuing cal 50
MSV261-BS	V5856.D	03/05/12	13:00	02:58	Blank Spike
MSV261-MB	V5858.D	03/05/12	14:01	03:59	Method Blank
ZZZZZZ	V5859.D	03/05/12	14:32	04:30	(unrelated sample)
ZZZZZZ	V5860.D	03/05/12	15:02	05:00	(unrelated sample)
MC8297-7A	V5861.D	03/05/12	15:33	05:31	TB022812
MC8303-4	V5862.D	03/05/12	16:02	06:00	(used for QC only; not part of Job MC8297)
ZZZZZZ	V5863.D	03/05/12	16:33	06:31	(unrelated sample)
ZZZZZZ	V5864.D	03/05/12	17:03	07:01	(unrelated sample)
ZZZZZZ	V5865.D	03/05/12	17:34	07:32	(unrelated sample)
ZZZZZZ	V5866.D	03/05/12	18:03	08:01	(unrelated sample)
ZZZZZZ	V5868.D	03/05/12	19:04	09:02	(unrelated sample)
ZZZZZZ	V5869.D	03/05/12	19:34	09:32	(unrelated sample)
MC8303-4MS	V5870.D	03/05/12	20:04	10:02	Matrix Spike
MC8303-4MSD	V5871.D	03/05/12	20:34	10:32	Matrix Spike Duplicate

Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: MC8297
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Check Std:	MSE2299-CC2293	Injection Date:	03/01/12
Lab File ID:	E58609.D	Injection Time:	12:02
Instrument ID:	GCMSE	Method:	SW846 8260B

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	144277	9.10	262197	9.98	108890	13.24	89624	15.80	48289	6.62
Upper Limit ^a	288554	9.60	524394	10.48	217780	13.74	179248	16.30	96578	7.12
Lower Limit ^b	72139	8.60	131099	9.48	54445	12.74	44812	15.30	24145	6.12

Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MSE2299-BS	145935	9.10	254037	9.98	105807	13.24	87848	15.80	47254	6.62
MSE2299-BSD	140918	9.10	248503	9.98	104408	13.24	86927	15.80	45455	6.62
MSE2299-MB	138472	9.11	241120	9.98	98028	13.24	87769	15.80	45206	6.63
ZZZZZZ	146030	9.10	249319	9.97	99946	13.24	87624	15.80	41197	6.63
ZZZZZZ	137478	9.10	234683	9.98	97887	13.24	86017	15.80	38980	6.63
MC8297-7	139800	9.10	231407	9.97	97058	13.24	88415	15.80	40998	6.63
MC8331-1	142336	9.10	244371	9.97	102292	13.24	89970	15.80	40362	6.62
ZZZZZZ	141131	9.10	238786	9.97	99656	13.24	88540	15.79	38518	6.63
ZZZZZZ	132239	9.10	237011	9.98	99072	13.24	86935	15.80	46345	6.62
ZZZZZZ	146349	9.10	263563	9.97	111753	13.23	97575	15.80	47095	6.62
MC8331-1MS	141521	9.09	257565	9.97	108592	13.23	87734	15.79	45368	6.61
MC8331-1MSD	137813	9.10	249057	9.97	105853	13.24	85403	15.79	43342	6.62

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: MC8297
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Check Std:	MSM1538-CC1537	Injection Date:	03/01/12
Lab File ID:	M46684.D	Injection Time:	10:48
Instrument ID:	GCMSM	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	73857	9.36	116017	10.25	65628	13.53	80043	16.10	36162	6.85
Upper Limit ^a	147714	9.86	232034	10.75	131256	14.03	160086	16.60	72324	7.35
Lower Limit ^b	36929	8.86	58009	9.75	32814	13.03	40022	15.60	18081	6.35

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSM1538-BS	75076	9.36	118456	10.25	65835	13.53	79506	16.10	37781	6.86
MSM1538-BSD	75673	9.36	116169	10.25	65312	13.53	82299	16.10	47558	6.85
MSM1538-MB	68506	9.36	105041	10.25	57155	13.53	70963	16.10	33237	6.86
ZZZZZZ	66711	9.36	104312	10.25	57088	13.53	73307	16.10	44723	6.86
ZZZZZZ	63692	9.36	97799	10.25	54493	13.53	68193	16.10	57487	6.85
ZZZZZZ	61776	9.36	95731	10.25	54375	13.53	63490	16.10	47376	6.85
ZZZZZZ	59777	9.36	90067	10.25	44319	13.53	41780	16.10	46556	6.86
ZZZZZZ	58618	9.36	90208	10.25	50981	13.53	57523	16.10	45179	6.85
MC8284-6	59534	9.36	91394	10.25	51553	13.53	68508	16.10	49811	6.86
ZZZZZZ	55636	9.36	86145	10.25	49183	13.53	56627	16.10	38771	6.86
ZZZZZZ	54166	9.36	84934	10.25	46536	13.53	55503	16.10	41855	6.86
ZZZZZZ	56631	9.37	87280	10.25	50856	13.53	65544	16.10	43166	6.85
MC8284-6MS	64222	9.37	101054	10.25	57245	13.53	68997	16.09	42717	6.86
MC8284-6MSD	66138	9.37	100927	10.24	59660	13.53	72037	16.10	48892	6.86
MC8297-1	60382	9.36	91154	10.25	51881	13.53	65325	16.10	46726	6.85
MC8297-2	58243	9.37	90270	10.25	51123	13.53	66711	16.10	46257	6.85
MC8297-3	56883	9.36	88438	10.24	49875	13.53	63095	16.10	42047	6.86
MC8297-4	56109	9.36	85465	10.25	49438	13.53	62263	16.10	38241	6.85
MC8297-5	52599	9.37	80362	10.25	46191	13.53	57572	16.10	43921	6.86

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: MC8297
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Check Std:	MSN2270-CC2251	Injection Date:	02/29/12
Lab File ID:	N60736.D	Injection Time:	14:08
Instrument ID:	GCMSEN	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	258726	9.02	469979	9.89	267330	13.15	194950	15.71	148756	6.56
Upper Limit ^a	517452	9.52	939958	10.39	534660	13.65	389900	16.21	297512	7.06
Lower Limit ^b	129363	8.52	234990	9.39	133665	12.65	97475	15.21	74378	6.06

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN2270-BS	258726	9.02	469979	9.89	267330	13.15	194950	15.71	148756	6.56
MSN2270-BSD	278805	9.02	497064	9.89	286441	13.15	198972	15.71	139478	6.57
MSN2270-MB	251454	9.02	444230	9.89	230306	13.16	143343	15.72	131544	6.58
ZZZZZZ	250276	9.02	448453	9.90	234913	13.15	146355	15.72	131091	6.58
MC8297-6	241770	9.02	431112	9.89	229264	13.15	141609	15.72	126488	6.57
ZZZZZZ	230743	9.02	418181	9.90	221081	13.15	133324	15.72	112113	6.57
ZZZZZZ	236474	9.02	424649	9.90	223122	13.16	136571	15.72	120942	6.58
ZZZZZZ	234663	9.02	427847	9.90	223690	13.15	138012	15.72	140723	6.57
ZZZZZZ	233632	9.02	421056	9.90	218639	13.16	135609	15.71	124303	6.58
ZZZZZZ	229115	9.03	415411	9.90	218691	13.16	131701	15.72	109161	6.58
ZZZZZZ	229646	9.02	411912	9.90	216668	13.15	130018	15.71	108620	6.58
ZZZZZZ	229201	9.02	411367	9.90	215669	13.16	131081	15.72	125286	6.58
ZZZZZZ	225519	9.02	406014	9.90	217421	13.15	132062	15.72	123690	6.57
ZZZZZZ	222242	9.02	401804	9.89	211591	13.15	132497	15.72	103603	6.58
ZZZZZZ	221561	9.02	396655	9.90	211861	13.15	128304	15.71	105589	6.58
ZZZZZZ	226917	9.02	408329	9.90	216618	13.15	148016	15.71	111992	6.58
ZZZZZZ	232574	9.02	420104	9.90	225052	13.15	147419	15.71	128218	6.58
ZZZZZZ	234836	9.02	424952	9.90	224319	13.15	147506	15.71	118247	6.58
ZZZZZZ	230739	9.03	418631	9.90	224765	13.15	144228	15.72	105882	6.58
ZZZZZZ	231381	9.02	416927	9.90	216686	13.15	134288	15.72	103104	6.57
MC8287-7	224524	9.02	411242	9.90	216180	13.16	128717	15.72	125278	6.58
MC8287-7MS	243444	9.02	435552	9.89	253881	13.15	189278	15.71	136888	6.57
MC8287-7MSD	253923	9.02	455210	9.90	250594	13.15	189013	15.71	125221	6.57

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: MC8297
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Check Std: MSV261-CC235 Injection Date: 03/05/12
Lab File ID: V5852.D Injection Time: 10:02
Instrument ID: GCMSV Method: SW846 8260B

	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
Check Std	255153	6.53	370463	7.72	208919	11.07	191493	13.31	102065	3.49
Upper Limit ^a	510306	7.03	740926	8.22	417838	11.57	382986	13.81	204130	3.99
Lower Limit ^b	127577	6.03	185232	7.22	104460	10.57	95747	12.81	51033	2.99

Lab	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
Sample ID	AREA		AREA		AREA		AREA		AREA	
MSV261-BS	257751	6.53	358057	7.72	203523	11.07	192937	13.31	104480	3.49
MSV261-MB	267088	6.52	395632	7.71	221137	11.07	200081	13.31	121881	3.49
ZZZZZZ	253535	6.52	379527	7.71	212346	11.07	193696	13.31	81810	3.49
ZZZZZZ	126193 ^c	6.51	167103 ^c	7.71	101994 ^c	11.07	86151 ^c	13.31	49343 ^c	3.46
MC8297-7A	256309	6.52	379095	7.71	218477	11.07	198222	13.31	147001	3.48
MC8303-4	248700	6.52	365211	7.71	199607	11.07	167376	13.31	148505	3.48
ZZZZZZ	75598 ^c	6.51	113746 ^c	7.71	55013 ^c	11.07	28233 ^c	13.31	26259 ^c	3.46
ZZZZZZ	255793	6.52	372798	7.71	207729	11.07	183423	13.31	79944	3.48
ZZZZZZ	238800	6.51	335473	7.70	187461	11.07	178175	13.30	80996	3.48
ZZZZZZ	237395	6.51	336656	7.70	183402	11.07	185402	13.31	81023	3.47
ZZZZZZ	236482	6.51	324500	7.70	196758	11.06	173346	13.30	70195	3.47
ZZZZZZ	17716 ^c	6.50	25383 ^c	7.70	14118 ^c	11.06	10720 ^c	13.30	7854 ^c	3.45
MC8303-4MS	232858	6.51	330736	7.70	160012	11.06	102189	13.30	136090	3.48
MC8303-4MSD	247031	6.51	347338	7.70	156116	11.06	86982 ^d	13.30	146763	3.48

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

(c) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

(d) Outside control limits due to possible matrix interference. Confirmed by MS/MSD.

5.6.4

5

not perfect sample

not perfect sample

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : M46702.D
 Acq On : 1 Mar 2012 8:10 pm
 Operator : emilyk
 Sample : mc8297-4
 Misc : MS25187,MSM1538,6.25,,,5,1
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Mar 02 16:20:49 2012
 Quant Method : C:\msdchem\1\methods\M022912W.M
 Quant Title : SW-846 Method 8260
 QLast Update : Thu Mar 01 11:32:45 2012
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.854	65	38241	500.00	ug/L	0.00
4) pentafluorobenzene	9.364	168	56109	50.00	ug/L	0.00
42) 1,4-difluorobenzene	10.248	114	85465	50.00	ug/L	0.00
65) chlorobenzene-d5	13.529	82	49438	50.00	ug/L	0.00
79) 1,4-dichlorobenzene-d4	16.095	152	62263	50.00	ug/L	0.00
System Monitoring Compounds						
39) dibromofluoromethane (s)	9.004	113	33324	47.13	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	94.26%
59) toluene-d8 (s)	12.062	98	113599	44.05	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	88.10%
81) bromofluorobenzene (s)	14.759	95	42869	39.14	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	78.28%
Target Compounds						
16) acetone	6.472	43	6669	42.38	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

6.1.4
6

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
MS8571	100% MS8571	2000
77	Surf	2000
122	MS8571	↓
71	RS	↓

Daily Saved File

Tune File 1: ES8429
Tune File 2:
Initial Cal: 2/13/12 2:22:12 Batch ID: MSE2293
ID File: E021812M-M/E022312M-M
ICM Verified: ES8429/ES8440 Analysts: CT
Sequence verified:

Date: 2-22-12

Signature: *[Signature]*

*Note: If sample matrix is soil - method SW846.9135 used for preparation. SW846.9139 is purge and trap method for soil and water

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	% Sol	Dil. Fact.	pH	Comments
ES8429	BLK	-	-	NA	1	-	-	-	-	-	
34	102285-50	2	MS8571	↓	2	↓	↓	↓	↓	↓	
2220	102285-50	2	↓	↓	2	↓	↓	↓	↓	↓	
2220	RS	2	MS8571	↓	3	↓	↓	↓	↓	↓	
ES8429	BLK	-	-	↓	4	↓	↓	↓	↓	↓	
29	RS	1	MS8571	↓	5	↓	↓	↓	↓	↓	
30	102285-50	2	MS8571	↓	6	↓	↓	↓	↓	↓	RR - do the split
31	-2	↓	↓	↓	7	↓	↓	↓	↓	↓	NE ↓
32	-5	↓	↓	↓	8	↓	↓	↓	↓	↓	
33	-25	↓	↓	↓	9	↓	↓	↓	↓	↓	
34	102285-50	↓	↓	↓	10	↓	↓	↓	↓	↓	
35	102285-50	↓	↓	↓	11	↓	↓	↓	↓	↓	
36	-200	↓	↓	↓	12	↓	↓	↓	↓	↓	
37	-400	↓	↓	↓	13	↓	↓	↓	↓	↓	RR - very red
38	BLK	-	-	↓	14	↓	↓	↓	↓	↓	
39	BLK	-	-	↓	15	↓	↓	↓	↓	↓	
40	102285-50	2	MS8571	↓	16	↓	↓	↓	↓	↓	
41	MC8106-2	↓	↓	↓	17	↓	↓	↓	↓	↓	soil screens 25x
42	102285-50	↓	↓	↓	18	↓	↓	↓	↓	↓	
43	102285-50	↓	↓	↓	19	↓	↓	↓	↓	↓	
44	102285-50	↓	↓	↓	20	↓	↓	↓	↓	↓	
45	-10	↓	↓	↓	21	↓	↓	↓	↓	↓	35x
46	-14	↓	↓	↓	22	↓	↓	↓	↓	↓	25x
47	-16	↓	↓	↓	23	↓	↓	↓	↓	↓	↓
48	-23	↓	↓	↓	24	↓	↓	↓	↓	↓	10x
49	-24	↓	↓	↓	25	↓	↓	↓	↓	↓	↓
50	-25	↓	↓	↓	26	↓	↓	↓	↓	↓	↓
51	-29	↓	↓	↓	27	↓	↓	↓	↓	↓	↓
52	-31	↓	↓	↓	28	↓	↓	↓	↓	↓	25x
53	-4	↓	↓	↓	29	↓	↓	↓	↓	↓	↓
54	-8	↓	↓	↓	30	↓	↓	↓	↓	↓	↓

MTX = Matrix: Designate W for water, S for soil, O for oil.

Sample amount is reported in grams (wet) for soil and oil, mL for water.

MS001-04 Date: 12/02/08

Review: *[Signature]* 2/24/126.7.1
6

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
MS8581	100000 (WST) 250 ppb	
77	Surf	2000
72	(WST)	
71	BS	

Daily Saved File

Tune file 1: E58408
Tune file 2:
Initial Cal: 2-23-12
ID File: E02212.M.M
ICAL Verified: E58408
Sequence verified: (Y)

Date: 2-23-12

Batch ID: MS2294

Analysts: GT

Signature: *[Signature]*

*Note: If sample matrix is soil - method SW846 8035 used for preparation. SW846 8030 is purge and trap method for soil and water

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	% Sol	Dil. Fact.	pH	Comments
E58408	BS/ICV				1	unknown					
	MS2293-50				2	Soil					
	70 BS				3	extract					
	71 BS				4						
	72 MB				5						
	73 MB				6						
	74 MC 8101-2	2	MS25130	182000P	7		12.0g/10ml		extract		sample flows
	75 -3	2			8		12.73g				not run, need for
	76 -4	2			9		12.41g				CE row
	77 -5	2			10		12.32g				
	78 -8	2			11		12.49g				
	79 -10	2			12		12.72g				ok
	80 -14	2			13		13.83g				ok
	81 -15	2			14		14.20g				ok
	82 -19	2			15		10.83g				CE row
	83 -32	2			16		9.08g				
	84 -34	2			17		7.96g/10ml				
	85 -3	2			18		12.73g				CE row
	86 MS1108-13				19				EDX		Soil screen
	87 -14				20						
	88 -15				21						
	89 -10				22						
	90 -19				23						
	91 -20				24				SDX		

MTX = Matrix: Designate W for water, S for soil, O for oil
 Sample amount is reported in grams (wt) for soil and oil, ml for water.

MS901-04 Date: 12/02/08

Review: *[Signature]*

3

6.7.2
6

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc.
MS 8581	8260 JS	250 ppb
8577	JS	200 ppb
8562	SAK	
8571	BS	

Daily Saved File

Time File 1:	K58608
Time File 2:	
Initial Cal:	E022212m.m
ID File:	MSE2293
ICAL Verified:	K58609
Sequence verified:	GK

Date: 3-1-12

Batch ID: MSE2299

Analysts: GK

Signature: *[Signature]*

*Note: If sample matrix is soil - method SW846 8035 used for preparation. SW846 8031 is purge and trap method for soil and water

6.7.3
6

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	# Sol	Dil. Fact.	pH	Comments
E58605	Blank	—	MS25183	8260	1	S	5ml	NA	50X	NA	✓ C/O
	06	↓			2						✓ clean
	07	↓			3						✓ ↓
	08	2			4						✓ 11:33am
	09	↓			5						✓
	10	3			6						✓
	11	↓			7						✓
	12	—			8						✓ C/O
	13	2			9						✓
	14	2			10				25X		✓
	15				11				50X		✓
	16				12						✓
	17	↓			13						✓
	18	1			14						✓
	19	2	MS25175		15				200X		✓
	20	3			16				1000X		✓
	21	2	MS25183		17				50X		✓
	22	↓			18						✓ 6:07pm
	23	—			19						✓

GK 3-5-12

MTX = Matrix: Designate W for water, S for soil, O for oil.
Sample amount is reported in grams (wet) for soil and oil; ml for water.

MS001-04 Date: 12/02/08

Review: *[Signature]* 3/5/12

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VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
MS 8549	V8260 Std	200 μ g/ml
8571	V8260 RS	200
8561	V8260 IS	250
8557	V8260 SS	250

Daily Saved File

Tune file 1:	M46670
Tune file 2:	NA
Initial Cal:	2/29/12
IS File:	M02212W.M
ICAL Verified:	
Sequence verified:	2/29/12

Date: 2/29/12

Batch ID: MSM1537

Analysts: ECK

Signature: ECK

*Note: If sample matrix is soil - method SW846 5035 used for preparation. SW846 5030 is purge and trap method for soil and water

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	# Sol	Dil. Fact.	pH	Comments
M46670	BLK (b1b)	NA	NA	NA	1	NA	5ml	NA	1.1	NA	
71	BLK	↓	↓		2						
72	MS1537-05	1	MS 8549		3						
73	-2				4						
74	-5				5						
75	-20				6						
76	-50				7						
77	-100				8						
78	-200				9						
79	↓ -400	↓	↓		10						
80	BLK	NA	NA		11						
81	BLK	↓	↓		12						
82	MS1537-5D	3	MS 8511	↓	13	↓	↓	↓	↓	↓	RL, misc. 3/5/12

MTX = Matrix: Designate W for water, S for soil, O for oil.
 Sample amount is reported in grams (wgt) for soil and oil, ml, for water.

MS001-04 Date: 12/02/08

Review: *[Signature]* 3/5/12

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6.7.4
6

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
MS8561	Ref. 1st Std	250 ppm
MS8572	260 Surrogate	250 ppm
MS8574	2760 Cal Std	250 ppm
MS8571	260 BS	250 ppm

Daily Saved File

Tune File 1: M40624
Tune file 2: M40624
Initial Cell: 2/24/11
ID File: M022912.D.M
ICAL Verified: M407861
Sequence verified: CT

Date: 3/1/12

Batch ID: MSMD38

Analyst: DT

Signature: [Signature]

*Note: If sample matrix is soil - method SW846 5035 used for preparation. SW846 5030 is purge and trap method for soil and water

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Ant.	% Sol	Dil. Fact.	pH	Comments
M40624	fl. air blank			—	1	—	—	—	—	—	
21	MS8571-10	1	MS8599	—	2	—	—	—	—	—	
75	BS	3	MS8571	—	3	—	—	—	—	—	
86	BS	3	MS8571	—	4	—	—	—	—	—	
77	MS			—	5	—	—	—	—	—	
77	MS8284-1A	3	MS8587	Wt. 56	6	SSFO	—	—	—	—	SL = 1.24 x 1.15 [unclear] 6/1/12
89	-2	3		—	7	50:1	6.06g	—	—	—	
90	-3	4		—	8	—	5.86g	—	—	—	
91	-4	3		—	9	—	5.36g	—	—	—	
92	-5	4		—	10	—	7.28g	—	—	—	
93	-6	10		—	11	—	7.35g	—	—	—	
94	-7	2		—	12	—	7.30g	—	—	—	
95	-8	4		—	13	—	7.19g	—	—	—	
96	-9	4		—	14	—	6.36g	—	—	—	
97	-10	7		—	15	—	7.07g	—	—	—	
98	-11	9		—	16	—	6.57g	—	—	—	
99	MS8284-1	2		—	17	—	6.49g	—	—	—	
100	-12	2		—	18	—	6.57g	—	—	—	
01	-13	2		—	19	—	5.77g	—	—	—	
02	-14	3		—	20	—	6.25g	—	—	—	
03	-15	2		—	21	—	5.46g	—	—	—	
04				—	22	—	—	—	—	—	
05				—	23	—	—	—	—	—	
06				—	24	—	—	—	—	—	
07				—	25	—	—	—	—	—	

MTX = Matrix: Designate W for water, S for soil, O for oil.

Sample amount is reported in grams (wet) for soil and oil, mL for water.

MS001-04 Date: 12/02/03

Review: [Signature] 3/1/12 8

6.7.5
6

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
M3852	10260 Cal. Std	200 ppb
M3853	" BSC 10.00	"
M3854	" 10.00	100 ppm
M3855	" Single Sol	200 ppb
M3856	" Int. Std	100 ppm

Daily Saved File

Tune file 1:	N60246
Tune file 2:	N/A
Initial Cal:	02/06/12 02:13
ID File:	N60246
ICAL Verified:	N60257
Sequence verified:	02/06

Date: 02/13/12

Batch ID: M5N2251

N021312W.M

Analysts

Signature: JHP

*Note: If sample matrix is soil - method SW846 5035 used for preparation. SW846 5030 is purge and trap method for soil and water.

Data File	Sample ID	Bot No.	Work Group	Test	MS #	*MX	Sampl Amt.	Res Cl.	Dil. Fact.	pH	Comments
N60241	Blank	N/A	N/A	N/A	15	N/A	5ml	N/A	1.1	N/A	
42	Blank				16						
43	Blank				17						
44	Blank				18						
45	BFB	5	M38514		19						
46	BFB	5	M38514		20						
47	IC2251-25	5/1	M38514		21						
48	-5				22						
49	-2				23						
50	-3				24						
51	-0.5				25						
52	IC2251-50				26						
53	IC2251-100				27						
54	-200				28						
55	-400				29						
56	Blank	N/A	N/A		30						
57	IC2251-50	5/1	M38514		31						
58	IC2251-50	5/1	1		32						
59	Blank	N/A	N/A		33						

JHP
02/14/12

*MX - Matrix: Designate W for water, S for soil, O for oil.

Sample amount is reported in grams (wet) for soil and oil, ml for water.

MSD01-04 Date: 12/02/08

Review: JHP

2/15/12
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6.7.6 6

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
MS 8562	KALCO CAL STD	2000
8571	KALCO MS (stds)	200
8577	KALCO 25	250
8547	KALCO 55	250

Daily Saved File

Tune file 1:	V5248
Tune file 2:	NA
Initial Cal:	2/9/12
ID File:	K2309125
ICAL Verified:	✓
Sequence verified:	✓

Date: 2/9/12

Batch ID: MSK 235

Analyst: _____

Signature: _____

*Note: If sample matrix is soil - method SW846 5035 used for preparation. SW846 5030 purge and trap method for soil and water

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Sample Amt.	% Sol	Dil. Fact.	pH	Comments
V5247	NA	NA	NA	NA	1	NA	NA	NA	NA	NA	
48	↓ (KFA)	↓	↓		2						
49	IC 235-15		MS 8562		3						
50	↓ -2				4						
51	↓ -5				5						
52	↓ -10				6						
53	↓ -20				7						
54	↓ -50				8						
55	IC 235-100				9						
56	IC 235-200				10						
57	↓ -400				11						
58	NA		NA		12						
59	↓		↓		13						
60	IC 235-50		MS 8571		14						
61	↓		↓		15						
62	NA		NA		16						
63	MC 6750-3		MS 29941	MDL	17						
64					18						
65					19						
66					20						
67					21						
68					22						
69					23						
70					24						

MTX = Matrix: Designate W for water, S for soil, O for oil.
 Sample amount is reported in grams (wt) for soil and oil, µL for water.

MS501-04 Date: 12/02/03

Review: _____

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6.7.8
6

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
MS 8599	V. B. 100% STD	200
8603	V. B. 100% STD	200
8589	V. B. 100% STD	200
8591	V. B. 100% STD	200

Daily Saved File

Tune file 1:	V. 8592
Tune file 2:	NA
Initial Cal:	0-2/8/12
ID File:	V. 8592
ICAL Verified:	✓
Sequence verified:	✓

Date: 3/5/12

Batch ID: MSV-261

Analysts

Signature: [Signature]

*Note: If sample matrix is soil - method SW846 5035 used for preparation. SW846 5030 is purge and trap method for soil and water

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	% Sol	Dil. Fact.	pH	Comments
V. 8590	NA	NA	NA	NA	1	NA	NA	NA	NA	NA	
51	↓	↓	↓	↓	2	↓	↓	↓	↓	↓	
52	CC-235-50	1	MS 8599	↓	3	↓	↓	↓	↓	↓	
53	BS	↓	MS 8603	↓	4	↓	↓	↓	↓	↓	Active high
54	BS	↓	↓	↓	5	↓	↓	↓	↓	↓	Mostly 2-4 in. Lm
55	BS	↓	↓	↓	6	↓	↓	↓	↓	↓	Active high
56	BS	↓	↓	↓	7	↓	↓	↓	↓	↓	OK
57	NA	NA	NA	↓	8	↓	↓	↓	↓	↓	
58	MB	↓	↓	↓	9	↓	↓	↓	↓	↓	
59	MC 8335-7	4	MC 8599	V. B. 100% STD	10	S	6.336				
60	↓ - 8	3	↓	↓	11	↓	7.266				
61	MC 8337-1A	1	MC 8599	V. B. 100% STD	12	↓	5.00				
62	MC 8303-4	6	↓	V. B. 100% STD	13	↓	6.84				
63	MC 8146-23A	3	↓	V. B. 100% STD	14	↓	6.56				25% RR
64	MC 8199-7R	3	↓	↓	15	↓	4.45				
65	MC 8300-1A	1	↓	↓	16	↓	5.00				
66	MC 8389-1A	2	↓	↓	17	↓	↓				
67	↓ - 6	3	↓	↓	18	↓	5.32				25% RR
68	↓ - 20	2	↓	↓	19	↓	5.44				
69	MC 8146-23A	2	↓	↓	20	↓	5.97				
70	MC 8303-4A	2	↓	↓	21	↓	3.889				MS 8603
71	↓ - 4MID	2	↓	↓	22	↓	4.075				↓
72	NA	NA	NA	NA	23	NA	NA				

MTX = Matrix: Designate W for water, S for soil, O for oil.
 Sample amount is reported in grams (wet) for soil and oil, mL for water.

MS001-04 Date: 12/02/08

Review: [Signature] 3/6/12

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6.7.9
6

PERCENT SOLIDS**HOLDING TIMES****Cooler Temp:** <6 C

7 days from collection to prep and analysis

Sample Date 2/28/12 Analyze by 3/6/12

BOLD OUTSIDE HOLD TIME

	SAMPLE DATE	SAMPLE ID	LABORATORY ID	Date analyzed
1	02/28/12	SB-19/1-3	MC8297-1	2/29/12
2	02/28/12	SB-18/1-3	MC8297-2	2/29/12
3	02/28/12	SB-17/1-3	MC8297-3	2/29/12
4	02/28/12	SB-16/1-3	MC8297-4	2/29/12
5	02/28/12	SB-15/1-3	MC8297-5	2/29/12
6	02/28/12	EB022812	MC8297-6	
7	02/28/12	TB022812	MC8297-7	
8	02/28/12	TB022812 SOIL	MC8297-7A	

DUPLICATE RELATIVE PERCENT DIFFERENCE

NONE

SAMPLE CALCULATION

	A	C	B		
Sample ID	Sample & Tare Wet Weight	Tare Weight	Dry Sample & Tare	% Moisture	% solids
SB-16/1-3	28.642	20.682	27.739	11.3%	88.7%

$$\% \text{ Solids} = [1 - ((A - C) - (B - C) / (A - C))] * 100$$

FIELD DUPLICATES

NONE

Percent Solids Raw Data Summary

Page 1 of 1

Job Number: MC8297

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MC8297-1 Analyzed: 29-FEB-12 by BF Method: SM21 2540 B MOD.
ClientID: SB-19/1-3

Wet Weight (Total)	28.642	g
Tare Weight	20.682	g
Dry Weight (Total)	27.739	g
Solids, Percent	88.7	%

Sample: MC8297-2 Analyzed: 29-FEB-12 by BF Method: SM21 2540 B MOD.
ClientID: SB-18/1-3

Wet Weight (Total)	35.564	g
Tare Weight	24.986	g
Dry Weight (Total)	34.697	g
Solids, Percent	91.8	%

Sample: MC8297-3 Analyzed: 29-FEB-12 by BF Method: SM21 2540 B MOD.
ClientID: SB-17/1-3

Wet Weight (Total)	35.374	g
Tare Weight	25.414	g
Dry Weight (Total)	34.263	g
Solids, Percent	88.8	%

Sample: MC8297-4 Analyzed: 29-FEB-12 by BF Method: SM21 2540 B MOD.
ClientID: SB-16/1-3

Wet Weight (Total)	37.663	g
Tare Weight	29.739	g
Dry Weight (Total)	36.848	g
Solids, Percent	89.7	%

Sample: MC8297-5 Analyzed: 29-FEB-12 by BF Method: SM21 2540 B MOD.
ClientID: SB-15/1-3

Wet Weight (Total)	28.372	g
Tare Weight	17.991	g
Dry Weight (Total)	27.087	g
Solids, Percent	87.6	%

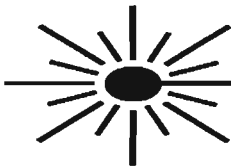
7.5

7

Data Validation Report

**WSP Environment and Energy
Former TTC – Glen Head, NY**

SDG# MC9008



ECT.CON INC.

Environmental and Computer
Technology Consultants

3531 Fox Chase Drive
Imperial, PA 15126
(724) 695-8042
FAX (724) 695-2698
e-mail: ectconinc@comcast.net

**Data Validation Report**

SDG#	MC9008
Validation Report Date	March 31, 2012
Validation Guidance	USEPA CLP National Functional Guidelines for Organic Data Review
Client Name	WSP Environmental Strategies Consulting, LLC
Project Name	Former TTC-Glen Head, NY
Laboratory	Accutest Laboratories
Method(s) Utilized	SW 846 8260
Analytical Fraction	Volatile Organic Compounds (VOCs)

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
03/22/12	TB032212	MC9008-1	X	Aqueous
03/22/12	MW-01	MC9008-2	X	Aqueous
03/22/12	MW-03	MC9008-3	X	Aqueous
03/22/12	MW-04	MC9008-4	X	Aqueous
03/22/12	MW-05	MC9008-5	X	Aqueous
03/22/12	MW-06	MC9008-6	X	Aqueous
03/22/12	MW-07	MC9008-7	X	Aqueous
03/22/12	MW-08	MC9008-8	X	Aqueous
03/22/12	MW-11	MC9008-9	X	Aqueous
03/22/12	MW-107	MC9008-10	X	Aqueous
03/22/12	TT-MW-02	MC9008-11	X	Aqueous
03/22/12	TT-MW-04	MC9008-12	X	Aqueous
03/22/12	TT-MW-05	MC9008-13	X	Aqueous
03/22/12	TT-MW-07	MC9008-14	X	Aqueous
03/22/12	TT-MW-08	MC9008-15	X	Aqueous
03/22/12	TT-MW-09	MC9008-16	X	Aqueous
03/22/12	TT-MW-10	MC9008-17	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. Laboratory calculations have been verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the Former TTC-Glen Head, NY site consists of 16 aqueous field samples and 1 trip blank. The samples were analyzed for the parameters as listed above.

The organic findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct.

The VOC findings are based upon the assessment of the following:

- * • Data Completeness
- * • Holding Times
- * • Calibration (Initial and Continuing)
- * • Blanks
- * • System Monitoring Compounds (Surrogate Spikes)
- * • Laboratory Control Sample
- * • Matrix Spike/Matrix Spike Duplicates
- * • Internal Standards
- * • Target Compound Identification
- Compound Quantification and Reported Contract Quantitation Limits
- * • System Performance
- * Criteria were met for this evaluation item.

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

1. Compound Quantitation

Positive results less than the reporting limit were qualified as estimated "J" due to uncertainty near the detection limit.

NOTES**VOLATILE ORGANIC COMPOUNDS****Field Duplicates**

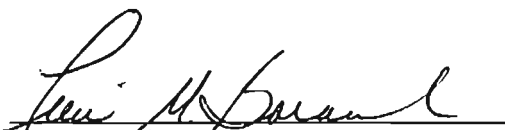
Calculate RPD for positive results only.

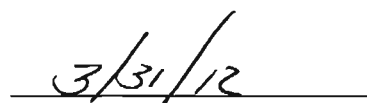
Sample ID	Duplicate ID	Parameter	RPD
MW-07	MW-107		
2.6	2.6	cis-1,2-Dichloroethene	0.0
4.2	4.5	Trichloroethene	-6.9
790	793	Tetrachloroethene	-0.4

Compound Quantitation

The following samples were analyzed at the noted dilution factor for the listed parameter(s). This accounts for the elevated reporting limits. Data are not qualified on this basis.

Sample ID	Parameter(s)	Dilution Factor
MW-01, MW-04	tetrachloroethene	5x
TT-MW-02	trichloroethene	5x
MW-07, MW-107	tetrachloroethene	10x


Data Reviewer


Date

Glossary of Data Qualifiers

U	Not Detected.	The associated number indicates approximate sample concentration necessary to be detected.
UJ	Not Detected.	Quantitation limit may be inaccurate or imprecise.
J	Analyte Present.	Reported value may not be accurate or precise.
N	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts.
R	Unusable Result.	Analyte may or may not be present in the sample.
UR	Unusable Result.	Analyte may or may not be present in the sample.
NJ	Consider Present.	Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling efforts. Reported value may not be accurate or precise.



ECT.CON INC.

Environmental and Computer
Technology Consultants

Annotated Form 1's (Spreadsheet)

Accutest Laboratories

Report of Analysis

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Client Sample ID: TB032212	Date Sampled: 03/22/12
Lab Sample ID: MC9008-1	Date Received: 03/23/12
Matrix: AQ - Trip Blank Water	Percent Solids: n/a
Method: SW846 8260B	
Project: Former TTC, 1 Robert Lane, Glen Head, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61718.D	1	03/26/12	EK	n/a	n/a	MSN2308
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.36	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	84%		70-130%
2037-26-5	Toluene-D8	85%		70-130%
460-00-4	4-Bromofluorobenzene	94%		70-130%

MB
3/31/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Page 1 of 1

3.2

Client Sample ID:	MW-01	Date Sampled:	03/22/12
Lab Sample ID:	MC9008-2	Date Received:	03/23/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61719.D	1	03/26/12	EK	n/a	n/a	MSN2308
Run #2	N61745.D	5	03/27/12	EK	n/a	n/a	MSN2309

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	6.9	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	473 ^a	5.0	1.8	ug/l	
79-01-6	Trichloroethene	7.1	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	83%	81%	70-130%
2037-26-5	Toluene-D8	85%	83%	70-130%
460-00-4	4-Bromofluorobenzene	95%	98%	70-130%

(a) Result is from Run# 2

Handwritten signature
3/31/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

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3.3



Client Sample ID:	MW-03	Date Sampled:	03/22/12
Lab Sample ID:	MC9008-3	Date Received:	03/23/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61720.D	1	03/26/12	EK	n/a	n/a	MSN2308
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	38.3	1.0	0.36	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		70-130%
2037-26-5	Toluene-D8	83%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%

MB
3/31/12

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Client Sample ID:	MW-04	Date Sampled:	03/22/12
Lab Sample ID:	MC9008-4	Date Received:	03/23/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61721.D	1	03/26/12	EK	n/a	n/a	MSN2308
Run #2	N61746.D	5	03/27/12	EK	n/a	n/a	MSN2309

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	5.5	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	648	5.0	1.8	ug/l	
79-01-6	Trichloroethene	4.5	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	84%	82%	70-130%
2037-26-5	Toluene-D8	85%	84%	70-130%
460-00-4	4-Bromofluorobenzene	95%	105%	70-130%

(a) Result is from Run# 2

Handwritten signature
3/23/12

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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3.5

3

Client Sample ID:	MW-05	Date Sampled:	03/22/12
Lab Sample ID:	MC9008-5	Date Received:	03/23/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61722.D	1	03/26/12	EK	n/a	n/a	MSN2308
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	82.1	1.0	0.36	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	84%		70-130%
2037-26-5	Toluene-D8	83%		70-130%
460-00-4	4-Bromofluorobenzene	96%		70-130%

MB
3/23/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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3.6

Client Sample ID:	MW-06	Date Sampled:	03/22/12
Lab Sample ID:	MC9008-6	Date Received:	03/23/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61723.D	1	03/26/12	EK	n/a	n/a	MSN2308
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	73.6	1.0	0.36	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	96%		70-130%

Handwritten: MAB
3/31/12

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

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3.7

Client Sample ID:	MW-07	Date Sampled:	03/22/12
Lab Sample ID:	MC9008-7	Date Received:	03/23/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61724.D	1	03/26/12	EK	n/a	n/a	MSN2308
Run #2	N61748.D	10	03/27/12	EK	n/a	n/a	MSN2309

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	2.6	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	790 ^J	10	3.6	ug/l	
79-01-6	Trichloroethene	4.2	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	87%	84%	70-130%
2037-26-5	Toluene-D8	85%	84%	70-130%
460-00-4	4-Bromofluorobenzene	98%	100%	70-130%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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3.8



Client Sample ID:	MW-08	Date Sampled:	03/22/12
Lab Sample ID:	MC9008-8	Date Received:	03/23/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61725.D	1	03/26/12	EK	n/a	n/a	MSN2308
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	144	1.0	0.36	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		70-130%
2037-26-5	Toluene-D8	85%		70-130%
460-00-4	4-Bromofluorobenzene	97%		70-130%

MB
3/31/12

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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3.9

Client Sample ID:	MW-11	Date Sampled:	03/22/12
Lab Sample ID:	MC9008-9	Date Received:	03/23/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DP	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61726.D	1	03/26/12	EK	n/a	n/a	MSN2308
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	155	1.0	0.36	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	98%		70-130%

MB
3/31/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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3.10



Client Sample ID:	MW-107	Date Sampled:	03/22/12
Lab Sample ID:	MC9008-10	Date Received:	03/23/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61727.D	1	03/26/12	EK	n/a	n/a	MSN2308
Run #2	N61749.D	10	03/27/12	EK	n/a	n/a	MSN2309

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	2.6	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	793	10	3.6	ug/l	
79-01-6	Trichloroethene	4.5	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%	85%	70-130%
2037-26-5	Toluene-D8	85%	85%	70-130%
460-00-4	4-Bromofluorobenzene	99%	101%	70-130%

(a) Result is from Run# 2

MP
3/31/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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3.11

Client Sample ID:	TT-MW-02	Date Sampled:	03/22/12
Lab Sample ID:	MC9008-11	Date Received:	03/23/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61728.D	1	03/26/12	EK	n/a	n/a	MSN2308
Run #2	N61747.D	5	03/27/12	EK	n/a	n/a	MSN2309

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	197	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.97 J	1.0	0.64	ug/l	J
127-18-4	Tetrachloroethene	22.0	1.0	0.36	ug/l	
79-01-6	Trichloroethene	663 ^a	5.0	3.8	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%	85%	70-130%
2037-26-5	Toluene-D8	85%	84%	70-130%
460-00-4	4-Bromofluorobenzene	96%	102%	70-130%

(a) Result is from Run# 2

mb
3/23/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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3.12



Client Sample ID:	TT-MW-04	Date Sampled:	03/22/12
Lab Sample ID:	MC9008-12	Date Received:	03/23/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61750.D	1	03/27/12	EK	n/a	n/a	MSN2309
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	61.0	1.0	0.36	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%		70-130%
2037-26-5	Toluene-D8	85%		70-130%
460-00-4	4-Bromofluorobenzene	104%		70-130%

MB
3/31/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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3.13



Client Sample ID:	TT-MW-05	Date Sampled:	03/22/12
Lab Sample ID:	MC9008-13	Date Received:	03/23/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61730.D	1	03/26/12	EK	n/a	n/a	MSN2308
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	3.3	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	167	1.0	0.36	ug/l	
79-01-6	Trichloroethene	3.1	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%		70-130%
2037-26-5	Toluene-D8	85%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

MB
3/23/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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3.14

Client Sample ID:	TT-MW-07	Date Sampled:	03/22/12
Lab Sample ID:	MC9008-14	Date Received:	03/23/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61751.D	1	03/27/12	EK	n/a	n/a	MSN2309
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	0.85	1.0	0.36	ug/l	✓
79-01-6	Trichloroethene	ND	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%

MP
3/31/12

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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3.15

3

Client Sample ID: TT-MW-08	Date Sampled: 03/22/12
Lab Sample ID: MC9008-15	Date Received: 03/23/12
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: Former TTC, 1 Robert Lane, Glen Head, NY	

	File ID	DP	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61732.D	1	03/27/12	EK	n/a	n/a	MSN2308
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	0.82	1.0	0.36	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	87%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	97%		70-130%

msb
3/31/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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Client Sample ID:	TT-MW-09	Date Sampled:	03/22/12
Lab Sample ID:	MC9008-16	Date Received:	03/23/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61733.D	1	03/27/12	EK	n/a	n/a	MSN2308
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	0.71	1.0	0.69	ug/l	J
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	1.4	1.0	0.36	ug/l	
79-01-6	Trichloroethene	6.4	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

MP
3/23/12

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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3.17

3

Client Sample ID:	TT-MW-10	Date Sampled:	03/22/12
Lab Sample ID:	MC9008-17	Date Received:	03/23/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N61734.D	1	03/27/12	EK	n/a	n/a	MSN2308
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	78.8	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	6.9	1.0	0.36	ug/l	
79-01-6	Trichloroethene	250	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	103%		70-130%

DMB
3/31/12

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound



ECT.CON INC.

Environmental and Computer
Technology Consultants

Support Documentation

COC

CHAIN OF CUSTODY

Accurate Laboratories of New England
495 Technology Center West, Building One
TEL: 508-481-4200 FAX: 508-481-7753
www.2accurate.com

PAGE 1 OF 2

[illegible]

4.1

MC9008: Chain of Custody
Page 1 of 4



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC9008

Client: wasp

Immediate Client Services Action Required: No

Date / Time Received: 3/23/2012

Delivery Method: Accutest Courier

Project: FORMER TTC

No. Coolers: 1

Airbtl #s:

Cooler Security

Y or N

Y or N

1. Custody Seals Present:	☒	☐	3. COC Present:	☒	☐
2. Custody Seals Intact:	☒	☐	4. Smpl Dates/Time OK:	☒	☐

Cooler Temperature

Y or N

1. Temp criteria achieved:	☒	☐
2. Cooler temp verification:	Infrared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservation

Y

N

N/A

1. Trip Blank present / cooler:	☐	☐	
2. Trip Blank listed on COC:	☐	☐	
3. Samples preserved properly:	☒	☐	
4. VOCs headspace free:	☐	☐	☒

Comments

received (DIF10 9 vials other samples had 3. Did not determine if matched.

Sample Integrity - Documentation

Y or N

1. Sample labels present on bottles:	☒	☐
2. Container labeling complete:	☒	☐
3. Sample container label / COC agree:	☒	☐

Sample Integrity - Condition

Y or N

1. Sample rec'd within HT:	☒	☐
2. All containers accounted for:	☒	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions

Y

N

N/A

1. Analysis requested is clear:	☒	☐	
2. Bottles received for unspecified tests:	☐	☒	
3. Sufficient volume rec'd for analysis:	☒	☐	
4. Compositing instructions clear:	☐	☐	☒
5. Filtering instructions clear:	☐	☐	☒

Accutest Laboratories
V: 508.481.6200

400 Technology Center West, 5th Floor
P: 508.481.7703

Marlborough, MA
www.accutest.com

MC9008: Chain of Custody
Page 3 of 4



Sample Receipt Summary - Problem Resolution

Accutest Job Number: MC9008

CSR: Jeremy Vienneau

Response Date 3/26/2012

Response: Client advised that they would like to have -10 (MW-107) analyzed for MS/MSD. See email in file.

4.1

4

Accutest Laboratories
V: 508.481.5200

400 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www.accutest.com

MC9008: Chain of Custody
Page 4 of 4

Laboratory Case Narrative

SAMPLE DELIVERY GROUP CASE NARRATIVE**Client:** WSP Environmental & Energy**Job No** MC9008**Site:** Former TTC, 1 Robert Lane, Glen Head, NY**Report Date** 3/30/2012 11:12:03 AM

16 Sample(s), 1 Trip Blank were collected on 03/22/2012 and were received at Accutest on 03/23/2012 properly preserved, at 0.8 Deg. C and intact. These Samples received an Accutest job number of MC9008. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix	AQ	Batch ID:	MSN2308

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC9008-17MS, MC9008-17MSD were used as the QC samples indicated.

Matrix	AQ	Batch ID:	MSN2309

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC9008-12MS, MC9008-12MSD were used as the QC samples indicated.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report (MC9008).



Sample Summary

WSP Environmental & Energy

Job No: MC9008

Former TTC, 1 Robert Lane, Glen Head, NY
Project No: 28873/03

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
MC9008-1	03/22/12	00:00 DAC	03/23/12	AQ Trip Blank Water	TB032212
MC9008-2	03/22/12	13:05 DAC	03/23/12	AQ Ground Water	MW-01
MC9008-3	03/22/12	12:20 DAC	03/23/12	AQ Ground Water	MW-03
MC9008-4	03/22/12	14:00 DAC	03/23/12	AQ Ground Water	MW-04
MC9008-5	03/22/12	12:40 DAC	03/23/12	AQ Ground Water	MW-05
MC9008-6	03/22/12	10:55 DAC	03/23/12	AQ Ground Water	MW-06
MC9008-7	03/22/12	11:15 DAC	03/23/12	AQ Ground Water	MW-07
MC9008-8	03/22/12	11:45 DAC	03/23/12	AQ Ground Water	MW-08
MC9008-9	03/22/12	11:50 DAC	03/23/12	AQ Ground Water	MW-11
MC9008-10	03/22/12	10:00 DAC	03/23/12	AQ Ground Water	MW-107
MC9008-11	03/22/12	16:10 DAC	03/23/12	AQ Ground Water	TT-MW-02
MC9008-12	03/22/12	14:45 DAC	03/23/12	AQ Ground Water	TT-MW-04
MC9008-13	03/22/12	14:30 DAC	03/23/12	AQ Ground Water	TT-MW-05

Accutest Laboratories

Sample Summary
(continued)

WSP Environmental & Energy

Job No: MC9008

Former TTC, 1 Robert Lane, Glen Head, NY
Project No: 28873/03

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
MC9008-14	03/22/12	15:20 DAC	03/23/12	AQ Ground Water	TT-MW-07
MC9008-15	03/22/12	15:05 DAC	03/23/12	AQ Ground Water	TT-MW-08
MC9008-16	03/22/12	16:30 DAC	03/23/12	AQ Ground Water	TT-MW-09
MC9008-17	03/22/12	15:45 DAC	03/23/12	AQ Ground Water	TT-MW-10
MC9008-17D	03/22/12	15:45 DAC	03/23/12	AQ Water Dup/MSD	TT-MW-10
MC9008-17S	03/22/12	15:45 DAC	03/23/12	AQ Water Matrix Spike	TT-MW-10

Worksheets

8260

SDG #: MC9008

Sample Temp: <6

HOLDING TIMES

14 days from collection to prep and analysis
 Sample Date 3/22/12 Analyze by 4/5/12

	SAMPLE DATE	SAMPLE ID	LABORATORY ID	VOCs	MATRIX	DATE ANALYZED	DF
1	03/22/12	TB032212	MC9008-1	X	Aqueous	3/26/12	1
2	03/22/12	MW-01	MC9008-2	X	Aqueous	3/26-27/12	1/5 PCE
3	03/22/12	MW-03	MC9008-3	X	Aqueous	3/26/12	1
4	03/22/12	MW-04	MC9008-4	X	Aqueous	3/26-27/12	1/5 PCE
5	03/22/12	MW-05	MC9008-5	X	Aqueous	3/26/12	1
6	03/22/12	MW-06	MC9008-6	X	Aqueous	3/26/12	1
7	03/22/12	MW-07	MC9008-7	X	Aqueous	3/26-27/12	1/10 PCE
8	03/22/12	MW-08	MC9008-8	X	Aqueous	3/26/12	1
9	03/22/12	MW-11	MC9008-9	X	Aqueous	3/26/12	1
10	03/22/12	MW-107	MC9008-10	X	Aqueous	3/26-27/12	1/10 PCE
11	03/22/12	TT-MW-02	MC9008-11	X	Aqueous	3/26-27/12	1/5 TCE
12	03/22/12	TT-MW-04	MC9008-12	X	Aqueous	3/27/12	1
13	03/22/12	TT-MW-05	MC9008-13	X	Aqueous	3/26/12	1
14	03/22/12	TT-MW-07	MC9008-14	X	Aqueous	3/27/12	1
15	03/22/12	TT-MW-08	MC9008-15	X	Aqueous	3/27/12	1
16	03/22/12	TT-MW-09	MC9008-16	X	Aqueous	3/27/12	1
17	03/22/12	TT-MW-10	MC9008-17	X	Aqueous	3/27/12	1

TARGET COMPOUNDS AND QUANTITATION LIMITS

Was a target compound list provided by the client? No
 Did Sample Form 1s match the target compound list? Not Applicable
 Were required quantitation limits provided by the client? No
 Did all compounds meet the required quantitation limits? Not Applicable

SYSTEM MONITORING COMPOUNDS

SAMPLE	SURROGATE	RECOVERY	DF	ACTION
ALL	ALL	OK		

Were surrogate RTs within windows established by the ICAL? Yes
 Were there any transcription errors between the raw data and Form 2? No
 Were laboratory acceptance limits used as the basis for validation? Yes
 Did the laboratory provide CLP Form II or equivalent? No

SAMPLE MW-01

SURR	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 2
ToI-d8	42.55	50	85.1	85
BFB	47.3	50	94.6	95
DBFMA	41.71	50	83.4	83

Recovery = (Amount Found/Amount Spiked)*100

MS/MSD RECOVERY and RELATIVE PERCENT DIFFERENCE

SAMPLE	COMPOUND	MS %R	MSD %R	RPD %R
TT-MW-04	ALL	OK	OK	OK
TT-MW-10	ALL	OK	OK	OK

Were there any transcription errors between the raw data and Form 3? No 49.96
 Were laboratory acceptance limits used as the basis for validation? Yes 46.46
 Did the laboratory provide CLP Form III or equivalent? Yes
 Were chromatograms and quan reports present for all MS/MSDs? Yes

SAMPLE	TT-MW-04	COMPOUND	CIS-1,2-DCE		
	AMOUNT FOUND	NATIVE AMOUNT	AMOUNT SPIKED	%R	FORM 3
MS	249.8	0	250	99.92	100
MSD	232.3	0	250	92.92	93
RPD	7.26			7.26	7

Recovery = ((Amount Found-Amount Native)/Amount Spiked)*100

RPD = ((MS-MSD)/((MS+MSD)/2))*100

LABORATORY CONTROL SAMPLES

SAMPLE	COMPOUND	LCS %R	LCSD %R	%RPD
2308	all	ok	ok	ok
27-Apr	All	OK	OK	OK

Were there any transcription errors between the raw data and Form 3? No
 Were laboratory acceptance limits used as the basis for validation? Yes
 Did the laboratory provide CLP Form III or equivalent? Yes
 Were chromatograms and quan reports present for all LCS/LCSDs? Yes

SAMPLE	2308	COMPOUND	CIS-1,2-DCE	
	AMOUNT FOUND	AMOUNT SPIKED	%R	FORM 3
LCS	46.68	50	93.38	93
LCSD	45.8	50	91.2	91
RPD	2.340702211		2.340702211	2

Recovery = ((Amount Found)/Amount Spiked)*100

RPD = ((LCS-LCD)/((LCS+LCSD)/2))*100

BLANKS

Were Form Is provided for all blanks? Yes
 Were chromatograms and quan reports present for all blanks? Yes
 Did the laboratory provide CLP Form IVs or equivalent? Yes

BLANK	COMPOUND	RESULT	5X OR 10X	ACTION LEVEL	AFFECTED SAMPLES
2308	all	nd	5	#VALUE!	2/4/11
2309	all	nd	5	#VALUE!	
TB	all	nd	10	#VALUE!	

CALIBRATION

	ICAL	CCV	CCV
Instrument	MAMSN	MAMSN	MAMSN
Date	3/16/12	3/26/12	3/27/12
CCV		15:29	4:12
CCV Bonus			

Are chromatograms and quan reports present for all ICAL standards? Yes
 Are CLP Form VIs or equivalent present and complete? Yes
 Any transcription or calculation errors? No
 What linearity criteria was used? %RSD 30
 Are RRFs greater than 0.05? No

INITIAL CALIBRATION RRF

Date 3/16/12
 Instrument MAMSN
 Compound CIS-1,2-DCE
 Reported RRF 0.689
 Calculated RRF 0.6886

Compound Area (A1) 93683
 Conc (C1) 25
 Internal Std Area (A2) 272100
 Conc (C2) 50

RRF = (A1/A2) * (C2/C1)

INITIAL CALIBRATION AVERAGE RRF

Date 3/16/12
 Instrument MAMSN
 Compound CIS-1,2-DCE
 Reported Average RRF 0.645
 Calculated Average RRF 0.6448
 Reported RSD 5.1800
 Calculated RSD 5.1945
 (RRF-(avg)RRF)^2
 RRF1 0.605 0.0016
 RRF2 0.606 0.001521
 RRF3 0.669 0.000576
 RRF4 0.675 0.0009
 RRF5 0.665 0.0004
 RRF6 0.631 0.000196
 RRF7 0.618 0.000729
 RRF8 0.689 0.001936
 SUM 5.158 0.007858
 (Sum/N-1)^.5 0.033504797
 ((Sum/N-1)^.5)/Average RRF 0.051945422
 N 8
 N-1 7

CCVs

Are chromatograms and quan reports present for all CCV standards?
 Are CLP Form VIIIs or equivalent present and complete?
 Any transcription or calculation errors?
 What %D criteria was used?
 Were samples analyzed within 12 hours of the tune?

Yes
 Yes
 No
 30%
 Yes

CONTINUING CALIBRATION RRF

Date 3/26/12
 Time 3:29:00 PM
 Instrument MAMSN
 Compound CIS-1,2-DCE
 Reported RRF 0.649
 Calculated RRF 0.6494

Compound Area (A1) 177725
 Conc (C1) 50

Internal Std Area (A2) 273895
 Conc (C2) 50

RRF = (A1/A2) * (C2/C1)

CONTINUING CALIBRATION %D

Date 3/26/12
 Time 3:29 PM
 Instrument MAMSN
 Compound CIS-1,2-DCE
 Reported %Difference -0.6
 Calculated %Difference -0.62

ICAL RRF 0.645
 CCV RRF 0.6490

%Difference (or %Drift) = ((ICAL - CCV)/ICAL)*100

TUNE

Raw data and mass assignments correct?
 Mass listing normalized to specified m/z?
 Were all tune reports present?

Yes
 Yes
 Yes

Instrument
 Date
 Time

MAMSN
 3/26/12
 15:29

m/z	Area	Calculated %	Reported %	Abundance Criteria
50	16448	16.8%	16.8	15-40% of mass 95
75	47072	48.0%	48	30-60% of mass 95
95	97976	100.0%	100	base peak, 100%
96	6638	6.8%	6.78	5-9% of mass 95
173	0	0.0%	0	<2% of mass 174
174	64892	66.3%	66.3	50-150% of mass 95
175	4838	7.4%	7.44	5-9% of mass 174
176	63640	97.8%	97.9	95%-101% of mass 174
177	3929	8.2%	6.17	5-9% of mass 176

INTERNAL STANDARD CHECK

CCV Date 3/28/12
CCV Time 3:29 PM
Instrument MAMSN

Shading indicates a percent recovery outside the -50% to 100% criteria.
Shading indicates a retention time outside the +/- 0.5 minute criteria.

	PFB	RT	14-DFB	RT	CB-D5	RT
UPPER	273895	9.02	495330	9.89	272894	13.15
LOWER	547390	9.52	980660	10.39	545768	13.65
	136848	8.52	247665	9.39	136447	12.65
MW-01	268489	9	487174	10	260215	13
MW-01	98%		98%		95%	
	14-DCB-D14	RT	TBA-D9	RT		
UPPER	209268	15.71	126805	6.57		
LOWER	418536	16.21	253810	7.07		
	104634	15.21	63403	6.07		
MW-01	163566	16	127686	7		
MW-01	78%		101%			

RELATIVE RETENTION TIMES

Shading indicates a relative retention time outside the +/- 0.06 RRT unit criteria.

SAMPLE MW-01

Compound	Sample RT	CCV RT	Difference
DBFMA	8.67	8.66	0.010
Toluene-d8	11.7	11.69	0.010
bfb	14.38	14.38	0.000

FIELD DUPLICATES

Sample ID	Duplicate ID	Parameter	RPD
MW-07	MW-107		
2.6	2.6	cis-1,2-Dichloroethene	0.0
4.2	4.5	Trichloroethene	-6.9
790	793	Tetrachloroethene	-0.4

SAMPLE CALCULATION

sample parameter
MW-01 PCE

toe

Compound area	261717	25431
IS area	256779	487174
IS conc	50	50
Compound RRF	0.539	0.367
DF	5	1
Vol purged	5	5
ng cf	5	5
Concentration	472.7414	7.1119
lab value ppb	473.0000	7.1000

Concentration = (Compound area * IS conc. * Dil. Factor* vol)/(IS area * ICAL Compound RRF* ng cf)

Are there any transcription errors? No
Are Form1s present for all field and quality control samples? Yes
Are chromatograms and quan reports present for all samples? Yes
Are RLs adjusted to reflect sample dilutions, percent solids, etc.? Yes

Volatile Surrogate Recovery Summary

Page 1 of 1

Job Number: MC9008

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Method: SW846 8260B

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC9008-1	N61718.D	84.0	85.0	94.0
MC9008-2	N61719.D	83.0	85.0	95.0
MC9008-2	N61745.D	81.0	83.0	98.0
MC9008-3	N61720.D	85.0	83.0	95.0
MC9008-4	N61721.D	84.0	85.0	95.0
MC9008-4	N61746.D	82.0	84.0	105.0
MC9008-5	N61722.D	84.0	83.0	96.0
MC9008-6	N61723.D	86.0	84.0	96.0
MC9008-7	N61724.D	87.0	85.0	98.0
MC9008-7	N61748.D	84.0	84.0	100.0
MC9008-8	N61725.D	85.0	85.0	97.0
MC9008-9	N61726.D	85.0	84.0	98.0
MC9008-10	N61727.D	85.0	85.0	99.0
MC9008-10	N61749.D	85.0	85.0	101.0
MC9008-11	N61728.D	86.0	85.0	96.0
MC9008-11	N61747.D	85.0	84.0	102.0
MC9008-12	N61750.D	86.0	85.0	104.0
MC9008-13	N61730.D	86.0	85.0	102.0
MC9008-14	N61751.D	85.0	84.0	101.0
MC9008-15	N61732.D	87.0	84.0	97.0
MC9008-16	N61733.D	86.0	84.0	102.0
MC9008-17	N61734.D	86.0	84.0	103.0
MC9008-12MS	N61755.D	84.0	87.0	86.0
MC9008-12MSD	N61756.D	83.0	87.0	85.0
MC9008-17MS	N61735.D	86.0	87.0	84.0
MC9008-17MSD	N61736.D	85.0	87.0	86.0
MSN2308-BS	N61714.D	84.0	86.0	84.0
MSN2308-BSD	N61715.D	83.0	86.0	84.0
MSN2308-MB	N61717.D	82.0	84.0	93.0
MSN2309-BS	N61741.D	84.0	86.0	87.0
MSN2309-BSD	N61742.D	85.0	85.0	85.0
MSN2309-MB	N61744.D	83.0	85.0	94.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

5.6.1

5

Method Blank Summary

Page 1 of 1

Job Number: MC9008

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2308-MB	N61717.D	1	03/26/12	EK	n/a	n/a	MSN2308

The QC reported here applies to the following samples:

Method: SW846 8260B

MC9008-1, MC9008-2, MC9008-3, MC9008-4, MC9008-5, MC9008-6, MC9008-7, MC9008-8, MC9008-9, MC9008-10, MC9008-11, MC9008-13, MC9008-15, MC9008-16, MC9008-17

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.36	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	82%	70-130%
2037-26-5	Toluene-D8	84%	70-130%
460-00-4	4-Bromofluorobenzene	93%	70-130%

5.1.1

5

Method Blank Summary

Page 1 of 1

Job Number: MC9008

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2309-MB	N61744.D	1	03/27/12	EK	n/a	n/a	MSN2309

The QC reported here applies to the following samples:

Method: SW846 8260B

MC9008-2, MC9008-4, MC9008-7, MC9008-10, MC9008-11, MC9008-12, MC9008-14

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.64	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.36	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.75	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.82	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	83% 70-130%
2037-26-5	Toluene-D8	85% 70-130%
460-00-4	4-Bromofluorobenzene	94% 70-130%

5.1.2

5

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: MC9008

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2308-BS	N61714.D	1	03/26/12	EK	n/a	n/a	MSN2308
MSN2308-BSD	N61715.D	1	03/26/12	EK	n/a	n/a	MSN2308

The QC reported here applies to the following samples:

Method: SW846 8260B

MC9008-1, MC9008-2, MC9008-3, MC9008-4, MC9008-5, MC9008-6, MC9008-7, MC9008-8, MC9008-9, MC9008-10, MC9008-11, MC9008-13, MC9008-15, MC9008-16, MC9008-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethene	50	46.7	93	45.6	91	2	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	44.8	90	44.4	89	1	70-130/25
127-18-4	Tetrachloroethene	50	46.2	92	45.7	91	1	70-130/25
79-01-6	Trichloroethene	50	46.3	93	44.2	88	5	70-130/25
75-01-4	Vinyl chloride	50	39.0	78	36.4	73	7	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	84%	83%	70-130%
2037-26-5	Toluene-D8	86%	86%	70-130%
460-00-4	4-Bromofluorobenzene	84%	84%	70-130%

5.2.1
5

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N61714.D

Vial: 16

Acq On : 26 Mar 2012 3:57 pm

Operator: emilyk

Sample : bs

Inst : MAMSN

Misc : MS25367,MSN2308,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 26 16:27:08 2012

Quant Results File: N031512W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N031512W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Fri Mar 16 09:34:36 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.57	65	126132	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	290430	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	514023	50.00	ug/L	0.00
66) chlorobenzene-d5	13.15	82	292989	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	15.71	152	215614	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	159510	41.81	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	83.62%
60) toluene-d8 (s)	11.70	98	637721	42.94	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	85.88%
82) bromofluorobenzene (s)	14.38	95	239390	42.13	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	84.26%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.66	59	137346	526.81	ug/L	88
3) Ethanol	5.42	45	245402	4931.80	ug/L	99
5) dichlorodifluoromethane	4.24	85	127491	33.64	ug/L	94
6) chloromethane	4.49	50	157399	38.55	ug/L	97
7) vinyl chloride	4.74	62	155885	39.03	ug/L	94
8) bromomethane	5.25	96	117041	41.21	ug/L	89
9) chloroethane	5.42	64	109181	43.38	ug/L	90
10) ethyl ether	6.31	59	130534	46.03	ug/L	99
11) acetonitrile	5.97	41	84584	49.61	ug/L	97
12) trichlorofluoromethane	6.08	101	233654	44.25	ug/L	98
13) freon-113	6.86	101	139615	45.09	ug/L	89
14) acrolein	6.07	56	52067	254.33	ug/L	99
15) 1,1-dichloroethene	6.66	96	155626	46.11	ug/L	81
16) acetone	6.20	43	52494	38.95	ug/L	97
17) Methyl Acetate	6.84	43	165431	55.30	ug/L	93
18) methylene chloride	6.81	84	177739	45.20	ug/L	90
19) methyl tert butyl ether	7.60	73	197569	27.34	ug/L	96
20) acrylonitrile	6.72	53	59714	225.65	ug/L	99
21) allyl chloride	6.91	41	177235	44.10	ug/L	91
22) trans-1,2-dichloroethene	7.51	96	153830	44.79	ug/L	88
23) iodomethane	6.72	142	81769	39.78	ug/L	92
24) carbon disulfide	7.10	76	497726	47.16	ug/L	100
25) propionitrile	6.64	54	5536	64.59	ug/L	100
26) vinyl acetate	6.84	43	165431	55.30	ug/L	100
27) chloroprene	8.13	53	225316	47.69	ug/L	89
28) di-isopropyl ether	8.17	45	555230	49.77	ug/L	88
29) methacrylonitrile	8.29	41	100892	45.45	ug/L	95
30) 2-butanone	8.18	72	18957	42.42	ug/L #	38
31) Hexane	8.15	41	225770	49.45	ug/L #	90
32) 1,1-dichloroethane	7.76	63	301257	47.38	ug/L	98
33) tert-butyl ethyl ether	8.56	59	108728	26.12	ug/L	93
34) isobutyl alcohol	8.16	43	440670	243.75	ug/L	89
35) 2,2-dichloropropane	8.63	77	87853	27.60	ug/L	93
36) cis-1,2-dichloroethene	8.33	96	174822	46.68	ug/L	88
37) ethyl acetate	8.16	43	440670	48.77	ug/L	87

(#)= qualifier out of range (m) = manual integration

N61714.D N031512W.M

Tue Mar 27 10:51:54 2012

RP1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N61715.D

Vial: 17

Acq On : 26 Mar 2012 4:25 pm

Operator: emilyk

Sample : bsd

Inst : MAMSN

Misc : MS25367,MSN2308,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 10:52:01 2012

Quant Results File: N031512W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N031512W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Fri Mar 16 09:34:36 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.57	65	138990	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	297215	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	525174	50.00	ug/L	0.00
66) chlorobenzene-d5	13.15	82	298791	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	15.71	152	220902	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	162044	41.51	ug/L	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	83.02%	
60) toluene-d8 (s)	11.69	98	655271	43.19	ug/L	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	86.38%	
82) bromofluorobenzene (s)	14.38	95	243239	41.78	ug/L	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	83.56%	

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.66	59	145150	505.23	ug/L	94
3) Ethanol	5.42	45	252343	4602.14	ug/L	99
5) dichlorodifluoromethane	4.24	85	123012	31.71	ug/L	100
6) chloromethane	4.49	50	164637	39.41	ug/L	95
7) vinyl chloride	4.74	62	150077	36.45	ug/L	94
8) bromomethane	5.25	96	117578	40.46	ug/L	99
9) chloroethane	5.42	64	107667	41.80	ug/L	97
10) ethyl ether	6.31	59	132418	45.63	ug/L	98
11) acetonitrile	5.97	41	80013	45.85	ug/L	97
12) trichlorofluoromethane	6.08	101	228901	42.36	ug/L	96
13) freon-113	6.86	101	136941	43.22	ug/L	86
14) acrolein	6.07	56	52883	252.41	ug/L	99
15) 1,1-dichloroethene	6.67	96	154290	44.67	ug/L #	77
16) acetone	6.20	43	48130	34.90	ug/L	93
17) Methyl Acetate	6.84	43	163927	53.54	ug/L	98
18) methylene chloride	6.81	84	176836	43.83	ug/L	88
19) methyl tert butyl ether	7.60	73	223456	29.90	ug/L	100
20) acrylonitrile	6.71	53	61697	227.82	ug/L	93
21) allyl chloride	6.91	41	182978	44.49	ug/L	92
22) trans-1,2-dichloroethene	7.51	96	156140	44.42	ug/L	88
23) iodomethane	6.72	142	78581	37.46	ug/L	96
24) carbon disulfide	7.09	76	494136	45.76	ug/L	99
25) propionitrile	6.63	54	5226	58.58	ug/L	100
26) vinyl acetate	6.84	43	163927	53.54	ug/L	98
27) chloroprene	8.13	53	223844	46.30	ug/L	93
28) di-isopropyl ether	8.17	45	558572	48.93	ug/L	89
29) methacrylonitrile	8.29	41	101785	44.81	ug/L	96
30) 2-butanone	8.18	72	20430	44.68	ug/L #	90
31) Hexane	8.15	41	215592	46.14	ug/L	89
32) 1,1-dichloroethane	7.76	63	301275	46.30	ug/L	97
33) tert-butyl ethyl ether	8.56	59	128592	28.51	ug/L	91
34) isobutyl alcohol	8.16	43	436015	235.67	ug/L	91
35) 2,2-dichloropropane	8.62	77	88521	27.27	ug/L	95
36) cis-1,2-dichloroethene	8.33	96	174741	45.60	ug/L	87
37) ethyl acetate	8.16	43	438472	47.42	ug/L	87

(#)= qualifier out of range (m)= manual integration

N61715.D N031512W.M

Tue Mar 27 10:56:12 2012

RP1

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Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: MC9008

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DP	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2309-BS	N61741.D	1	03/27/12	EK	n/a	n/a	MSN2309
MSN2309-BSD	N61742.D	1	03/27/12	EK	n/a	n/a	MSN2309

The QC reported here applies to the following samples:

Method: SW846 8260B

MC9008-2, MC9008-4, MC9008-7, MC9008-10, MC9008-11, MC9008-12, MC9008-14

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethene	50	47.3	95	48.4	97	2	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	45.5	91	46.8	94	3	70-130/25
127-18-4	Tetrachloroethene	50	45.1	90	46.3	93	3	70-130/25
79-01-6	Trichloroethene	50	45.7	91	47.3	95	3	70-130/25
75-01-4	Vinyl chloride	50	36.4	73	35.4	71	3	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	84%	85%	70-130%
2037-26-5	Toluene-D8	86%	85%	70-130%
460-00-4	4-Bromofluorobenzene	87%	85%	70-130%

5.2.2
5

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC9008

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC9008-17MS	N61735.D	1	03/27/12	EK	n/a	n/a	MSN2308
MC9008-17MSD	N61736.D	1	03/27/12	EK	n/a	n/a	MSN2308
MC9008-17	N61734.D	1	03/27/12	EK	n/a	n/a	MSN2308

The QC reported here applies to the following samples:

Method: SW846 8260B

MC9008-1, MC9008-2, MC9008-3, MC9008-4, MC9008-5, MC9008-6, MC9008-7, MC9008-8, MC9008-9, MC9008-10, MC9008-11, MC9008-13, MC9008-15, MC9008-16, MC9008-17

CAS No.	Compound	MC9008-17 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethene	78.8	50	133	108	134	110	1	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	50	48.5	97	49.8	100	3	70-130/30
127-18-4	Tetrachloroethene	6.9	50	54.2	95	54.6	95	1	70-130/30
79-01-6	Trichloroethene	250	50	292	84	294	88	1	70-130/30
75-01-4	Vinyl chloride	ND	50	47.4	95	45.6	91	4	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC9008-17	Limits
1868-53-7	Dibromofluoromethane	86%	85%	86%	70-130%
2037-26-5	Toluene-D8	87%	87%	84%	70-130%
460-00-4	4-Bromofluorobenzene	84%	86%	103%	70-130%

5.3.1

5

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N61735.D

Vial: 37

Acq On : 27 Mar 2012 1:50 am

Operator: emilyk

Sample : mc9008-17ms

Inst : MAMSN

Misc : MS25375,MSN2308,,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 08:07:25 2012

Quant Results File: N031512W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N031512W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Fri Mar 16 09:34:36 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.58	65	108041	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	257469	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	467021	50.00	ug/L	0.00
66) chlorobenzene-d5	13.15	82	259605	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	15.71	152	200354	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	145176	42.93	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	85.86%
60) toluene-d8 (s)	11.69	98	585894	43.43	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	86.86%
82) bromofluorobenzene (s)	14.37	95	221195	41.89	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	83.78%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.67	59	122491	548.50	ug/L	# 77
3) Ethanol	5.43	45	228612	5363.68	ug/L	96
5) dichlorodifluoromethane	4.24	85	118625	35.30	ug/L	99
6) chloromethane	4.49	50	160043	44.22	ug/L	93
7) vinyl chloride	4.75	62	164587	47.36	ug/L	95
8) bromomethane	5.25	96	108781	43.21	ug/L	96
9) chloroethane	5.42	64	104668	46.91	ug/L	93
10) ethyl ether	6.31	59	122707	48.81	ug/L	100
11) acetonitrile	5.97	41	83606	55.31	ug/L	97
12) trichlorofluoromethane	6.08	101	220731	47.15	ug/L	93
13) freon-113	6.85	101	134167	48.88	ug/L	84
14) acrolein	6.07	56	41826	230.46	ug/L	98
15) 1,1-dichloroethene	6.66	96	150131	50.18	ug/L	# 75
16) acetone	6.20	43	92954	77.80	ug/L	98
17) Methyl Acetate	6.84	43	140512	52.98	ug/L	93
18) methylene chloride	6.81	84	165133	47.55	ug/L	88
19) methyl tert butyl ether	7.60	73	161713	25.47	ug/L	97
20) acrylonitrile	6.72	53	55870	238.16	ug/L	92
21) allyl chloride	6.91	41	172625	48.46	ug/L	91
22) trans-1,2-dichloroethene	7.51	96	147673	48.50	ug/L	86
23) iodomethane	6.72	142	81523	44.55	ug/L	96
24) carbon disulfide	7.09	76	468428	50.07	ug/L	100
25) propionitrile	6.63	54	6119	84.06	ug/L	100
26) vinyl acetate	6.84	43	140512	52.98	ug/L	100
27) chloroprene	8.13	53	207897	49.64	ug/L	91
28) di-isopropyl ether	8.17	45	536654	54.26	ug/L	87
29) methacrylonitrile	8.29	41	93024	47.27	ug/L	91
30) 2-butanone	8.18	72	18552	46.83	ug/L	# 45
31) Hexane	8.15	41	211638	52.29	ug/L	99
32) 1,1-dichloroethane	7.76	63	296069	52.52	ug/L	99
33) tert-butyl ethyl ether	8.56	59	73071	22.41	ug/L	92
34) isobutyl alcohol	8.16	43	420251	262.22	ug/L	90
35) 2,2-dichloropropane	8.62	77	61378	22.96	ug/L	92
36) cis-1,2-dichloroethene	8.33	96	441061	132.86	ug/L	85
37) ethyl acetate	8.16	43	420251	52.47	ug/L	86

(#)= qualifier out of range (m) = manual integration

N61735.D N031512W.M

Tue Mar 27 14:57:12 2012

RP1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N61736.D

Vial: 38

Acq On : 27 Mar 2012 2:19 am

Operator: emilyk

Sample : mc9008-17msd

Inst : MAMSN

Misc : MS25375,MSN2308,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 08:07:35 2012

Quant Results File: N031512W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N031512W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Fri Mar 16 09:34:36 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.57	65	125338	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	270300	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	490371	50.00	ug/L	0.00
66) chlorobenzene-d5	13.15	82	279326	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	15.71	152	204040	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	151751	42.74	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	85.48%
60) toluene-d8 (s)	11.69	98	614214	43.36	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	86.72%
82) bromofluorobenzene (s)	14.38	95	230192	42.81	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	85.62%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.66	59	135898	524.55	ug/L	86
3) Ethanol	5.42	45	249851	5053.02	ug/L	99
5) dichlorodifluoromethane	4.24	85	129224	36.63	ug/L	97
6) chloromethane	4.49	50	173201	45.58	ug/L	99
7) vinyl chloride	4.74	62	167003	45.62	ug/L	94
8) bromomethane	5.25	96	118129	44.70	ug/L	99
9) chloroethane	5.42	64	111524	47.61	ug/L	95
10) ethyl ether	6.31	59	129618	49.11	ug/L	95
11) acetonitrile	5.97	41	81081	51.09	ug/L	97
12) trichlorofluoromethane	6.08	101	234637	47.74	ug/L	96
13) freon-113	6.86	101	141821	49.21	ug/L	87
14) acrolein	6.07	56	45302	237.76	ug/L	94
15) 1,1-dichloroethene	6.67	96	154882	49.31	ug/L #	75
16) acetone	6.20	43	97336	77.60	ug/L	97
17) Methyl Acetate	6.84	43	149561	53.72	ug/L	96
18) methylene chloride	6.81	84	173878	47.71	ug/L	85
19) methyl tert butyl ether	7.60	73	205707	30.22	ug/L	95
20) acrylonitrile	6.72	53	58451	237.33	ug/L	92
21) allyl chloride	6.91	41	177334	47.41	ug/L	89
22) trans-1,2-dichloroethene	7.51	96	159075	49.76	ug/L	90
23) iodomethane	6.72	142	82759	43.12	ug/L	92
24) carbon disulfide	7.09	76	499686	50.88	ug/L	99
25) propionitrile	6.64	54	5590	71.22	ug/L	100
26) vinyl acetate	6.84	43	149561	53.72	ug/L	95
27) chloroprene	8.13	53	226696	51.55	ug/L	90
28) di-isopropyl ether	8.16	45	572131	55.10	ug/L	87
29) methacrylonitrile	8.28	41	98776	47.81	ug/L	91
30) 2-butanone	8.18	72	20336	48.90	ug/L #	78
31) Hexane	8.15	41	223773	52.66	ug/L #	93
32) 1,1-dichloroethane	7.76	63	317321	53.62	ug/L	97
33) tert-butyl ethyl ether	8.56	59	108263	27.20	ug/L	93
34) isobutyl alcohol	8.17	43	444012	263.89	ug/L	99
35) 2,2-dichloropropane	8.62	77	79220	26.92	ug/L	95
36) cis-1,2-dichloroethene	8.33	96	467337	134.09	ug/L	83
37) ethyl acetate	8.17	43	444147	52.82	ug/L	84

(#)= qualifier out of range (m) = manual integration

N61736.D N031512W.M

Tue Mar 27 14:57:29 2012

RP1

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Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC9008

Account: WSPNYC WSP Environmental & Energy

Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC9008-12MS	N61755.D	5	03/27/12	EK	n/a	n/a	MSN2309
MC9008-12MSD	N61756.D	5	03/27/12	EK	n/a	n/a	MSN2309
MC9008-12	N61750.D	1	03/27/12	EK	n/a	n/a	MSN2309

The QC reported here applies to the following samples:

Method: SW846 8260B

MC9008-2, MC9008-4, MC9008-7, MC9008-10, MC9008-11, MC9008-12, MC9008-14

CAS No.	Compound	MC9008-12 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethene	ND	250	250	100	232	93	7	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	245	98	226	90	8	70-130/30
127-18-4	Tetrachloroethene	61.0	250	302	96	282	88	7	70-130/30
79-01-6	Trichloroethene	ND	250	246	98	229	92	7	70-130/30
75-01-4	Vinyl chloride	ND	250	206	82	185	74	11	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC9008-12	Limits
1868-53-7	Dibromofluoromethane	84%	83%	86%	70-130%
2037-26-5	Toluene-D8	87%	87%	85%	70-130%
460-00-4	4-Bromofluorobenzene	86%	85%	104%	70-130%

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N61755.D
 Acq On : 27 Mar 2012 12:54 pm
 Sample : MC9008-12MS,1:5
 Misc : MS25375,MSN2309,,,5,5
 MS Integration Params: RTEINT.P
 Quant Time: Mar 27 13:40:16 2012

Vial: 57
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N031512W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N031512W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Fri Mar 16 09:34:36 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.57	65	125590	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	283249	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	499532	50.00	ug/L	0.00
66) chlorobenzene-d5	13.15	82	285813	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	15.71	152	206615	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	155401	41.77	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	83.54%
60) toluene-d8 (s)	11.69	98	627364	43.47	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	86.94%
82) bromofluorobenzene (s)	14.37	95	233906	42.96	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	85.92%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.66	59	144314	555.92	ug/L	88
3) Ethanol	5.42	45	253836	5123.31	ug/L	99
5) dichlorodifluoromethane	4.24	85	116286	31.46	ug/L	99
6) chloromethane	4.49	50	157673	39.60	ug/L	94
7) vinyl chloride	4.74	62	159459	41.16	ug/L	95
8) bromomethane	5.25	96	116600	42.10	ug/L	98
9) chloroethane	5.42	64	114206	46.52	ug/L	98
10) ethyl ether	6.31	59	138902	50.22	ug/L	97
11) acetonitrile	5.97	41	97508	58.63	ug/L	96
12) trichlorofluoromethane	6.08	101	241091	46.81	ug/L	94
13) freon-113	6.86	101	150888	49.96	ug/L	89
14) acrolein	6.07	56	48611	243.46	ug/L	94
15) 1,1-dichloroethene	6.67	96	162052	49.23	ug/L #	76
16) acetone	6.20	43	65708	49.99	ug/L	100
17) Methyl Acetate	6.84	43	169261	58.01	ug/L	94
18) methylene chloride	6.81	84	182437	47.77	ug/L	92
19) methyl tert butyl ether	7.59	73	205388	28.94	ug/L	97
20) acrylonitrile	6.71	53	62367	241.65	ug/L	91
21) allyl chloride	6.91	41	184935	47.19	ug/L	93
22) trans-1,2-dichloroethene	7.51	96	163868	48.92	ug/L	91
23) iodomethane	6.73	142	86795	43.16	ug/L	99
24) carbon disulfide	7.09	76	505040	49.07	ug/L	98
25) propionitrile	6.63	54	6262	77.13	ug/L	100
26) vinyl acetate	6.84	43	169261	58.01	ug/L	96
27) chloroprene	8.13	53	236616	51.35	ug/L	90
28) di-isopropyl ether	8.16	45	586090	53.87	ug/L	88
29) methacrylonitrile	8.29	41	103981	48.03	ug/L	95
30) 2-butanone	8.18	72	20596	47.26	ug/L #	31
31) Hexane	8.15	41	237262	53.29	ug/L	97
32) 1,1-dichloroethane	7.76	63	313456	50.55	ug/L	98
33) tert-butyl ethyl ether	8.56	59	107197	26.29	ug/L	91
34) isobutyl alcohol	8.16	43	460409	261.13	ug/L	82
35) 2,2-dichloropropane	8.62	77	90725	28.89	ug/L	93
36) cis-1,2-dichloroethene	8.33	96	182478	49.96	ug/L	85
37) ethyl acetate	8.16	43	462209	52.46	ug/L	90

(#) = qualifier out of range (m) = manual integration

N61755.D N031512W.M Tue Mar 27 13:40:50 2012 RP1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N61756.D

Vial: 58

Acq On : 27 Mar 2012 1:22 pm

Operator: JUGALP

Sample : MC9008-12MSD,1:5

Inst : MAMSN

Misc : MS25375,MSN2309,,,5,5

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 13:57:17 2012

Quant Results File: N031512W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N031512W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Fri Mar 16 09:34:36 2012

Response via : Initial Calibration

DataAcq Meth : N8260

6.4.4

6

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.57	65	138198	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	304960	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	541508	50.00	ug/L	0.00
66) chlorobenzene-d5	13.15	82	307212	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	15.71	152	226635	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	166907	41.67	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	83.34%
60) toluene-d8 (s)	11.69	98	680673	43.51	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	87.02%
82) bromofluorobenzene (s)	14.38	95	253675	42.47	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	84.94%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.66	59	154094	539.44	ug/L	91
3) Ethanol	5.43	45	279271	5122.44	ug/L	99
5) dichlorodifluoromethane	4.24	85	114326	28.73	ug/L	98
6) chloromethane	4.49	50	163416	38.12	ug/L	95
7) vinyl chloride	4.74	62	156026	36.99	ug/L	92
8) bromomethane	5.25	96	118102	39.61	ug/L	99
9) chloroethane	5.42	64	112124	42.42	ug/L	97
10) ethyl ether	6.32	59	139707	46.92	ug/L	98
11) acetonitrile	5.97	41	89406	49.94	ug/L	98
12) trichlorofluoromethane	6.08	101	239624	43.22	ug/L	95
13) freon-113	6.85	101	148831	45.77	ug/L	83
14) acrolein	6.06	56	56734	263.92	ug/L	100
15) 1,1-dichloroethene	6.66	96	156598	44.19	ug/L	78
16) acetone	6.20	43	67365	47.60	ug/L	100
17) Methyl Acetate	6.84	43	174871	55.67	ug/L	96
18) methylene chloride	6.81	84	183626	44.41	ug/L	90
19) methyl tert butyl ether	7.60	73	228075	29.75	ug/L	100
20) acrylonitrile	6.72	53	63975	230.24	ug/L	97
21) allyl chloride	6.91	41	190602	45.17	ug/L	90
22) trans-1,2-dichloroethene	7.51	96	163112	45.23	ug/L	91
23) iodomethane	6.72	142	81457	37.82	ug/L	99
24) carbon disulfide	7.09	76	506839	45.74	ug/L	100
25) propionitrile	6.64	54	6227	70.15	ug/L	100
26) vinyl acetate	6.84	43	174871	55.67	ug/L	98
27) chloroprene	8.13	53	232525	46.87	ug/L	92
28) di-isopropyl ether	8.16	45	588719	50.26	ug/L	88
29) methacrylonitrile	8.28	41	107612	46.17	ug/L	90
30) 2-butanone	8.18	72	22015	46.92	ug/L #	88
31) Hexane	8.15	41	234974	49.02	ug/L	97
32) 1,1-dichloroethane	7.76	63	312628	46.82	ug/L	99
33) tert-butyl ethyl ether	8.56	59	114149	26.12	ug/L	93
34) isobutyl alcohol	8.16	43	467194	246.11	ug/L	92
35) 2,2-dichloropropane	8.63	77	100628	29.60	ug/L	95
36) cis-1,2-dichloroethene	8.33	96	182686	46.46	ug/L	82
37) ethyl acetate	8.16	43	467941	49.33	ug/L	87

(#)=qualifier out of range (m)=manual integration

N61756.D N031512W.M

Tue Mar 27 13:57:49 2012

RP1

Page 1

Initial Calibration Summary

Page 1 of 5

Job Number: MC9008
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2292-ICC2292
Lab FileID: N61310.D

Response Factor Report MAMSN

Method : C:\MSDCHEM\1\METHODS\N031512W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Fri Mar 16 09:34:36 2012
Response via : Initial Calibration

Calibration Files

1 =N61308.D 2 =N61307.D 5 =N61306.D 50 =N61310.D
100 =N61311.D 200 =N61312.D 400 =N61313.D 0.5 =N61309.D
25 =N61305.D =

Compound	1	2	5	50	100	200	400	0.5	25	Avg	%RSD
1) tert butyl alcohol-d9 -----ISTD-----											
2) tertiary butyl alcohol	0.929	0.911	0.902	1.082	1.113	1.082	1.090		1.159	1.034	9.90
3) Ethanol	0.209	0.195	0.192	0.197	0.190	0.185	0.189		0.221	0.197	6.05
4) I pentafluorobenzene -----ISTD-----											
5) dichlorodifluoromethane	0.624	0.648	0.688	0.679	0.657	0.612	0.575		0.737	0.653	7.67
6) chloromethane	0.796	0.733	0.763	0.668	0.683	0.642	0.625		0.713	0.703	8.44
7) vinyl chloride	1.026	0.828	0.797	0.719	0.706	0.610			0.807	0.785	16.59
----- Linear regression ----- Coefficient =									0.9936		
Response Ratio = 0.05640 + 0.61530 *A											
8) bromomethane	0.559	0.520	0.471	0.464	0.458	0.424			0.526	0.489	9.60
9) chloroethane	0.455	0.428	0.449	0.452	0.438	0.410	0.359		0.476	0.433	8.32
10) ethyl ether	0.423	0.430	0.483	0.529	0.528	0.503	0.477		0.533	0.488	8.93
11) acetonitrile	0.458	0.471	0.463	0.206	0.113	0.083	0.204		0.350	0.294	55.02
12) trichlorofluoromethane	0.843	0.866	0.967	0.946	0.927	0.877	0.823		1.022	0.909	7.48
13) freon-113	0.489	0.515	0.572	0.553	0.539	0.517	0.488		0.593	0.533	7.11
14) acrolein	0.028	0.040	0.036	0.038	0.036	0.034	0.032		0.038	0.035	10.80
15) 1,1-dichloroethene	0.685	0.674	0.630	0.533	0.525	0.494	0.496		0.610	0.581	13.50
16) acetone	0.273	0.276	0.245	0.213	0.201	0.189	0.230		0.228	0.232	13.65
17) Methyl Acetate	0.459	0.475	0.565	0.560	0.541	0.493	0.459		0.569	0.515	9.42
18) methylene chloride	0.949	0.786	0.688	0.669	0.643	0.626			0.732	0.728	15.36
----- Linear regression ----- Coefficient =									0.9997		
Response Ratio = 0.04847 + 0.62341 *A											
19) methyl tert butyl ether	0.838	0.698	0.851	1.140	1.325	1.464	1.372		0.949	1.080	26.44
----- Linear regression ----- Coefficient =									0.9981		

5.7.1
5

Initial Calibration Summary

Page 2 of 5

Job Number: MC9008
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2292-ICC2292
 Lab FileID: N61310.D

Response Ratio = -0.08441 + 1.39859 *A										
20)	acrylonitrile	0.036	0.045	0.050	0.049	0.046	0.045	0.048	0.046	10.36
21)	allyl chloride	0.620	0.728	0.733	0.687	0.640		0.743	0.692	7.52
22)	trans-1,2-dichloroethene	0.585	0.577	0.576	0.604	0.600	0.585	0.640	0.591	4.02
23)	iodomethane	0.181	0.160	0.188	0.338	0.356	0.328	0.286	0.263	29.43
----- Quadratic regression -----								Coefficient = 0.9996		
Response Ratio = -0.02203 + 0.39396 *A + -0.01555 *A^2										
24)	carbon disulfide	1.774	1.625	1.790	1.894	1.869	1.813	2.030	1.817	6.56
25)	propionitrile	0.048	0.022	0.016	0.015	0.012	0.010	0.022	0.021	63.05
----- Quadratic regression -----								Coefficient = 0.9970		
Response Ratio = 0.00246 + 0.01345 *A + -0.00046 *A^2										
26)	vinyl acetate	0.459	0.475	0.565	0.560	0.541	0.493	0.569	0.515	9.42
27)	chloroprene	0.639	0.716	0.884	0.906	0.863	0.784	0.901	0.813	12.73
28)	di-isopropyl ether	1.778	1.635	1.948	2.130	2.065	1.899	2.217	1.921	10.92
29)	methacrylonitrile	0.331	0.306	0.407	0.417	0.417	0.384	0.420	0.382	11.28
30)	2-butanone	0.066	0.085	0.082	0.075	0.071		0.083	0.077	9.88
31)	Hexane	0.777	0.740	0.854	0.843	0.796	0.721	0.922	0.786	11.36
32)	1,1-dichloroethane	1.031	1.019	1.124	1.160	1.129	1.072	1.219	1.095	6.93
33)	tert-butyl ethyl ether	0.207	0.315	0.800	0.993	1.135	1.199	0.532	0.740	53.54
----- Linear regression -----								Coefficient = 0.9978		
Response Ratio = -0.26249 + 1.21899 *A										
34)	isobutyl alcohol	0.302	0.292	0.324	0.337	0.324	0.295	0.355	0.311	9.54
35)	2,2-dichloropropane	0.006	0.030	0.088	0.508	0.668	0.675	0.366	0.334	88.06
----- Linear regression -----								Coefficient = 0.9957		
Response Ratio = -0.07827 + 0.68971 *A										
36)	cis-1,2-dichloroethene	0.605	0.606	0.669	0.675	0.665	0.631	0.689	0.645	5.18
37)	ethyl acetate	1.509	1.458	1.618	1.687	1.621	1.477	1.767	1.555	9.41
38)	bromochloromethane	0.238	0.246	0.263	0.271	0.271	0.265	0.283	0.262	5.43
39)	chloroform	1.026	1.017	1.096	1.146	1.124	1.065	1.188	1.084	6.11
40)	dibromofluoromethane (s)	0.676	0.604	0.654	0.644	0.640	0.624	0.595	0.666	9.51
41)	Tetrahydrofuran	0.130	0.157	0.187	0.200	0.184	0.183	0.187	0.175	13.52
42)	1,1,1-trichloroethane	0.388	0.461	0.601	0.878	0.918	0.905	0.872	0.726	29.30

5.7.1

5

Page 3 of 5

Sample: MSN2292-ICC2292
Lab FileID: N61310.D

[illegible]

5.7.1

Initial Calibration Summary

Page 4 of 5

Job Number: MC9008
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2292-ICC2292
 Lab FileID: N61310.D

		0.287	0.426	0.453	0.452	0.431		0.405	0.409	15.29	
		----- Linear regression -----						Coefficient = 0.9991			
		Response Ratio = 0.00602 + 0.43506 *A									
66)	I chlorobenzene-d5	-----ISTD-----									
67)	tetrachloroethene	0.477	0.517	0.575	0.522	0.547	0.535	0.538	0.601	0.539	6.92
68)	1,3-dichloropropane	1.066	1.014	1.120	1.048	1.072	1.019	1.010	1.145	1.061	4.71
69)	dibromochloromethane	0.368	0.399	0.465	0.525	0.572	0.573	0.608	0.346	0.531	19.87
		----- Linear regression -----						Coefficient = 0.9992			
		Response Ratio = -0.03506 + 0.60478 *A									
70)	1,2-dibromoethane	0.518	0.550	0.539	0.551	0.587	0.569	0.586	0.587	0.561	4.57
71)	2-hexanone	0.331	0.390	0.429	0.413	0.424			0.374	0.394	9.41
72)	chlorobenzene	1.653	1.573	1.669	1.595	1.677	1.619	1.626	1.758	1.646	3.49
73)	1,1,1,2-tetrachloroethane	0.470	0.515	0.546	0.536	0.554	0.369	0.543	0.505		13.10
74)	ethylbenzene	2.585	2.489	2.771	2.838	3.025	2.910	2.891	3.147	2.832	7.65
75)	m,p-xylene	0.876	0.891	0.998	1.053	1.116	1.063	1.024	0.852	1.169	11.03
76)	o-xylene	0.873	0.834	1.021	1.044	1.098	1.046	1.018	0.682	1.136	15.03
		----- Linear regression -----						Coefficient = 0.9995			
		Response Ratio = 0.03121 + 1.02223 *A									
77)	styrene	1.243	1.631	1.793	1.766	1.799			1.697	1.655	12.79
78)	bromoform	0.221	0.202	0.254	0.305	0.352	0.367	0.407	0.295	0.300	24.07
		----- Linear regression -----						Coefficient = 0.9971			
		Response Ratio = -0.05375 + 0.40549 *A									
79)	trans-1,4-dichloro-2-butene	0.043	0.086	0.117	0.131	0.151			0.070	0.100	40.79
		----- Linear regression -----						Coefficient = 0.9953			
		Response Ratio = -0.05304 + 0.15458 *A									
80)	I 1,4-dichlorobenzene-d	-----ISTD-----									
81)	isopropylbenzene	2.737	2.683	3.067	3.088	3.104	2.961	2.902	3.315	2.982	6.94
82)	bromofluorobenzene (s)	1.552	1.272	1.262	1.236	1.174			1.411	1.318	10.52
83)	bromobenzene	0.816	0.840	0.881	0.817	0.819	0.799	0.797	0.857	0.828	3.51
84)	1,1,2,2-tetrachloroethane	1.183	1.052	1.167	1.069	1.064	0.995	0.936	0.847	1.153	10.61
85)	1,2,3-trichloropropane	0.986	0.967	1.005	0.991	1.030	1.021	1.036	0.998	1.004	2.35
86)	n-propylbenzene	3.915	3.857	4.353	4.455	4.445	4.264	4.025	4.750	4.258	7.20
87)	2-chlorotoluene	2.787	2.592	2.866	2.700	2.667	2.547	2.461	2.907	2.691	5.80

5.7.1

5

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N61305.D

Acq On : 15 Mar 2012 11:58 am

Sample : IC2292-25

Misc : MS25282,MSN2292,,,5,1

MS Integration Params: RTEINT.P

Quant Time: Mar 15 16:34:38 2012

Vial: 20

Operator: jugalp

Inst : MAMSN

Multiplr: 1.00

Quant Results File: N031512W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N031512W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Thu Mar 15 16:33:36 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.57	65	138714	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	272100	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	481445	50.00	ug/L	0.00
66) chlorobenzene-d5	13.15	82	258845	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	15.71	152	193109	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	81491	25.16	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	50.32%#
60) toluene-d8 (s)	11.70	98	324481	24.95	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	49.90%#
82) bromofluorobenzene (s)	14.38	95	122626	27.04	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	54.08%#

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.66	59	80386	266.85	ug/L	92
3) Ethanol	5.42	45	153173	2939.20	ug/L	99
5) dichlorodifluoromethane	4.24	85	100236	32.04	ug/L	92
6) chloromethane	4.49	50	96947	28.50	ug/L	95
7) vinyl chloride	4.74	62	109832	41.80	ug/L	95
8) bromomethane	5.25	96	71521	30.96	ug/L	97
9) chloroethane	5.42	64	64803	33.19	ug/L	90
10) ethyl ether	6.31	59	72563	27.99	ug/L	93
11) acetonitrile	5.97	41	47664	42.99	ug/L	94
12) trichlorofluoromethane	6.08	101	139080	30.83	ug/L	99
13) freon-113	6.85	101	80622	30.66	ug/L	85
14) acrolein	6.07	56	25787	147.02	ug/L	94
15) 1,1-dichloroethene	6.66	96	83053	31.24	ug/L #	72
16) acetone	6.20	43	30954	24.72	ug/L	93
17) Methyl Acetate	6.84	43	77374	30.88	ug/L	96
18) methylene chloride	6.81	84	99544	29.22	ug/L	86
19) methyl tert butyl ether	7.60	73	129149	17.29	ug/L	97
20) acrylonitrile	6.72	53	32597	131.68	ug/L	99
21) allyl chloride	6.91	41	101144	29.04	ug/L	91
22) trans-1,2-dichloroethene	7.51	96	87140	28.42	ug/L	89
23) iodomethane	6.72	142	38978	26.93	ug/L	95
24) carbon disulfide	7.09	76	276171	29.17	ug/L	99
25) propionitrile	6.63	54	3031	57.17	ug/L	100
26) vinyl acetate	6.84	43	77374	30.88	ug/L	94
27) chloroprene	8.13	53	122550	28.73	ug/L	92
28) di-isopropyl ether	8.17	45	301658	32.76	ug/L	85
29) methacrylonitrile	8.28	41	57187	28.05	ug/L	94
30) 2-butanone	8.18	72	11312	29.39	ug/L #	72
31) Hexane	8.15	41	125469	36.25	ug/L	96
32) 1,1-dichloroethane	7.76	63	165814	30.34	ug/L	99
33) tert-butyl ethyl ether	8.56	59	72328	11.08	ug/L	97
34) isobutyl alcohol	8.16	43	241592	169.88	ug/L	85
35) 2,2-dichloropropane	8.63	77	49732	24.59	ug/L	92
36) cis-1,2-dichloroethene	8.33	96	93683	27.84	ug/L	88
37) ethyl acetate	8.16	43	240333	33.78	ug/L	90

(#)=qualifier out of range (m)=manual integration

N61305.D N031512W.M

Fri Mar 16 07:51:56 2012

RP1

Page 1

Continuing Calibration Summary

Page 1 of 4

Job Number: MC9008
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2308-CC2292
 Lab FileID: N61713.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\N61713.D
 Acq On : 26 Mar 2012 3:29 pm
 Sample : cc2292-50
 Misc : MS25367,MSN2308,,,,5,1
 MS Integration Params: RTEINT.P

Vial: 15
 Operator: emilyk
 Inst : MAMSN
 Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\N031512W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Fri Mar 16 09:34:36 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	83	0.00	6.57
2	tertiary butyl alcohol	1.034	1.127	-9.0	87	0.00	6.66
3 T	Ethanol	0.197	0.222	-12.7	94	0.00	5.42
4 I	pentafluorobenzene	1.000	1.000	0.0	99	0.00	9.02
5 M	dichlorodifluoromethane	0.653	0.503	23.0	74	0.00	4.24
6 P	chloromethane	0.703	0.560	20.3	83	0.00	4.49
----- True Calc. % Drift -----							
7 c	vinyl chloride	50.000	47.208	5.6	88	0.01	4.74 ✓
----- AvgRF CCRF % Dev -----							
8 M	bromomethane	0.489	0.453	7.4	96	0.00	5.24
9 M	chloroethane	0.433	0.436	-0.7	96	0.00	5.42
10 M	ethyl ether	0.488	0.506	-3.7	95	0.00	6.31
11 M	acetonitrile	0.294	0.297	-1.0	143	0.00	5.97
12 M	trichlorofluoromethane	0.909	0.848	6.7	89	0.00	6.07
13 M	freon-113	0.533	0.514	3.6	92	0.00	6.85
14 M	acrolein	0.035	0.031	11.4	82	0.00	6.07
15 c	1,1-dichloroethene	0.581	0.541	6.9	101	0.00	6.66
16 M	acetone	0.232	0.196	15.5	91	0.00	6.20
17 M	Methyl Acetate	0.515	0.606	-17.7	108	0.00	6.84
----- True Calc. % Drift -----							
18 M	methylene chloride	50.000	49.060	1.9	95	0.00	6.81
19 M	methyl tert butyl ether	50.000	34.319	31.4#	76	0.00	7.60
----- AvgRF CCRF % Dev -----							
20 M	acrylonitrile	0.046	0.048	-4.3	95	0.00	6.72
21 M	allyl chloride	0.692	0.655	5.3	89	0.00	6.91
22 M	trans-1,2-dichloroethene	0.591	0.585	1.0	96	0.00	7.51
----- True Calc. % Drift -----							
23 M	iodomethane	50.000	44.995	10.0	94	0.00	6.72
----- AvgRF CCRF % Dev -----							
24 M	carbon disulfide	1.817	1.950	-7.3	102	0.00	7.09
----- True Calc. % Drift -----							
25 M	propionitrile	50.000	73.060	-46.1#	133	0.00	6.63
----- AvgRF CCRF % Dev -----							

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Continuing Calibration Summary

Page 2 of 4

Job Number: MC9008
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2308-CC2292
 Lab FileID: N61713.D

26 M	vinyl acetate	0.515	0.606	-17.7	108	0.00	6.84
27 M	chloroprene	0.813	0.811	0.2	91	0.00	8.13
28 M	di-isopropyl ether	1.921	2.087	-8.6	97	0.00	8.16
29 M	methacrylonitrile	0.382	0.395	-3.4	94	0.00	8.28
30 M	2-butanone	0.077	0.079	-2.6	93	0.00	8.17
31 M	Hexane	0.786	0.827	-5.2	98	0.00	8.15
32 P	1,1-dichloroethane	1.095	1.115	-1.8	96	0.00	7.76
----- True		Calc.	% Drift	-----			
33 M	tert-butyl ethyl ether	50.000	29.811	40.4%	58	0.00	8.56
----- AvgRF		CCRF	% Dev	-----			
34 M	isobutyl alcohol	0.311	0.328	-5.5	97	0.00	8.16
----- True		Calc.	% Drift	-----			
35 M	2,2-dichloropropane	50.000	30.458	39.1%	67	0.00	8.62
----- AvgRF		CCRF	% Dev	-----			
36 M	cis-1,2-dichloroethene	0.645	0.649	-0.6	96	0.00	8.33
37 M	ethyl acetate	1.555	1.640	-5.5	97	0.00	8.16
38 M	bromochloromethane	0.262	0.265	-1.1	97	0.00	8.50
39 C	chloroform	1.084	1.115	-2.9	97	0.00	8.54
40 S	dibromofluoromethane (s)	0.657	0.622	5.3	96	0.00	8.66
41 M	Tetrahydrofuran	0.175	0.180	-2.9	96	0.00	8.87
----- True		Calc.	% Drift	-----			
42 M	1,1,1-trichloroethane	50.000	44.242	11.5	89	0.00	9.30
----- AvgRF		CCRF	% Dev	-----			
43 I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	9.89
44 M	Cyclohexane	0.570	0.574	-0.7	94	0.00	9.57
----- True		Calc.	% Drift	-----			
45 M	carbon tetrachloride	50.000	38.715	22.6	86	0.00	9.66
----- AvgRF		CCRF	% Dev	-----			
46 M	1,1-dichloropropene	0.469	0.470	-0.2	97	0.00	9.47
47 M	benzene	1.420	1.414	0.4	97	0.00	9.70
48 M	1,2-dichloroethane	0.470	0.476	-1.3	99	0.00	9.19
----- True		Calc.	% Drift	-----			
49 M	tert-amyl methyl ether	50.000	29.710	40.6%	54	0.00	9.81
----- AvgRF		CCRF	% Dev	-----			
50 M	heptane	0.312	0.315	-1.0	99	0.00	10.16
51 M	trichloroethene	0.367	0.357	2.7	95	0.00	10.31
52 C	1,2-dichloropropane	0.373	0.378	-1.3	98	0.00	10.28
53 M	dibromomethane	0.208	0.215	-3.4	98	0.00	10.25
54 M	bromodichloromethane	0.438	0.460	-5.0	98	0.00	10.37
55 M	Methylcyclohexane	0.572	0.578	-1.0	97	0.00	10.83
56 M	2-chloroethyl vinyl ether	0.373	0.378	-1.3	98	0.00	10.28
57 M	methyl methacrylate	0.227	0.212	6.6	92	0.00	10.46
58 M	1,4-dioxane	0.004	0.004	0.0	91	0.00	10.47
----- True		Calc.	% Drift	-----			
59 M	cis-1,3-dichloropropene	50.000	42.697	14.6	90	0.00	10.98
----- AvgRF		CCRF	% Dev	-----			
60 S	toluene-d8 (s)	1.444	1.376	4.7	99	0.00	11.69

5.7.3

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Continuing Calibration Summary

Page 3 of 4

Job Number: MC9008
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2308-CC2292
Lab FileID: N61713.D

61 M	4-methyl-2-pentanone	0.318	0.307	3.5	92	0.00	11.08
62 c	toluene	0.825	0.846	-2.5	98	0.00	11.76
----- True Calc. % Drift -----							
63 M	trans-1,3-dichloropropene	50.000	40.424	19.2	87	0.00	11.40
----- AvgRF CCRF % Dev -----							
64 M	1,1,2-trichloroethane	0.282	0.279	1.1	96	0.00	11.57
----- True Calc. % Drift -----							
65 M	ethyl methacrylate	50.000	44.866	10.3	94	0.00	11.78
----- AvgRF CCRF % Dev -----							
66 I	chlorobenzene-d5	1.000	1.000	0.0	98	0.00	13.15
67 M	tetrachloroethene	0.539	0.529	1.9	99	0.00	12.50
68 M	1,3-dichloropropane	1.061	1.047	1.3	98	0.00	11.81
----- True Calc. % Drift -----							
69 M	dibromochloromethane	50.000	45.883	8.2	97	0.00	12.10
----- AvgRF CCRF % Dev -----							
70 M	1,2-dibromoethane	0.561	0.554	1.2	98	0.00	12.35
71 M	2-hexanone	0.394	0.346	12.2	87	0.01	11.94
72 P	chlorobenzene	1.646	1.618	1.7	99	0.00	13.19
73 M	1,1,1,2-tetrachloroethane	0.505	0.518	-2.6	98	0.00	13.10
74 c	ethylbenzene	2.832	2.875	-1.5	99	0.00	13.36
75 M	m,p-xylene	1.005	1.068	-6.3	99	0.00	13.54
----- True Calc. % Drift -----							
76 M	o-xylene	50.000	50.288	-0.6	99	0.00	13.96
----- AvgRF CCRF % Dev -----							
77 M	styrene	1.655	1.613	2.5	97	0.00	13.89
----- True Calc. % Drift -----							
78 P	bromoform	50.000	44.481	11.0	99	0.00	13.71
79 M	trans-1,4-dichloro-2-bute	50.000	35.962	28.1	66	0.00	14.10
----- AvgRF CCRF % Dev -----							
80 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	15.71
81 M	isopropylbenzene	2.982	3.041	-2.0	100	0.00	14.32
82 S	bromofluorobenzene (s)	1.318	1.207	8.4	97	0.00	14.38
83 M	bromobenzene	0.828	0.800	3.4	100	0.00	14.61
84 P	1,1,2,2-tetrachloroethane	1.052	1.051	0.1	100	0.00	13.95
85 M	1,2,3-trichloropropane	1.004	0.900	10.4	92	0.00	14.10
86 M	n-propylbenzene	4.258	4.322	-1.5	99	0.00	14.76
87 M	2-chlorotoluene	2.691	2.631	2.2	99	0.00	14.88
88 M	4-chlorotoluene	2.645	2.653	-0.3	100	0.00	14.96
89 M	1,3,5-trimethylbenzene	2.899	2.953	-1.9	97	0.00	15.04
90 M	tert-butylbenzene	1.757	1.762	-0.3	98	0.00	15.35
91 M	1,2,4-trimethylbenzene	2.875	2.925	-1.7	97	0.00	15.45
92 M	sec-butylbenzene	3.766	3.809	-1.1	97	0.00	15.56
93 M	1,3-dichlorobenzene	1.541	1.484	3.7	99	0.00	15.67
94 M	p-isopropyltoluene	2.757	2.796	-1.4	98	0.00	15.74
95 M	1,4-dichlorobenzene	1.576	1.519	3.6	99	0.00	15.74
96 M	1,2-dichlorobenzene	1.483	1.411	4.9	98	0.00	16.10
97 M	n-butylbenzene	2.905	2.917	-0.4	99	0.00	16.16
98 M	1,2-dibromo-3-chloropropa	0.165	0.153	7.3	97	0.00	16.58

5.7.3

5

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N61713.D

Vial: 15

Acq On : 26 Mar 2012 3:29 pm

Operator: emilyk

Sample : cc2292-50

Inst : MAMSN

Misc : MS25367,MSN2308,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 26 15:50:16 2012

Quant Results File: N031512W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N031512W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Fri Mar 16 09:34:36 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.57	65	126805	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	273695	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	495330	50.00	ug/L	0.00
66) chlorobenzene-d5	13.15	82	272894	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	15.71	152	209268	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	153216	42.62	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	85.24%
60) toluene-d8 (s)	11.69	98	613334	42.86	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	85.72%
82) bromofluorobenzene (s)	14.38	95	227417	41.24	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	82.48%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.66	59	142859	545.04	ug/L	91
3) Ethanol	5.42	45	281522	5627.67	ug/L	100
5) dichlorodifluoromethane	4.24	85	137771	38.57	ug/L	99
6) chloromethane	4.49	50	153177	39.81	ug/L	94
7) vinyl chloride	4.74	62	174436	47.21	ug/L	97
8) bromomethane	5.24	96	123963	46.32	ug/L	97
9) chloroethane	5.42	64	119392	50.33	ug/L	98
10) ethyl ether	6.31	59	138379	51.78	ug/L	100
11) acetonitrile	5.97	41	81161	50.51	ug/L	97
12) trichlorofluoromethane	6.07	101	231990	46.62	ug/L	98
13) freon-113	6.85	101	140814	48.26	ug/L	85
14) acrolein	6.07	56	42692	221.28	ug/L	99
15) 1,1-dichloroethene	6.66	96	148055	46.55	ug/L #	71
16) acetone	6.20	43	53553	42.16	ug/L	90
17) Methyl Acetate	6.84	43	165779	58.80	ug/L #	91
18) methylene chloride	6.81	84	180683	49.06	ug/L	89
19) methyl tert butyl ether	7.60	73	239638	34.32	ug/L	98
20) acrylonitrile	6.72	53	65210	261.49	ug/L	90
21) allyl chloride	6.91	41	179180	47.31	ug/L	92
22) trans-1,2-dichloroethene	7.51	96	160185	49.49	ug/L	88
23) iodomethane	6.72	142	87557	44.99	ug/L	92
24) carbon disulfide	7.09	76	533703	53.67	ug/L	99
25) propionitrile	6.63	54	5782	73.06	ug/L	100
26) vinyl acetate	6.84	43	165779	58.80	ug/L	98
27) chloroprene	8.13	53	222030	49.87	ug/L	88
28) di-isopropyl ether	8.16	45	571295	54.34	ug/L	88
29) methacrylonitrile	8.28	41	108006	51.63	ug/L	88
30) 2-butanone	8.17	72	21606	51.31	ug/L #	61
31) Hexane	8.15	41	226459	52.64	ug/L	96
32) 1,1-dichloroethane	7.76	63	305141	50.92	ug/L	97
33) tert-butyl ethyl ether	8.56	59	127073	29.81	ug/L	92
34) isobutyl alcohol	8.16	43	448942	263.51	ug/L	84
35) 2,2-dichloropropane	8.62	77	93567	30.46	ug/L	91
36) cis-1,2-dichloroethene	8.33	96	177725	50.36	ug/L	87
37) ethyl acetate	8.16	43	448953	52.73	ug/L	89

(#)= qualifier out of range (m) = manual integration

N61713.D N031512W.M

Tue Mar 27 10:47:43 2012

RP1

Page 1

Continuing Calibration Summary

Page 1 of 4

Job Number: MC9008
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2309-CC2292
 Lab FileID: N61740.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\N61740.D
 Acq On : 27 Mar 2012 4:12 am
 Sample : cc2292-50
 Misc : MS25375,MSN2309,,,,5,1
 MS Integration Params: RTEINT.P

Vial: 42
 Operator: emilyk
 Inst : MAMSN
 Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\N031512W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Fri Mar 16 09:34:36 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	64	0.00	6.57
2	tertiary butyl alcohol	1.034	1.172	-13.3	69	0.00	6.66
3 T	Ethanol	0.197	0.253	-28.4	82	0.00	5.42
4 I	pentafluorobenzene	1.000	1.000	0.0	96	0.00	9.02
5 M	dichlorodifluoromethane	0.653	0.500	23.4	71	0.00	4.24
6 P	chloromethane	0.703	0.633	10.0	91	0.00	4.49
		True	Calc.	% Drift			
7 c	vinyl chloride	50.000	46.470	7.1	84	0.01	4.74
		AvgRF	CCRF	% Dev			
8 M	bromomethane	0.489	0.458	6.3	93	0.00	5.25
9 M	chloroethane	0.433	0.450	-3.9	96	0.00	5.42
10 M	ethyl ether	0.488	0.496	-1.6	90	0.00	6.31
11 M	acetonitrile	0.294	0.308	-4.8	144	0.00	5.97
12 M	trichlorofluoromethane	0.909	0.880	3.2	89	0.00	6.07
13 M	freon-113	0.533	0.512	3.9	89	0.00	6.85
14 M	acrolein	0.035	0.027	22.9	68	0.01	6.07
15 c	1,1-dichloroethene	0.581	0.561	3.4	101	0.00	6.66
16 M	acetone	0.232	0.178	23.3	80	0.01	6.20
17 M	Methyl Acetate	0.515	0.528	-2.5	91	0.00	6.84
		True	Calc.	% Drift			
18 M	methylene chloride	50.000	49.395	1.2	93	0.00	6.81
19 M	methyl tert butyl ether	50.000	28.478	43.0	60	0.00	7.60
		AvgRF	CCRF	% Dev			
20 M	acrylonitrile	0.046	0.043	6.5	82	0.00	6.72
21 M	allyl chloride	0.692	0.691	0.1	91	0.00	6.91
22 M	trans-1,2-dichloroethene	0.591	0.590	0.2	94	0.00	7.51
		True	Calc.	% Drift			
23 M	iodomethane	50.000	46.808	6.4	95	0.00	6.72
		AvgRF	CCRF	% Dev			
24 M	carbon disulfide	1.817	1.977	-8.8	100	0.00	7.10
		True	Calc.	% Drift			
25 M	propionitrile	50.000	77.648	-55.3	136	0.00	6.63
		AvgRF	CCRF	% Dev			

Continuing Calibration Summary

Job Number: MC9008
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2309-CC2292
Lab FileID: N61740.D

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26 M	vinyl acetate	0.515	0.528	-2.5	91	0.00	6.84
27 M	chloroprene	0.813	0.834	-2.6	91	0.00	8.13
28 M	di-isopropyl ether	1.921	2.099	-9.3	95	0.00	8.17
29 M	methacrylonitrile	0.382	0.352	7.9	81	0.00	8.28
30 M	2-butanone	0.077	0.066	14.3	74	0.00	8.18
31 M	Hexane	0.786	0.796	-1.3	91	0.00	8.15
32 P	1,1-dichloroethane	1.095	1.146	-4.7	95	0.00	7.76
		True	Calc.	% Drift			
33 M	tert-butyl ethyl ether	50.000	26.450	47.1%	46	0.00	8.56
		AvgRF	CCRF	% Dev			
34 M	isobutyl alcohol	0.311	0.318	-2.3	91	0.00	8.16
		True	Calc.	% Drift			
35 M	2,2-dichloropropane	50.000	24.586	50.8%	49	0.00	8.62
		AvgRF	CCRF	% Dev			
36 M	cis-1,2-dichloroethene	0.645	0.661	-2.5	94	0.00	8.33
37 M	ethyl acetate	1.555	1.588	-2.1	91	0.00	8.16
38 M	bromochloromethane	0.262	0.261	0.4	93	0.00	8.50
39 c	chloroform	1.084	1.144	-5.5	96	0.00	8.54
40 S	dibromofluoromethane (s)	0.657	0.628	4.4	94	0.00	8.66
41 M	Tetrahydrofuran	0.175	0.156	10.9	80	0.00	8.87
		True	Calc.	% Drift			
42 M	1,1,1-trichloroethane	50.000	43.606	12.8	85	0.00	9.30
		AvgRF	CCRF	% Dev			
43 I	1,4-difluorobenzene	1.000	1.000	0.0	98	0.00	9.89
44 M	Cyclohexane	0.570	0.590	-3.5	94	0.00	9.57
		True	Calc.	% Drift			
45 M	carbon tetrachloride	50.000	40.005	20.0	86	0.00	9.66
		AvgRF	CCRF	% Dev			
46 M	1,1-dichloropropene	0.469	0.480	-2.3	95	0.00	9.47
47 M	benzene	1.420	1.437	-1.2	95	0.00	9.70
48 M	1,2-dichloroethane	0.470	0.464	1.3	93	0.00	9.19
		True	Calc.	% Drift			
49 M	tert-amyl methyl ether	50.000	26.783	46.4%	43	0.00	9.81
		AvgRF	CCRF	% Dev			
50 M	heptane	0.312	0.290	7.1	88	0.00	10.17
51 M	trichloroethene	0.367	0.363	1.1	94	0.00	10.31
52 c	1,2-dichloropropane	0.373	0.378	-1.3	95	0.00	10.28
53 M	dibromomethane	0.208	0.205	1.4	91	0.00	10.25
54 M	bromodichloromethane	0.438	0.450	-2.7	92	0.00	10.37
55 M	Methylcyclohexane	0.572	0.572	0.0	92	0.00	10.83
56 M	2-chloroethyl vinyl ether	0.373	0.378	-1.3	95	0.00	10.28
57 M	methyl methacrylate	0.227	0.186	18.1	78	0.00	10.46
58 M	1,4-dioxane	0.004	0.004	0.0	78	0.00	10.47
		True	Calc.	% Drift			
59 M	cis-1,3-dichloropropene	50.000	40.530	18.9	83	0.00	10.98
		AvgRF	CCRF	% Dev			
60 S	toluene-d8 (s)	1.444	1.377	4.6	95	0.00	11.69

5.7.4

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Continuing Calibration Summary

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Job Number: MC9008
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2309-CC2292
Lab FileID: N61740.D

61 M	4-methyl-2-pentanone	0.318	0.265	16.7	77	0.00	11.08
62 c	toluene	0.825	0.845	-2.4	95	0.00	11.77
----- True Calc. % Drift -----							
63 M	trans-1,3-dichloropropene	50.000	38.710	22.6	80	0.00	11.40
----- AvgRF CCRF % Dev -----							
64 M	1,1,2-trichloroethane	0.282	0.270	4.3	90	0.00	11.57
----- True Calc. % Drift -----							
65 M	ethyl methacrylate	50.000	39.344	21.3	80	0.00	11.78
----- AvgRF CCRF % Dev -----							
66 I	chlorobenzene-d5	1.000	1.000	0.0	99	0.00	13.15
67 M	tetrachloroethene	0.539	0.502	6.9	95	0.00	12.50
68 M	1,3-dichloropropane	1.061	0.953	10.2	90	0.00	11.81
----- True Calc. % Drift -----							
69 M	dibromochloromethane	50.000	42.895	14.2	91	0.00	12.10
----- AvgRF CCRF % Dev -----							
70 M	1,2-dibromoethane	0.561	0.497	11.4	89	0.00	12.36
71 M	2-hexanone	0.394	0.295	25.1	75	0.02	11.94
72 P	chlorobenzene	1.646	1.541	6.4	96	0.00	13.19
73 M	1,1,1,2-tetrachloroethane	0.505	0.488	3.4	94	0.00	13.10
74 c	ethylbenzene	2.832	2.753	2.8	96	0.00	13.36
75 M	m,p-xylene	1.005	1.023	-1.8	96	0.00	13.55
----- True Calc. % Drift -----							
76 M	o-xylene	50.000	47.558	4.9	95	0.00	13.96
----- AvgRF CCRF % Dev -----							
77 M	styrene	1.655	1.522	8.0	92	0.00	13.89
----- True Calc. % Drift -----							
78 P	bromoform	50.000	39.741	20.5	87	0.00	13.71
79 M	trans-1,4-dichloro-2-bute	50.000	32.266	35.5	54	0.00	14.10
----- AvgRF CCRF % Dev -----							
80 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	15.71
81 M	isopropylbenzene	2.982	2.974	0.3	95	0.00	14.32
82 S	bromofluorobenzene (s)	1.318	1.243	5.7	96	0.00	14.38
83 M	bromobenzene	0.828	0.796	3.9	96	0.00	14.61
84 P	1,1,2,2-tetrachloroethane	1.052	0.961	8.7	89	0.00	13.96
85 M	1,2,3-trichloropropane	1.004	0.817	18.6	81	0.00	14.10
86 M	n-propylbenzene	4.258	4.294	-0.8	95	0.00	14.76
87 M	2-chlorotoluene	2.691	2.620	2.6	96	0.00	14.89
88 M	4-chlorotoluene	2.645	2.609	1.4	95	0.00	14.96
89 M	1,3,5-trimethylbenzene	2.899	2.941	-1.4	94	0.00	15.04
90 M	tert-butylbenzene	1.757	1.756	0.1	94	0.00	15.35
91 M	1,2,4-trimethylbenzene	2.875	2.938	-2.2	95	0.00	15.45
92 M	sec-butylbenzene	3.766	3.800	-0.9	94	0.00	15.57
93 M	1,3-dichlorobenzene	1.541	1.461	5.2	95	0.00	15.67
94 M	p-isopropyltoluene	2.757	2.727	1.1	93	0.00	15.74
95 M	1,4-dichlorobenzene	1.576	1.480	6.1	94	0.00	15.74
96 M	1,2-dichlorobenzene	1.483	1.386	6.5	94	0.00	16.11
97 M	n-butylbenzene	2.905	2.791	3.9	92	0.00	16.16
98 M	1,2-dibromo-3-chloropropa	0.165	0.124	24.8	76	0.00	16.58

5.7.4

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Instrument Performance Check (BFB)

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Job Number: MC9008
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2292-BFB	Injection Date: 03/15/12
Lab File ID: N61304.D	Injection Time: 11:30
Instrument ID: GCMSN	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	11056	19.8	Pass
75	30.0 - 60.0% of mass 95	25280	45.3	Pass
95	Base peak, 100% relative abundance	55856	100.0	Pass
96	5.0 - 9.0% of mass 95	4166	7.46	Pass
173	Less than 2.0% of mass 174	539	0.96 (1.53) ^a	Pass
174	50.0 - 150.0% of mass 95	35240	63.1	Pass
175	5.0 - 9.0% of mass 174	2894	5.18 (8.21) ^a	Pass
176	95.0 - 101.0% of mass 174	34872	62.4 (99.0) ^a	Pass
177	5.0 - 9.0% of mass 176	2674	4.79 (7.67) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSN2292-IC2292	N61305.D	03/15/12	11:58	00:28	Initial cal 25
MSN2292-IC2292	N61306.D	03/15/12	12:26	00:56	Initial cal 5
MSN2292-IC2292	N61307.D	03/15/12	12:54	01:24	Initial cal 2
MSN2292-IC2292	N61308.D	03/15/12	13:23	01:53	Initial cal 1
MSN2292-IC2292	N61309.D	03/15/12	13:51	02:21	Initial cal 0.5
MSN2292-ICC2292	N61310.D	03/15/12	14:19	02:49	Initial cal 50
MSN2292-IC2292	N61311.D	03/15/12	14:48	03:18	Initial cal 100
MSN2292-IC2292	N61312.D	03/15/12	15:16	03:46	Initial cal 200
MSN2292-IC2292	N61313.D	03/15/12	15:44	04:14	Initial cal 400
MSN2292-ICV2292	N61315.D	03/15/12	16:41	05:11	Initial cal verification 50

Instrument Performance Check (BFB)

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Job Number: MC9008
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample:	MSN2308-BFB	Injection Date:	03/26/12
Lab File ID:	N61713.D	Injection Time:	15:29
Instrument ID:	GCMSN		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	16448	16.8	Pass
75	30.0 - 60.0% of mass 95	47072	48.0	Pass
95	Base peak, 100% relative abundance	97976	100.0	Pass
96	5.0 - 9.0% of mass 95	6638	6.78	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	64992	66.3	Pass
175	5.0 - 9.0% of mass 174	4838	4.94 (7.44) ^a	Pass
176	95.0 - 101.0% of mass 174	63640	65.0 (97.9) ^a	Pass
177	5.0 - 9.0% of mass 176	3929	4.01 (6.17) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSN2308-CC2292	N61713.D	03/26/12	15:29	00:00	Continuing cal 50
MSN2308-BS	N61714.D	03/26/12	15:57	00:28	Blank Spike
MSN2308-BSD	N61715.D	03/26/12	16:25	00:56	Blank Spike Duplicate
MSN2308-MB	N61717.D	03/26/12	17:22	01:53	Method Blank
MC9008-1	N61718.D	03/26/12	17:50	02:21	TB032212
MC9008-2	N61719.D	03/26/12	18:18	02:49	MW-01
MC9008-3	N61720.D	03/26/12	18:47	03:18	MW-03
MC9008-4	N61721.D	03/26/12	19:15	03:46	MW-04
MC9008-5	N61722.D	03/26/12	19:43	04:14	MW-05
MC9008-6	N61723.D	03/26/12	20:11	04:42	MW-06
MC9008-7	N61724.D	03/26/12	20:40	05:11	MW-07
MC9008-8	N61725.D	03/26/12	21:08	05:39	MW-08
MC9008-9	N61726.D	03/26/12	21:36	06:07	MW-11
MC9008-10	N61727.D	03/26/12	22:04	06:35	MW-107
MC9008-11	N61728.D	03/26/12	22:33	07:04	TT-MW-02
MC9008-13	N61730.D	03/26/12	23:29	08:00	TT-MW-05
MC9008-15	N61732.D	03/27/12	00:26	08:57	TT-MW-08
MC9008-16	N61733.D	03/27/12	00:54	09:25	TT-MW-09
MC9008-17	N61734.D	03/27/12	01:22	09:53	TT-MW-10
MC9008-17MS	N61735.D	03/27/12	01:50	10:21	Matrix Spike
MC9008-17MSD	N61736.D	03/27/12	02:19	10:50	Matrix Spike Duplicate

Scan 3089 (14.366 min): N61713.D
cc2292-50

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	906	49.00	3213	64.00	459	77.00	1007
37.10	3856	50.00	16448	65.10	210	77.90	780
38.10	4096	51.00	5122	67.00	309	78.90	2203
39.10	1860	52.10	330	68.00	9574	80.00	671
39.80	234	55.00	222	69.00	9815	81.00	2354
41.00	223	56.00	1439	69.90	847	81.90	804
43.00	269	57.10	2676	72.20	343	84.90	166
44.00	1328	60.10	832	73.00	4293	85.90	183
45.00	812	61.00	4184	74.00	16424	87.00	4544
47.00	1269	62.00	4281	75.00	47072	87.90	4038
47.80	318	63.00	3062	76.00	4456	88.60	185

Scan 3089 (14.366 min): N61713.D
cc2292-50

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
91.00	436	116.80	604	145.90	194		
92.00	2490	117.80	193	147.80	243		
93.00	3551	118.90	441	154.70	155		
94.00	10993	120.10	267	172.30	301		
95.00	97976	127.90	247	173.90	64992		
96.00	6638	128.70	244	174.90	4838		
96.90	215	129.70	361	175.90	63640		
103.90	508	134.90	167	176.90	3929		
105.10	1392	136.90	189	207.00	305		
106.00	458	140.80	712				
115.90	242	142.90	905				

6.5.2

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Instrument Performance Check (BFB)

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Job Number: MC9008
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2309-BFB	Injection Date: 03/27/12
Lab File ID: N61739.D	Injection Time: 03:44
Instrument ID: GCMSN	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	19656	18.1	Pass
75	30.0 - 60.0% of mass 95	51544	47.6	Pass
95	Base peak, 100% relative abundance	108376	100.0	Pass
98	5.0 - 9.0% of mass 95	7570	6.98	Pass
173	Less than 2.0% of mass 174	451	0.42 (0.65) ^a	Pass
174	50.0 - 150.0% of mass 95	69328	64.0	Pass
175	5.0 - 9.0% of mass 174	5074	4.68 (7.32) ^a	Pass
176	95.0 - 101.0% of mass 174	69856	64.5 (100.8) ^a	Pass
177	5.0 - 9.0% of mass 176	5242	4.84 (7.50) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSN2309-CC2292	N61740.D	03/27/12	04:12	00:28	Continuing cal 50
MSN2309-BS	N61741.D	03/27/12	04:40	00:56	Blank Spike
MSN2309-BSD	N61742.D	03/27/12	05:08	01:24	Blank Spike Duplicate
MSN2309-MB	N61744.D	03/27/12	06:05	02:21	Method Blank
MC9008-2	N61745.D	03/27/12	08:12	04:28	MW-01
MC9008-4	N61746.D	03/27/12	08:40	04:56	MW-04
MC9008-11	N61747.D	03/27/12	09:08	05:24	TT-MW-02
MC9008-7	N61748.D	03/27/12	09:36	05:52	MW-07
MC9008-10	N61749.D	03/27/12	10:05	06:21	MW-107
MC9008-12	N61750.D	03/27/12	10:33	06:49	TT-MW-04
MC9008-14	N61751.D	03/27/12	11:01	07:17	TT-MW-07
ZZZZZZ	N61752.D	03/27/12	11:29	07:45	(unrelated sample)
ZZZZZZ	N61753.D	03/27/12	11:58	08:14	(unrelated sample)
ZZZZZZ	N61754.D	03/27/12	12:26	08:42	(unrelated sample)
MC9008-12MS	N61755.D	03/27/12	12:54	09:10	Matrix Spike
MC9008-12MSD	N61756.D	03/27/12	13:22	09:38	Matrix Spike Duplicate

Volatile Internal Standard Area Summary

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Job Number: MC9008
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Check Std:	MSN2308-CC2292	Injection Date:	03/26/12
Lab File ID:	N61713.D	Injection Time:	15:29
Instrument ID:	GCMSN	Method:	SW846 8260B

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	273695	9.02	495330	9.89	272894	13.15	209268	15.71	126805	6.57
Upper Limit ^a	547390	9.52	990660	10.39	545788	13.65	418536	16.21	253610	7.07
Lower Limit ^b	136848	8.52	247665	9.39	136447	12.65	104634	15.21	63403	6.07

Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MSN2308-BS	290430	9.02	514023	9.89	292989	13.15	215614	15.71	126132	6.57
MSN2308-BSD	297215	9.02	525174	9.89	298791	13.15	220902	15.71	138990	6.57
MSN2308-MB	281186	9.02	507829	9.90	267566	13.15	173281	15.71	187246	6.58
MC9008-1	271736	9.02	491850	9.90	259716	13.15	164328	15.71	128263	6.58
MC9008-2	268469	9.02	487174	9.89	280215	13.15	163566	15.71	127686	6.58
MC9008-3	262190	9.02	477703	9.89	253937	13.15	154430	15.71	115459	6.58
MC9008-4	263244	9.02	476695	9.89	255850	13.15	157842	15.71	116103	6.58
MC9008-5	259002	9.02	474429	9.90	251862	13.15	152621	15.72	110904	6.58
MC9008-6	255028	9.02	472031	9.89	247617	13.15	152127	15.71	114650	6.59
MC9008-7	249190	9.02	464627	9.89	247363	13.15	151442	15.72	103776	6.58
MC9008-8	250713	9.02	456868	9.90	245516	13.15	146725	15.71	100786	6.58
MC9008-9	245026	9.02	449420	9.89	242887	13.15	142044	15.71	103293	6.58
MC9008-10	246591	9.02	458911	9.90	246009	13.15	143856	15.71	103714	6.59
MC9008-11	249054	9.02	452756	9.90	239888	13.15	143724	15.71	101096	6.59
MC9008-13	241372	9.02	444097	9.89	235676	13.15	132393	15.71	84236	6.59
MC9008-15	236705	9.02	443268	9.89	237691	13.15	143897	15.71	87409	6.59
MC9008-16	235203	9.02	438221	9.90	229965	13.15	131398	15.71	66049	6.59
MC9008-17	241758	9.02	444901	9.89	233754	13.15	129284	15.72	69254	6.59
MC9008-17MS	257469	9.02	467021	9.89	259605	13.15	200354	15.71	108041	6.58
MC9008-17MSD	270300	9.02	490371	9.89	279326	13.15	204040	15.71	125338	6.57

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

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Job Number: MC9008
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Check Std:	MSN2309-CC2292	Injection Date:	03/27/12
Lab File ID:	N61740.D	Injection Time:	04:12
Instrument ID:	GCMSEN	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	264797	9.02	479172	9.89	275791	13.15	202637	15.71	97129	6.57
Upper Limit ^a	529594	9.52	958344	10.39	551582	13.65	405274	16.21	194258	7.07
Lower Limit ^b	132399	8.52	239586	9.39	137886	12.65	101319	15.21	48565	6.07

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN2309-BS	278295	9.02	501593	9.89	287242	13.15	206883	15.71	136104	6.57
MSN2309-BSD	281495	9.02	505440	9.89	289535	13.15	208495	15.71	142483	6.57
MSN2309-MB	266821	9.02	489023	9.89	257194	13.15	162258	15.71	103065	6.59
MC9008-2	269471	9.02	492977	9.89	256779	13.15	153819	15.71	79378	6.58
MC9008-4	262213	9.02	473160	9.89	249036	13.15	140657	15.71	100822	6.59
MC9008-11	260368	9.02	474168	9.89	248276	13.16	143283	15.72	108729	6.59
MC9008-7	254888	9.02	462484	9.89	245520	13.15	144408	15.71	94972	6.59
MC9008-10	247402	9.02	455241	9.89	241236	13.15	138867	15.71	77372	6.59
MC9008-12	244937	9.02	453076	9.90	237345	13.15	132967	15.72	78616	6.59
MC9008-14	245850	9.02	452656	9.89	238328	13.15	136632	15.71	96861	6.58
ZZZZZZ	250755	9.02	460021	9.89	246562	13.15	165800	15.71	104589	6.59
ZZZZZZ	258335	9.02	465790	9.89	251051	13.15	189702	15.71	109354	6.58
ZZZZZZ	272582	9.02	495876	9.89	258816	13.15	190565	15.71	107648	6.58
MC9008-12MS	283249	9.02	499532	9.89	285813	13.15	206815	15.71	125590	6.57
MC9008-12MSD	304960	9.02	541508	9.89	307212	13.15	226635	15.71	138198	6.57

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N61719.D

Vial: 21

Acq On : 26 Mar 2012 6:18 pm

Operator: emilyk

Sample : mc9008-2

Inst : MAMSN

Misc : MS25375,MSN2308,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 07:44:13 2012

Quant Results File: N031512W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N031512W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Fri Mar 16 09:34:36 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.58	65	127686	500.00	ug/L	0.01
4) pentafluorobenzene	9.02	168	268469	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	487174	50.00	ug/L	0.00
66) chlorobenzene-d5	13.15	82	260215	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	15.71	152	163566	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	8.67	113	147073	41.71	ug/L	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	83.42%	
60) toluene-d8 (s)	11.70	98	598884	42.55	ug/L	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	85.10%	
82) bromofluorobenzene (s)	14.38	95	203882	47.30	ug/L	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	94.60%	

Target Compounds

						Qvalue
7) vinyl chloride	4.76	62	1550	Below Cal	#	1
16) acetone	6.21	43	48505	38.93	ug/L	98
36) cis-1,2-dichloroethene	8.33	96	23801	6.88	ug/L	93
51) trichloroethene	10.31	95	25431	7.12	ug/L	78
65) ethyl methacrylate	11.70	69	1561	Below Cal	#	1
67) tetrachloroethene	12.50	166	1537160	547.96	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 N61719.D N031512W.M Tue Mar 27 14:39:52 2012 RP1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N61745.D Vial: 47
 Acq On : 27 Mar 2012 8:12 am Operator: JUGALP
 Sample : MC9008-2,1:5 Inst : MAMSN
 Misc : MS25375,MSN2309,,,,5,5 Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 27 09:01:39 2012 Quant Results File: N031512W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N031512W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Fri Mar 16 09:34:36 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.58	65	79378	500.00	ug/L	0.01
4) pentafluorobenzene	9.02	168	269471	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	492977	50.00	ug/L	0.00
66) chlorobenzene-d5	13.15	82	256779	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	15.71	152	153819	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	143752	40.61	ug/L	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	81.22%	
60) toluene-d8 (s)	11.69	98	587501	41.25	ug/L	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	82.50%	
82) bromofluorobenzene (s)	14.38	95	198448	48.95	ug/L	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	97.90%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
7) vinyl chloride	4.75	62	1396	Below Cal	#	1
16) acetone	6.22	43	8610	6.89	ug/L	99
18) methylene chloride	6.82	84	1598	Below Cal		81
36) cis-1,2-dichloroethene	8.34	96	4505	1.30	ug/L	89
51) trichloroethene	10.31	95	5454	1.51	ug/L	78
65) ethyl methacrylate	11.69	69	1388	Below Cal	#	1
67) tetrachloroethene	12.50	166	261717	94.54	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 N61745.D N031512W.M Tue Mar 27 13:04:33 2012 RP1

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
MS8579	1826 Cal. Std	1000 ug/L
MS8603	" BS (W5) Std	" " "
MS8560	" Int. Std	125 ppm
MS8577	" Sample Std	200 ug/L

Daily Saved File

Tune file 1:	N61304
Tune file 2:	N/A
Initial Cal:	03115112
ID File:	N621572W.M
ICAL Verified:	N61315
Sequence verified:	JHP

Date: 03/15/12

Batch ID: MSN2292

Analysts

Signature: JHP

*Note: If sample matrix is soil - method SW846.5035 used for preparation. SW846.5030 is purge and trap method for soil and water

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	% Sol	Dil. Fact.	pH	Comments
N61300	Blank	N/A	N/A	N/A	15	W	5 ml	N/A	1:1	N/A	
	01 Blank				16						
	02 Blank				17						
	03 BFB	3	MS8577		18						
	04 BFB	3	MS8577		19						
	05 IC2292-25	3/3	MS8577		20						
	06 -5				21						
	07 -2				22						
	08 -1				23						
	09 -0.5				24						
	10 IC2292-50				25						
	11 IC2292-100				26						
	12 -200				27						
	13 -400				28						
	14 Blank	N/A	N/A		29						
	15 IC2292-50	3/3	MS8577		30						
	16 IC2292-50	3/3	MS8603		31						
	17 Blank	N/A	N/A		32						

MTX = Matrix: Designate W for water, S for soil, O for oil.
 Sample amount is reported in grams (wt) for soil and oil, mL for water.

MS001-04 Date: 12/02/08

Review: JHP 3/16/12

6.7.1
6

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
MS 8623	V8260 (4500)	200 ug/ml
8623	V8260 BS	200
8623	V8260 155	125

Daily Saved File

Tune file 1:	N61713
Tune file 2:	N/A
Initial Cal:	03115112
ID File:	N031512W.M
ICAL verified:	N61315
Sequence verified:	348

Date: 3/26/12

Batch ID: MSN 2308

Analysts: ECK

Signature: ECK

*Note: If sample matrix is soil - method SW846 5035 used for preparation. SW846 5030 is purge and trap method for soil and water

6.7.2 6

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	% Sol	Dil. Fact.	pH	Comments
N61713	CC2282-56	1	MS 8623	NA	15	NA	5ml	NA	1:1	NA	
N61714	bs	3	MS 8623		16						
	15	4	4		17						
	16	NA	NA		18						
	17	4	4		19	4					
	18	MS 4008-1	MS 25315	V8260SL	20	6W				2.2	
	19	2	1		21						RR-1:5 only co
	20	3	2		22						
	21	4	2		23						RR-1:5 only co
	22	5	1		24						
	23	6	2		25						
	24	7	2		26						RR-1:10 only co
	25	8	3		27						
	26	9	3		28						
	27	10	3		29						RR-1:10 only co
	28	11	3		30						RR-1:5 only co
	29	12	3		31						RR-1:10, only co
	30	13	1		32						
	31	14	2		33						RR-1:10 only co
	32	15	3		34						
	33	16	2		35						
	34	17	2		36						
	35	71AS 11416			37						
	36	17ASD	4		38	4					
	37	DK	NA	NA	39	NA	4	4	4	NA	

MTX - Matrix: Designate W for water, S for soil, O for oil.

Sample amount is reported in grams (wet) for soil and oil, and for water.

NIS001-04 Date: 12/02/08

Review: *Clara Taylor* 3/26/12

35

Instrument: GCMS N

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standardized Data

Lot #	Description	Conc.
m3 8603	Vardo (P.L. 4th)	225 mg
m3 8603	11 B5 (P.L. 5734)	" 4"
m3 8604	11 B5 2 13	125 ppm

Daily Saved \$12.00

Tune file 1:	N61737
Tune file 2:	N/A
Initial Cal:	03115/12
ID file:	N031512W.M
ICAN Verified:	N61315
Sequence verified:	JHP

Date: 03/27/12

Batch ID: MSN2307

Analysts

Signature: FHP

*Note: If sample matrix is soil - method SW846 5035 used for preparation. SW846 5030 is purge and trap method for soil and water

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MEX	Samp Ant.	Sol	Dil. Fact.	pH	Comments
N 6A38	Blamu	N/A	N/A	N/A	40	N/A	5ml	N/A	1:1	N/A	
39	Blamu	1	1		41						
40	CC 2292-50	1	MS8623		42						
41	BS	3	MS8623		43						
42	BSD	3	MS8623		44						
43	Blamu	N/A	N/A		45						
44	mf	1	1		46						
45	MC9008-2	2	MS25375	VS60 SL	47	6W			1:5	2.2	
46	-4	1			48				1:5		
47	-11	1			49				1:5		
48	-7	1			50				1:10		
49	-10	1			51				1:10		
50	-12	1			52				1:1		
51	-14	1			53				1:1		
52	MC9557-6	2	MS25360	VS60 24P	54				1:1		
53	-7	2			55				1:10		
54	MC9766-4	2	MS25363	VS60 24P	56				1:1	2.2	
55	MC9008-2	2	MS25375	VS60 SL	57				1:5	2.2	
56	-12	2			58				1:5	1	

MIX - Matrix: Designate W for water, S for soil, O for oil. Sample amount is reported in grams (wet) for soil and oil, g/L for water.

MS001-04 Date: 12/02/08

Review: *on* *on* *on* 3/28/12

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03/05/12

Technical Report for

WSP Environmental & Energy

Former TTC, 1 Robert Lane, Glen Head, NY

28873/03

Accutest Job Number: MC8298

Sampling Date: 02/28/12

Report to:

WSP Group

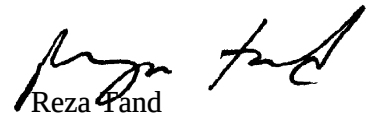
Dave.Carstens@WSPGroup.com

ATTN: Dave Carstens

Total number of pages in report: **149**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Reza Fand
Lab Director

Client Service contact: Frank DAgostino 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) ISO 17025:2005 (L2235)
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Test results relate only to samples analyzed.

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Sample Summary

WSP Environmental & Energy

Job No: MC8298

Former TTC, 1 Robert Lane, Glen Head, NY
Project No: 28873/03

Sample Number	Collected		Matrix Code	Type	Client Sample ID
	Date	Time By			
MC8298-1	02/28/12	12:40 DC	02/28/12	AQ Trip Blank Water	TB022812-PDB

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: WSP Environmental & Energy

Job No MC8298

Site: Former TTC, 1 Robert Lane, Glen Head, NY

Report Date 3/5/2012 1:13:48 PM

1 Trip Blank was collected on 02/28/2012 and were received at Accutest on 02/28/2012 properly preserved, at 0.6 Deg. C and intact. These Samples received an Accutest job number of MC8298. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ

Batch ID: MSN2270

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC8287-7MS, MC8287-7MSD were used as the QC samples indicated.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report (MC8298).

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID:	TB022812-PDB	Date Sampled:	02/28/12
Lab Sample ID:	MC8298-1	Date Received:	02/28/12
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former TTC, 1 Robert Lane, Glen Head, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N60740.D	1	02/29/12	JP	n/a	n/a	MSN2270
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	84%		70-130%
2037-26-5	Toluene-D8	86%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (NY)
- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

Page 1 of 1

4.1

Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC8298

Client: WSP

Immediate Client Services Action Required: No

Date / Time Received: 2/28/2012

Delivery Method:

Client Service Action Required at Login: No

Project: TTC/GLEN HEAD

No. Coolers:

1

Airbill #'s:

Cooler Security

Y or N

Y or N

1. Custody Seals Present:	☒	☐	3. COC Present:	☒	☐
2. Custody Seals Intact:	☒	☐	4. Smpl Dates/Time OK	☒	☐

Cooler Temperature

Y or N

1. Temp criteria achieved:	☒	☐
2. Cooler temp verification:	Infrared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservation

Y or N

N/A

1. Trip Blank present / cooler:	☒	☐	☐
2. Trip Blank listed on COC:	☒	☐	☐
3. Samples preserved properly:	☒	☐	
4. VOCs headspace free:	☒	☐	☐

Sample Integrity - Documentation

Y or N

1. Sample labels present on bottles:	☒	☐
2. Container labeling complete:	☒	☐
3. Sample container label / COC agree:	☒	☐

Sample Integrity - Condition

Y or N

1. Sample recvd within HT:	☒	☐
2. All containers accounted for:	☒	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions

Y or N N/A

1. Analysis requested is clear:	☒	☐	
2. Bottles received for unspecified tests	☐	☒	
3. Sufficient volume recvd for analysis:	☒	☐	
4. Compositing instructions clear:	☐	☐	☒
5. Filtering instructions clear:	☐	☐	☒

Comments

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www.accutest.com

Internal Sample Tracking Chronicle

WSP Environmental & Energy

Job No: MC8298

Former TTC, 1 Robert Lane, Glen Head, NY
Project No: 28873/03

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC8298-1 Collected: 28-FEB-12 12:40 By: DC Received: 28-FEB-12 By: TB022812-PDB						
MC8298-1	SW846 8260B	29-FEB-12 16:01	JP			V8260SL

Accutest Internal Chain of Custody

Page 1 of 1

Job Number: MC8298
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY
Received: 02/28/12

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC8298-1.1	VOC Ref #3	Jugal Patel	02/29/12 14:34	Retrieve from Storage
MC8298-1.1	Jugal Patel	GCMSN	02/29/12 14:34	Load on Instrument
MC8298-1.1	GCMSN	Jugal Patel	03/01/12 13:15	Unload from Instrument
MC8298-1.1	Jugal Patel	VOC Ref #3	03/01/12 13:16	Return to Storage

4.3
4

GC/MS Volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Page 1 of 1

Job Number: MC8298
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2270-MB	N60739.D	1	02/29/12	JP	n/a	n/a	MSN2270

The QC reported here applies to the following samples:

Method: SW846 8260B

MC8298-1

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	85% 70-130%
2037-26-5	Toluene-D8	86% 70-130%
460-00-4	4-Bromofluorobenzene	97% 70-130%

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: MC8298**Account:** WSPNYC WSP Environmental & Energy**Project:** Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2270-BS	N60736.D	1	02/29/12	JP	n/a	n/a	MSN2270
MSN2270-BSD	N60737.D	1	02/29/12	JP	n/a	n/a	MSN2270

The QC reported here applies to the following samples:**Method:** SW846 8260B

MC8298-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethene	50	49.4	99	48.3	97	2	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	47.8	96	45.7	91	4	70-130/25
127-18-4	Tetrachloroethene	50	50.5	101	47.4	95	6	70-130/25
79-01-6	Trichloroethene	50	49.7	99	47.3	95	5	70-130/25
75-01-4	Vinyl chloride	50	50.6	101	47.2	94	7	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	87%	86%	70-130%
2037-26-5	Toluene-D8	87%	87%	70-130%
460-00-4	4-Bromofluorobenzene	86%	88%	70-130%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC8298**Account:** WSPNYC WSP Environmental & Energy**Project:** Former TTC, 1 Robert Lane, Glen Head, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC8287-7MS	N60758.D	5	03/01/12	JP	n/a	n/a	MSN2270
MC8287-7MSD	N60759.D	5	03/01/12	JP	n/a	n/a	MSN2270
MC8287-7	N60757.D	1	03/01/12	JP	n/a	n/a	MSN2270

The QC reported here applies to the following samples:**Method:** SW846 8260B

MC8298-1

CAS No.	Compound	MC8287-7 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethene	ND	250	246	98	246	98	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	237	95	233	93	2	70-130/30
127-18-4	Tetrachloroethene	ND	250	245	98	250	100	2	70-130/30
79-01-6	Trichloroethene	ND	250	245	98	243	97	1	70-130/30
75-01-4	Vinyl chloride	ND	250	251	100	239	96	5	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC8287-7	Limits
1868-53-7	Dibromofluoromethane	87%	87%	85%	70-130%
2037-26-5	Toluene-D8	89%	88%	85%	70-130%
460-00-4	4-Bromofluorobenzene	85%	86%	98%	70-130%

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: MC8298
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2251-BFB
Lab File ID: N60246.D
Instrument ID: GCMSN

Injection Date: 02/13/12
Injection Time: 12:34

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	24576	20.3	Pass
75	30.0 - 60.0% of mass 95	61872	51.0	Pass
95	Base peak, 100% relative abundance	121256	100.0	Pass
96	5.0 - 9.0% of mass 95	7246	5.98	Pass
173	Less than 2.0% of mass 174	681	0.56 (0.88) ^a	Pass
174	50.0 - 150.0% of mass 95	77064	63.6	Pass
175	5.0 - 9.0% of mass 174	5723	4.72 (7.43) ^a	Pass
176	95.0 - 101.0% of mass 174	75752	62.5 (98.3) ^a	Pass
177	5.0 - 9.0% of mass 176	5148	4.25 (6.80) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSN2251-IC2251	N60247.D	02/13/12	13:02	00:28	Initial cal 25
MSN2251-IC2251	N60248.D	02/13/12	13:31	00:57	Initial cal 5
MSN2251-IC2251	N60249.D	02/13/12	13:59	01:25	Initial cal 2
MSN2251-IC2251	N60250.D	02/13/12	14:27	01:53	Initial cal 1
MSN2251-IC2251	N60251.D	02/13/12	14:55	02:21	Initial cal 0.5
MSN2251-ICC2251	N60252.D	02/13/12	15:24	02:50	Initial cal 50
MSN2251-IC2251	N60253.D	02/13/12	15:52	03:18	Initial cal 100
MSN2251-IC2251	N60254.D	02/13/12	16:20	03:46	Initial cal 200
MSN2251-IC2251	N60255.D	02/13/12	16:48	04:14	Initial cal 400
MSN2251-ICV2251	N60257.D	02/13/12	17:45	05:11	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: MC8298
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2270-BFB
Lab File ID: N60736.D
Instrument ID: GCMSN
Injection Date: 02/29/12
Injection Time: 14:08

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	2630	27.2	Pass
75	30.0 - 60.0% of mass 95	5236	54.1	Pass
95	Base peak, 100% relative abundance	9673	100.0	Pass
96	5.0 - 9.0% of mass 95	746	7.71	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	5433	56.2	Pass
175	5.0 - 9.0% of mass 174	364	3.76 (6.70) ^a	Pass
176	95.0 - 101.0% of mass 174	5363	55.4 (98.7) ^a	Pass
177	5.0 - 9.0% of mass 176	401	4.15 (7.48) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSN2270-CC2251	N60736.D	02/29/12	14:08	00:00	Continuing cal 50
MSN2270-BS	N60736.D	02/29/12	14:08	00:00	Blank Spike
MSN2270-BSD	N60737.D	02/29/12	14:36	00:28	Blank Spike Duplicate
MSN2270-MB	N60739.D	02/29/12	15:33	01:25	Method Blank
MC8298-1	N60740.D	02/29/12	16:01	01:53	TB022812-PDB
ZZZZZZ	N60741.D	02/29/12	16:29	02:21	(unrelated sample)
ZZZZZZ	N60742.D	02/29/12	16:58	02:50	(unrelated sample)
ZZZZZZ	N60743.D	02/29/12	17:26	03:18	(unrelated sample)
ZZZZZZ	N60744.D	02/29/12	17:54	03:46	(unrelated sample)
ZZZZZZ	N60745.D	02/29/12	18:22	04:14	(unrelated sample)
ZZZZZZ	N60746.D	02/29/12	18:51	04:43	(unrelated sample)
ZZZZZZ	N60747.D	02/29/12	19:19	05:11	(unrelated sample)
ZZZZZZ	N60748.D	02/29/12	19:47	05:39	(unrelated sample)
ZZZZZZ	N60749.D	02/29/12	20:15	06:07	(unrelated sample)
ZZZZZZ	N60750.D	02/29/12	20:44	06:36	(unrelated sample)
ZZZZZZ	N60751.D	02/29/12	21:12	07:04	(unrelated sample)
ZZZZZZ	N60752.D	02/29/12	21:40	07:32	(unrelated sample)
ZZZZZZ	N60753.D	02/29/12	22:08	08:00	(unrelated sample)
ZZZZZZ	N60754.D	02/29/12	22:37	08:29	(unrelated sample)
ZZZZZZ	N60755.D	02/29/12	23:05	08:57	(unrelated sample)
ZZZZZZ	N60756.D	02/29/12	23:33	09:25	(unrelated sample)
MC8287-7	N60757.D	03/01/12	00:02	09:54	(used for QC only; not part of job MC8298)
MC8287-7MS	N60758.D	03/01/12	00:30	10:22	Matrix Spike
MC8287-7MSD	N60759.D	03/01/12	00:58	10:50	Matrix Spike Duplicate

Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: MC8298
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Check Std: MSN2270-CC2251 **Injection Date:** 02/29/12
Lab File ID: N60736.D **Injection Time:** 14:08
Instrument ID: GCMSN **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	258726	9.02	469979	9.89	267330	13.15	194950	15.71	148756	6.56
Upper Limit ^a	517452	9.52	939958	10.39	534660	13.65	389900	16.21	297512	7.06
Lower Limit ^b	129363	8.52	234990	9.39	133665	12.65	97475	15.21	74378	6.06

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN2270-BS	258726	9.02	469979	9.89	267330	13.15	194950	15.71	148756	6.56
MSN2270-BSD	278805	9.02	497064	9.89	286441	13.15	198972	15.71	139478	6.57
MSN2270-MB	251454	9.02	444230	9.89	230306	13.16	143343	15.72	131544	6.58
MC8298-1	250276	9.02	448453	9.90	234913	13.15	146355	15.72	131091	6.58
ZZZZZZ	241770	9.02	431112	9.89	229264	13.15	141609	15.72	126488	6.57
ZZZZZZ	230743	9.02	418181	9.90	221081	13.15	133324	15.72	112113	6.57
ZZZZZZ	236474	9.02	424649	9.90	223122	13.16	136571	15.72	120942	6.58
ZZZZZZ	234663	9.02	427847	9.90	223690	13.15	138012	15.72	140723	6.57
ZZZZZZ	233632	9.02	421056	9.90	218639	13.16	135609	15.71	124303	6.58
ZZZZZZ	229115	9.03	415411	9.90	218691	13.16	131701	15.72	109161	6.58
ZZZZZZ	229646	9.02	411912	9.90	216668	13.15	130018	15.71	108620	6.58
ZZZZZZ	229201	9.02	411367	9.90	215669	13.16	131081	15.72	125286	6.58
ZZZZZZ	225519	9.02	406014	9.90	217421	13.15	132062	15.72	123690	6.57
ZZZZZZ	222242	9.02	401804	9.89	211591	13.15	132497	15.72	103603	6.58
ZZZZZZ	221561	9.02	396655	9.90	211861	13.15	128304	15.71	105589	6.58
ZZZZZZ	226917	9.02	408329	9.90	216618	13.15	148016	15.71	111992	6.58
ZZZZZZ	232574	9.02	420104	9.90	225052	13.15	147419	15.71	128218	6.58
ZZZZZZ	234836	9.02	424952	9.90	224319	13.15	147506	15.71	118247	6.58
ZZZZZZ	230739	9.03	418631	9.90	224765	13.15	144228	15.72	105882	6.58
ZZZZZZ	231381	9.02	416927	9.90	216686	13.15	134288	15.72	103104	6.57
MC8287-7	224524	9.02	411242	9.90	216180	13.16	128717	15.72	125278	6.58
MC8287-7MS	243444	9.02	435552	9.89	253881	13.15	189278	15.71	136888	6.57
MC8287-7MSD	253923	9.02	455210	9.90	250594	13.15	189013	15.71	125221	6.57

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: MC8298
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Method: SW846 8260B	Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC8298-1	N60740.D	84.0	86.0	95.0
MC8287-7MS	N60758.D	87.0	89.0	85.0
MC8287-7MSD	N60759.D	87.0	88.0	86.0
MSN2270-BS	N60736.D	87.0	87.0	86.0
MSN2270-BSD	N60737.D	86.0	87.0	88.0
MSN2270-MB	N60739.D	85.0	86.0	97.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

5.6.1
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Initial Calibration Summary

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Job Number: MC8298
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2251-ICC2251
Lab FileID: N60252.D

Response Factor Report MAMSN

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Wed Feb 15 16:23:00 2012
Response via : Initial Calibration

Calibration Files

1 =N60250.D	2 =N60249.D	5 =N60248.D	50 =N60252.D
100 =N60253.D	200 =N60254.D	400 =N60255.D	0.5 =N60251.D
25 =N60247.D	=		

Compound	1	2	5	50	100	200	400	0.5	25	Avg	%RSD

1) tert butyl alcohol-d9	-----ISTD-----										
2) tertiary butyl alcohol	0.985	0.844	0.875	1.123	1.099	1.122	1.087		1.013	1.019	10.82
3) Ethanol	0.160	0.162	0.155	0.191	0.176	0.189	0.178		0.176	0.173	7.62
4) I pentafluorobenzene	-----ISTD-----										
5) dichlorodifluoromethane	0.461	0.353	0.416	0.372	0.357	0.351	0.320		0.452	0.385	13.41
6) chloromethane	0.571	0.506	0.505	0.462	0.465	0.497	0.487		0.452	0.493	7.59
7) vinyl chloride	0.792	0.604	0.619	0.581	0.524	0.509			0.623	0.607	15.30
8) bromomethane	0.506	0.472	0.435	0.374	0.392	0.402	0.386		0.398	0.421	11.09
9) chloroethane	0.503	0.412	0.460	0.427	0.421	0.404	0.362		0.449	0.430	9.74
10) ethyl ether	0.585	0.433	0.536	0.541	0.553	0.542	0.518		0.540	0.531	8.25
11) acetonitrile	0.377	0.133	0.069	0.070	0.262				0.213	0.187	64.50
----- Quadratic regression -----											Coefficient = 0.9917
Response Ratio = 0.14318 + -0.13111 *A + 0.04663 *A^2											
12) trichlorofluoromethane	1.013	0.780	0.906	0.858	0.856	0.849	0.812		0.929	0.875	8.31
13) freon-113	0.596	0.493	0.535	0.510	0.506	0.501	0.489		0.548	0.522	6.90
14) acrolein	0.072	0.056	0.066	0.066	0.070	0.071	0.068		0.065	0.067	7.49
15) 1,1-dichloroethene	0.640	0.538	0.548	0.492	0.508	0.506	0.510		0.536	0.535	8.75
16) acetone	0.221	0.251	0.207	0.200	0.207	0.268			0.202	0.222	11.99
17) Methyl Acetate	1.136	0.833	1.055	1.071	0.991	0.942	0.903		0.992	0.991	9.84
18) methylene chloride	0.812	0.671	0.711	0.666	0.673	0.667	0.664		0.678	0.693	7.31
19) methyl tert butyl ether	1.393	1.138	1.323	1.541	1.707	1.767	1.587		1.408	1.483	14.04
20) acrylonitrile	0.046	0.052	0.051	0.051	0.051				0.049	0.050	4.47
21) allyl chloride	0.707	0.594	0.728	0.821	0.821	0.770	0.709		0.811	0.745	10.43

Initial Calibration Summary

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Job Number: MC8298
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2251-ICC2251
Lab FileID: N60252.D

22)	trans-1,2-dichloroethene	0.669	0.548	0.631	0.597	0.605	0.603	0.593	0.620	0.608	5.70
23)	iodomethane	0.118	0.121	0.232	0.312	0.302	0.232		0.172	0.213	37.21
	----- Quadratic regression -----										Coefficient = 0.9964
	Response Ratio =	$-0.05722 + 0.37442 * A + -0.01678 * A^2$									
24)	carbon disulfide	2.199	1.829	2.075	1.981	1.933	1.933	1.888	2.045	1.985	5.93
25)	propionitrile	0.147	0.031	0.024	0.009	0.008	0.007	0.005	0.011	0.030	159.97
	----- Quadratic regression -----										Coefficient = 0.9984
	Response Ratio =	$0.00177 + 0.00769 * A + -0.00041 * A^2$									
26)	vinyl acetate	1.136	0.833	1.055	1.071	0.990	0.964	0.905	0.992	0.993	9.66
27)	chloroprene	0.819	0.692	0.858	0.977	1.000	0.982	0.857	0.939	0.891	11.77
28)	di-isopropyl ether	2.329	1.890	2.227	2.302	2.294	2.177	1.868	2.258	2.168	8.52
29)	methacrylonitrile	0.428	0.380	0.465	0.458	0.464	0.454	0.435	0.435	0.440	6.39
30)	2-butanone		0.066	0.085	0.086	0.085	0.082		0.080	0.081	9.19
31)	Hexane	1.012	0.890	0.985	0.921	0.908	0.843	0.717	0.958	0.904	10.29
32)	1,1-dichloroethane	1.213	1.046	1.189	1.188	1.178	1.160	1.086	1.213	1.159	5.28
33)	tert-butyl ethyl ether	0.975	0.886	1.161	1.515	1.703	1.759	1.700	1.345	1.380	24.89
	----- Linear regression -----										Coefficient = 0.9994
	Response Ratio =	$-0.06737 + 1.72011 * A$									
34)	isobutyl alcohol	0.376	0.326	0.383	0.370	0.360	0.343	0.296	0.365	0.352	8.33
35)	2,2-dichloropropane		0.360	0.682	0.795	0.780			0.603	0.644	27.46
	----- Linear regression -----										Coefficient = 0.9988
	Response Ratio =	$-0.07331 + 0.80185 * A$									
36)	cis-1,2-dichloroethene	0.713	0.606	0.663	0.660	0.665	0.670	0.654	0.676	0.663	4.43
37)	ethyl acetate	1.959	1.629	1.861	1.836	1.803	1.712	1.482	1.837	1.765	8.57
38)	bromochloromethane	0.255	0.232	0.246	0.265	0.264	0.265	0.269	0.258	0.257	4.90
39)	chloroform	1.209	1.067	1.148	1.160	1.158	1.151	1.082	1.171	1.143	4.09
40)	dibromofluoromethane (s)	0.837	0.701	0.628	0.631	0.611	0.616	0.595	0.843	0.650	14.13
41)	Tetrahydrofuran	0.227	0.156	0.210	0.213	0.208	0.214	0.213	0.200	0.205	10.35
42)	1,1,1-trichloroethane	0.688	0.676	0.781	0.907	0.928	0.944	0.811	0.899	0.829	12.90
43)	I 1,4-difluorobenzene	-----ISTD-----									
44)	Cyclohexane	0.658	0.557	0.661	0.638	0.639	0.626	0.591	0.679	0.631	6.33
45)	carbon tetrachloride	0.251	0.213	0.279	0.340	0.369	0.393	0.307	0.344	0.312	19.57

5.7.1

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Initial Calibration Summary

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Job Number: MC8298
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2251-ICC2251
 Lab FileID: N60252.D

----- Quadratic regression -----								Coefficient = 0.9973			
Response Ratio = -0.03556 + 0.45279 *A + -0.01748 *A^2											
46)	1,1-dichloropropene	0.558	0.434	0.513	0.508	0.514	0.509	0.489	0.532	0.507	7.05
47)	benzene	1.642	1.336	1.509	1.465	1.475	1.480	1.430	1.654	1.525	6.61
48)	1,2-dichloroethane	0.525	0.480	0.532	0.514	0.515	0.507	0.471	0.519	0.508	4.26
49)	tert-amyl methyl ether	0.538	0.443	0.560	0.725	0.788	0.842	0.899	0.635	0.679	23.66
----- Linear regression -----								Coefficient = 0.9985			
Response Ratio = -0.10183 + 0.89893 *A											
50)	heptane	0.401	0.345	0.406	0.372	0.376	0.370	0.343	0.396	0.376	6.37
51)	trichloroethene	0.399	0.336	0.393	0.368	0.364	0.366	0.357	0.384	0.371	5.55
52)	1,2-dichloropropane	0.402	0.326	0.402	0.392	0.397	0.394	0.371	0.396	0.385	6.69
53)	dibromomethane	0.230	0.196	0.225	0.221	0.218	0.210	0.196	0.227	0.215	6.30
54)	bromodichloromethane	0.398	0.359	0.452	0.471	0.488	0.504	0.470	0.478	0.452	10.86
55)	Methylcyclohexane	0.641	0.543	0.639	0.644	0.640	0.646	0.631	0.678	0.633	6.15
56)	2-chloroethyl vinyl ether	0.402	0.326	0.402	0.392	0.397	0.394	0.371	0.396	0.385	6.69
57)	methyl methacrylate	0.230	0.250	0.256	0.267	0.278			0.230	0.252	7.73
58)	1,4-dioxane	0.004	0.005	0.005	0.005	0.005			0.004	0.005	10.54
59)	cis-1,3-dichloropropene	0.413	0.355	0.461	0.524	0.564	0.597	0.590	0.367	0.514	19.01
----- Linear regression -----								Coefficient = 0.9997			
Response Ratio = -0.02303 + 0.59325 *A											
60)	toluene-d8 (s)	1.716	1.508	1.413	1.379	1.357	1.400	1.365	1.918	1.477	12.72
61)	4-methyl-2-pentanone	0.299	0.371	0.368	0.384	0.387			0.336	0.358	9.45
62)	toluene	0.926	0.787	0.875	0.884	0.904	0.920	0.857	0.908	0.883	5.12
63)	trans-1,3-dichloropropene	0.276	0.257	0.354	0.431	0.469	0.509	0.518	0.206	0.401	29.95
----- Linear regression -----								Coefficient = 0.9993			
Response Ratio = -0.03783 + 0.51980 *A											
64)	1,1,2-trichloroethane	0.283	0.262	0.295	0.292	0.291	0.299	0.300	0.290	0.289	4.17
65)	ethyl methacrylate	0.342	0.461	0.487	0.521	0.483			0.415	0.451	14.20
66)	I chlorobenzene-d5	-----ISTD-----									
67)	tetrachloroethene	0.566	0.512	0.563	0.502	0.519	0.520	0.547	0.544	0.534	4.51
68)	1,3-dichloropropane	1.158	0.920	1.113	1.027	1.072	1.046	1.034	1.064	1.054	6.58
69)	dibromochloromethane	0.385	0.372	0.454	0.495	0.547	0.562	0.602	0.493	0.489	16.82

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Initial Calibration Summary

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Job Number: MC8298
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2251-ICC2251
Lab FileID: N60252.D

----- Linear regression ----- Coefficient = 0.9987											
Response Ratio = -0.05384 + 0.59995 *A											
70)	1,2-dibromoethane	0.583	0.492	0.575	0.541	0.566	0.572	0.601	0.540	0.559	6.02
71)	2-hexanone			0.384	0.431	0.446	0.464	0.478	0.377	0.430	9.67
72)	chlorobenzene	1.779	1.462	1.628	1.523	1.577	1.598	1.626	1.584	1.597	5.76
73)	1,1,1,2-tetrachloroethane	0.420	0.364	0.446	0.461	0.498	0.512	0.538	0.478	0.465	11.88
74)	ethylbenzene	3.118	2.637	3.018	2.826	2.975	3.036	3.006	3.144	2.995	5.21
75)	m,p-xylene	1.157	0.984	1.099	1.046	1.110	1.130	1.064	1.193	1.106	5.64
76)	o-xylene	1.064	0.926	1.070	1.017	1.076	1.091	1.046	0.928	1.068	6.10
77)	styrene			1.430	1.602	1.741	1.832	1.835	1.199	1.584	14.39
78)	bromoform	0.171	0.202	0.243	0.282	0.329	0.365	0.404	0.265	0.283	28.22
----- Linear regression ----- Coefficient = 0.9964											
Response Ratio = -0.06393 + 0.40319 *A											
79)	trans-1,4-dichloro-2-butene	0.021	0.035	0.060	0.111	0.139	0.171	0.192	0.087	0.102	61.34
----- Linear regression ----- Coefficient = 0.9937											
Response Ratio = -0.04396 + 0.19257 *A											
80)	I 1,4-dichlorobenzene-d	-----ISTD-----									
81)	isopropylbenzene	3.348	2.960	3.407	3.153	3.138	3.152	3.055	3.359	3.197	4.97
82)	bromofluorobenzene (s)			1.585	1.361	1.310	1.317	1.249	1.447	1.378	8.75
83)	bromobenzene	0.897	0.802	0.870	0.801	0.807	0.810	0.814	0.836	0.830	4.31
84)	1,1,2,2-tetrachloroethane	1.226	1.097	1.183	1.121	1.094	1.094	1.019	1.121	1.119	5.59
85)	1,2,3-trichloropropane	1.118	0.879	1.041	1.052	1.085	1.134	1.163	1.007	1.060	8.45
86)	n-propylbenzene	5.070	4.323	4.873	4.698	4.637	4.613	4.337	4.879	4.679	5.60
87)	2-chlorotoluene	3.193	2.788	3.091	2.799	2.764	2.768	2.635	2.941	2.872	6.53
88)	4-chlorotoluene	3.249	2.656	3.134	2.831	2.798	2.808	2.662	2.919	2.882	7.36
89)	1,3,5-trimethylbenzene	3.150	2.885	3.376	3.202	3.165	3.205	3.027	3.354	3.170	5.06
90)	tert-butylbenzene	2.160	1.806	2.114	1.936	1.899	1.902	1.751	2.043	1.951	7.37
91)	1,2,4-trimethylbenzene	3.433	2.853	3.218	3.182	3.187	3.240	3.041	3.283	3.180	5.40
92)	sec-butylbenzene	4.331	3.779	4.361	4.157	4.099	4.133	3.880	4.294	4.129	5.08
93)	1,3-dichlorobenzene	1.810	1.553	1.698	1.534	1.509	1.564	1.537	1.541	1.593	6.58
94)	p-isopropyltoluene	3.102	2.723	3.203	3.038	3.015	3.014	2.706	3.106	2.988	6.02
95)	1,4-dichlorobenzene										

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Initial Calibration Summary

Page 5 of 5

Job Number: MC8298
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2251-ICC2251
Lab FileID: N60252.D

	1.942	1.700	1.761	1.582	1.585	1.617	1.471	1.596	1.657	8.67
96)	1,2-dichlorobenzene									
	1.507	1.448	1.587	1.460	1.471	1.495	1.494	1.463	1.491	2.94
97)	n-butylbenzene									
	2.936	2.629	3.318	3.395	3.423	3.423	3.255	3.252	3.204	8.77
98)	1,2-dibromo-3-chloropropane									
	0.189	0.137	0.171	0.186	0.197	0.205	0.215	0.165	0.183	13.61
99)	1,2,4-trichlorobenzene									
	0.720	0.704	0.765	0.849	0.949	1.024	1.054	0.724	0.849	16.84
	----- Linear regression ----- Coefficient = 0.9991									
	Response Ratio = -0.10382 + 1.05917 *A									
100)	1,3,5-trichlorobenzene									
	1.079	0.965	1.074	1.044	1.098	1.150	1.159	1.020	1.074	6.01
101)	hexachlorobutadiene									
	0.537	0.498	0.566	0.467	0.491	0.510	0.510	0.468	0.506	6.62
102)	naphthalene									
	0.973	1.003	1.384	1.984	2.369	2.544	2.804	1.514	1.822	38.76
	----- Linear regression ----- Coefficient = 0.9970									
	Response Ratio = -0.45466 + 2.80461 *A									
103)	1,2,3-trichlorobenzene									
	0.562	0.560	0.726	0.780	0.885	0.956	1.002	0.660	0.766	22.21
	----- Linear regression ----- Coefficient = 0.9987									
	Response Ratio = -0.11451 + 1.00505 *A									
104)	2-methylnaphthalene									
	0.515	0.550	0.477	0.362	0.547	0.819	1.060	0.400	0.591	39.58
	----- Quadratic regression ----- Coefficient = 0.9986									
	Response Ratio = -0.02909 + 0.50791 *A + 0.14089 *A^2									

(#) = Out of Range ### Number of calibration levels exceeded format ###

N021312W.M

Wed Feb 15 16:24:34 2012

RP1

Initial Calibration Verification

Page 1 of 4

Job Number: MC8298
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2251-ICV2251
 Lab FileID: N60257.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\N60257.D
 Acq On : 13 Feb 2012 5:45 pm
 Sample : icv2251-50
 Misc : MS25046,MSN2251,,,,5,1
 MS Integration Params: RTEINT.P

Vial: 31
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Tue Feb 14 10:54:28 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	110	0.00	6.57
2	tertiary butyl alcohol	1.019	1.135	-11.4	111	-0.01	6.65
3 T	Ethanol	0.173	0.166	4.0	96	-0.01	5.42
4 I	pentafluorobenzene	1.000	1.000	0.0	120	0.00	9.02
5 M	dichlorodifluoromethane	0.385	0.552	-43.4#	178	0.00	4.24
6 P	chloromethane	0.493	0.568	-15.2	147	0.00	4.49
7 c	vinyl chloride	0.577	0.535	7.3	110	0.00	4.74
8 M	bromomethane	0.421	0.479	-13.8	153	0.00	5.25
9 M	chloroethane	0.430	0.401	6.7	112	0.00	5.42
10 M	ethyl ether	0.531	0.536	-0.9	119	0.00	6.31
----- True Calc. % Drift -----							
11 M	acetonitrile	50.000	-1.000	102.0#	101	-0.01	5.97
----- AvgRF CCRF % Dev -----							
12 M	trichlorofluoromethane	0.875	0.878	-0.3	123	0.00	6.08
13 M	freon-113	0.522	0.528	-1.1	124	-0.01	6.86
14 M	acrolein	0.067	0.051	23.9	93	0.00	6.07
15 c	1,1-dichloroethene	0.535	0.538	-0.6	131	0.00	6.66
16 M	acetone	0.222	0.192	13.5	111	0.00	6.20
17 M	Methyl Acetate	0.991	1.006	-1.5	113	-0.01	6.84
18 M	methylene chloride	0.693	0.669	3.5	120	0.00	6.81
19 M	methyl tert butyl ether	1.483	1.521	-2.6	118	0.00	7.60
20 M	acrylonitrile	0.050	0.047	6.0	108	0.00	6.71
21 M	allyl chloride	0.745	0.719	3.5	105	0.00	6.91
22 M	trans-1,2-dichloroethene	0.608	0.586	3.6	118	0.00	7.51
----- True Calc. % Drift -----							
23 M	iodomethane	50.000	27.345	45.3#	74	0.00	6.73
----- AvgRF CCRF % Dev -----							
24 M	carbon disulfide	1.985	1.972	0.7	119	0.00	7.10
----- True Calc. % Drift -----							
25 M	propionitrile	50.000	50.692	-1.4	121	0.00	6.64
----- AvgRF CCRF % Dev -----							
26 M	vinyl acetate	0.993	1.006	-1.3	113	-0.01	6.84
27 M	chloroprene	0.891	0.936	-5.1	115	0.00	8.13
28 M	di-isopropyl ether	2.168	2.126	1.9	111	0.00	8.17
29 M	methacrylonitrile	0.440	0.429	2.5	112	0.00	8.29

Initial Calibration Verification

Job Number: MC8298
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2251-ICV2251
Lab FileID: N60257.D

30 M	2-butanone	0.081	0.080	1.2	113	-0.01	8.17
31 M	Hexane	0.904	0.866	4.2	113	-0.01	8.15
32 P	1,1-dichloroethane	1.159	1.136	2.0	115	-0.01	7.76
		----- True	Calc.	% Drift	-----		
33 M	tert-butyl ethyl ether	50.000	44.218	11.6	115	-0.01	8.56
		----- AvgRF	CCRF	% Dev	-----		
34 M	isobutyl alcohol	0.352	0.337	4.3	109	-0.01	8.17
		----- True	Calc.	% Drift	-----		
35 M	2,2-dichloropropane	50.000	44.165	11.7	112	0.00	8.63
		----- AvgRF	CCRF	% Dev	-----		
36 M	cis-1,2-dichloroethene	0.663	0.647	2.4	117	-0.01	8.33
37 M	ethyl acetate	1.765	1.696	3.9	111	-0.01	8.17
38 M	bromochloromethane	0.257	0.267	-3.9	121	0.00	8.50
39 c	chloroform	1.143	1.117	2.3	115	-0.01	8.54
40 S	dibromofluoromethane (s)	0.679	0.583	14.1	111	0.00	8.66
41 M	Tetrahydrofuran	0.205	0.195	4.9	110	-0.01	8.87
42 M	1,1,1-trichloroethane	0.829	0.887	-7.0	117	-0.01	9.30
		----- True	Calc.	% Drift	-----		
43 I	1,4-difluorobenzene	1.000	1.000	0.0	117	-0.01	9.89
44 M	Cyclohexane	0.631	0.628	0.5	115	0.00	9.58
		----- True	Calc.	% Drift	-----		
45 M	carbon tetrachloride	50.000	43.740	12.5	120	-0.01	9.66
		----- AvgRF	CCRF	% Dev	-----		
46 M	1,1-dichloropropene	0.507	0.503	0.8	116	0.00	9.47
47 M	benzene	1.502	1.441	4.1	115	-0.01	9.70
48 M	1,2-dichloroethane	0.508	0.489	3.7	112	-0.01	9.19
		----- True	Calc.	% Drift	-----		
49 M	tert-amyl methyl ether	50.000	45.276	9.4	115	0.00	9.81
		----- AvgRF	CCRF	% Dev	-----		
50 M	heptane	0.376	0.350	6.9	110	0.00	10.17
51 M	trichloroethene	0.371	0.357	3.8	114	-0.01	10.31
52 c	1,2-dichloropropane	0.385	0.372	3.4	111	-0.01	10.28
53 M	dibromomethane	0.215	0.216	-0.5	114	0.00	10.25
54 M	bromodichloromethane	0.452	0.473	-4.6	118	0.00	10.37
55 M	Methylcyclohexane	0.633	0.625	1.3	114	0.00	10.84
56 M	2-chloroethyl vinyl ether	0.385	0.372	3.4	111	-0.01	10.28
57 M	methyl methacrylate	0.252	0.243	3.6	114	0.00	10.46
58 M	1,4-dioxane	0.005	0.004	20.0	107	0.00	10.47
		----- True	Calc.	% Drift	-----		
59 M	cis-1,3-dichloropropene	50.000	45.921	8.2	117	0.00	10.99
		----- AvgRF	CCRF	% Dev	-----		
60 S	toluene-d8 (s)	1.504	1.310	12.9	111	-0.01	11.70
61 M	4-methyl-2-pentanone	0.358	0.333	7.0	105	-0.01	11.08
62 c	toluene	0.883	0.875	0.9	116	-0.01	11.77
		----- True	Calc.	% Drift	-----		
63 M	trans-1,3-dichloropropene	50.000	47.396	5.2	124	0.00	11.40
		----- AvgRF	CCRF	% Dev	-----		
64 M	1,1,2-trichloroethane	0.289	0.277	4.2	111	0.00	11.58

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Initial Calibration Verification

Job Number: MC8298
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2251-ICV2251
 Lab FileID: N60257.D

65 M	ethyl methacrylate	0.451	0.437	3.1	111	0.00	11.78
66 I	chlorobenzene-d5	1.000	1.000	0.0	112	-0.01	13.15
67 M	tetrachloroethene	0.534	0.520	2.6	116	-0.01	12.51
68 M	1,3-dichloropropane	1.054	1.009	4.3	110	0.00	11.81
		----- True	Calc.	% Drift	-----		
69 M	dibromochloromethane	50.000	47.664	4.7	117	0.00	12.11
		----- AvgRF	CCRF	% Dev	-----		
70 M	1,2-dibromoethane	0.559	0.546	2.3	113	0.00	12.36
71 M	2-hexanone	0.430	0.390	9.3	101	0.00	11.93
72 P	chlorobenzene	1.597	1.562	2.2	115	-0.01	13.19
73 M	1,1,1,2-tetrachloroethane	0.465	0.483	-3.9	118	-0.01	13.10
74 C	ethylbenzene	2.973	2.867	3.6	114	-0.01	13.36
75 M	m,p-xylene	1.099	1.082	1.5	116	0.00	13.55
76 M	o-xylene	1.032	1.052	-1.9	116	-0.01	13.96
77 M	styrene	1.603	1.671	-4.2	117	0.00	13.89
		----- True	Calc.	% Drift	-----		
78 P	bromoform	50.000	44.477	11.0	117	-0.01	13.71
79 M	trans-1,4-dichloro-2-bute	50.000	39.107	21.8	107	0.00	14.10
		----- AvgRF	CCRF	% Dev	-----		
80 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	115	-0.01	15.71
81 M	isopropylbenzene	3.197	3.668	-14.7	133	-0.01	14.32
82 S	bromofluorobenzene (s)	1.378	1.322	4.1	111	0.00	14.38
83 M	bromobenzene	0.830	0.799	3.7	114	-0.01	14.61
84 P	1,1,2,2-tetrachloroethane	1.119	1.060	5.3	108	0.00	13.96
85 M	1,2,3-trichloropropane	1.060	1.012	4.5	110	-0.01	14.10
86 M	n-propylbenzene	4.679	4.613	1.4	112	-0.01	14.76
87 M	2-chlorotoluene	2.872	2.755	4.1	113	-0.01	14.89
88 M	4-chlorotoluene	2.882	2.880	0.1	117	-0.01	14.96
89 M	1,3,5-trimethylbenzene	3.170	3.123	1.5	112	0.00	15.05
90 M	tert-butylbenzene	1.951	1.919	1.6	114	-0.01	15.35
91 M	1,2,4-trimethylbenzene	3.180	3.086	3.0	111	-0.01	15.45
92 M	sec-butylbenzene	4.129	4.111	0.4	113	-0.01	15.57
93 M	1,3-dichlorobenzene	1.593	1.533	3.8	115	0.00	15.68
94 M	p-isopropyltoluene	2.988	3.040	-1.7	115	-0.01	15.74
95 M	1,4-dichlorobenzene	1.657	1.599	3.5	116	-0.01	15.74
96 M	1,2-dichlorobenzene	1.491	1.467	1.6	115	-0.01	16.11
97 M	n-butylbenzene	3.204	3.169	1.1	107	-0.01	16.16
98 M	1,2-dibromo-3-chloropropa	0.183	0.174	4.9	107	0.00	16.58
		----- True	Calc.	% Drift	-----		
99 M	1,2,4-trichlorobenzene	50.000	47.549	4.9	122	0.00	17.98
		----- AvgRF	CCRF	% Dev	-----		
100 M	1,3,5-trichlorobenzene	1.074	1.088	-1.3	119	-0.01	17.41
101 M	hexachlorobutadiene	0.506	0.488	3.6	120	-0.01	18.29
		----- True	Calc.	% Drift	-----		
102 M	naphthalene	50.000	46.548	6.9	125	-0.01	18.27
103 M	1,2,3-trichlorobenzene	50.000	47.320	5.4	123	-0.01	18.49
104 M	2-methylnaphthalene	25.000	42.135	-68.5#	316	-0.01	19.79

(3.0 %) 3 of 99 compounds '%D > 30

Initial Calibration Verification

Job Number: MC8298
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2251-ICV2251
Lab FileID: N60257.D

(#) = Out of Range SPCC's out = 0 CCC's out = 0
N60252.D N021312W.M Tue Feb 14 14:03:04 2012 RP1

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Continuing Calibration Summary

Page 1 of 4

Job Number: MC8298
 Account: WSPNYC WSP Environmental & Energy
 Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2270-CC2251
 Lab FileID: N60736.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\N60736.D
 Acq On : 29 Feb 2012 2:08 pm
 Sample : CC2251-50
 Misc : MS25169,MSN2270,,,,5,1
 MS Integration Params: RTEINT.P

Vial: 17
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Wed Feb 15 16:23:00 2012
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	99	-0.01	6.56
2	tertiary butyl alcohol	1.019	1.156	-13.4	102	-0.01	6.65
3 T	Ethanol	0.173	0.184	-6.4	95	0.00	5.42
4 I	pentafluorobenzene	1.000	1.000	0.0	100	0.00	9.02
5 M	dichlorodifluoromethane	0.385	0.604	-56.9#	163	0.00	4.24
6 P	chloromethane	0.493	0.664	-34.7#	144	0.00	4.49
7 c	vinyl chloride	0.607	0.615	-1.3	106	0.00	4.74
8 M	bromomethane	0.421	0.379	10.0	101	0.00	5.25
9 M	chloroethane	0.430	0.400	7.0	94	0.00	5.42
10 M	ethyl ether	0.531	0.513	3.4	95	0.00	6.31
----- True Calc. % Drift -----							
11 M	acetonitrile	50.000	167.550	-235.1#	171	0.00	5.97
----- AvgRF CCRF % Dev -----							
12 M	trichlorofluoromethane	0.875	0.889	-1.6	104	0.00	6.08
13 M	freon-113	0.522	0.560	-7.3	110	-0.01	6.85
14 M	acrolein	0.067	0.057	14.9	86	0.00	6.07
15 c	1,1-dichloroethene	0.535	0.532	0.6	108	0.00	6.66
16 M	acetone	0.222	0.442	-99.1#	214#	0.00	6.20
17 M	Methyl Acetate	0.991	1.032	-4.1	96	-0.01	6.84
18 M	methylene chloride	0.693	0.657	5.2	99	-0.01	6.81
19 M	methyl tert butyl ether	1.483	1.381	6.9	90	0.00	7.60
20 M	acrylonitrile	0.050	0.050	0.0	96	0.00	6.72
21 M	allyl chloride	0.745	0.789	-5.9	96	0.00	6.91
22 M	trans-1,2-dichloroethene	0.608	0.581	4.4	98	0.00	7.51
----- True Calc. % Drift -----							
23 M	iodomethane	50.000	44.941	10.1	115	0.00	6.72
----- AvgRF CCRF % Dev -----							
24 M	carbon disulfide	1.985	1.820	8.3	92	-0.01	7.09
----- True Calc. % Drift -----							
25 M	propionitrile	50.000	87.191	-74.4#	154	0.00	6.64
----- AvgRF CCRF % Dev -----							
26 M	vinyl acetate	0.993	1.032	-3.9	96	-0.01	6.84
27 M	chloroprene	0.891	0.918	-3.0	94	-0.01	8.13
28 M	di-isopropyl ether	2.168	2.271	-4.8	99	0.00	8.16
29 M	methacrylonitrile	0.440	0.470	-6.8	103	0.00	8.28

Continuing Calibration Summary

Page 2 of 4

Job Number: MC8298
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2270-CC2251
Lab FileID: N60736.D

30 M	2-butanone	0.081	0.121	-49.4#	142	0.00	8.18
31 M	Hexane	0.904	0.965	-6.7	105	-0.01	8.15
32 P	1,1-dichloroethane	1.159	1.166	-0.6	98	-0.01	7.76
----- True		Calc.	% Drift	-----			
33 M	tert-butyl ethyl ether	50.000	35.171	29.7	75	-0.01	8.56
----- AvgRF		CCRF	% Dev	-----			
34 M	isobutyl alcohol	0.352	0.409	-16.2	110	0.00	8.17
----- True		Calc.	% Drift	-----			
35 M	2,2-dichloropropane	50.000	41.558	16.9	87	-0.01	8.62
----- AvgRF		CCRF	% Dev	-----			
36 M	cis-1,2-dichloroethene	0.663	0.655	1.2	99	-0.01	8.33
37 M	ethyl acetate	1.765	2.031	-15.1	111	0.00	8.17
38 M	bromochloromethane	0.257	0.257	0.0	97	0.00	8.50
39 c	chloroform	1.143	1.185	-3.7	102	0.00	8.54
40 S	dibromofluoromethane (s)	0.679	0.654	3.7	104	0.00	8.66
41 M	Tetrahydrofuran	0.205	0.204	0.5	96	-0.01	8.87
42 M	1,1,1-trichloroethane	0.829	0.896	-8.1	99	-0.02	9.29
----- True		Calc.	% Drift	-----			
43 I	1,4-difluorobenzene	1.000	1.000	0.0	101	-0.01	9.89
44 M	Cyclohexane	0.631	0.649	-2.9	102	-0.01	9.58
----- True		Calc.	% Drift	-----			
45 M	carbon tetrachloride	50.000	44.569	10.9	105	-0.01	9.66
----- AvgRF		CCRF	% Dev	-----			
46 M	1,1-dichloropropene	0.507	0.503	0.8	100	0.00	9.47
47 M	benzene	1.502	1.431	4.7	98	-0.01	9.70
48 M	1,2-dichloroethane	0.508	0.490	3.5	96	0.00	9.19
----- True		Calc.	% Drift	-----			
49 M	tert-amyl methyl ether	50.000	36.445	27.1	77	0.00	9.81
----- AvgRF		CCRF	% Dev	-----			
50 M	heptane	0.376	0.393	-4.5	107	-0.01	10.17
51 M	trichloroethene	0.371	0.368	0.8	101	-0.01	10.31
52 c	1,2-dichloropropane	0.385	0.394	-2.3	101	-0.01	10.28
53 M	dibromomethane	0.215	0.213	0.9	97	0.00	10.25
54 M	bromodichloromethane	0.452	0.490	-8.4	105	0.00	10.37
55 M	Methylcyclohexane	0.633	0.654	-3.3	102	-0.01	10.83
56 M	2-chloroethyl vinyl ether	0.385	0.394	-2.3	101	-0.01	10.28
57 M	methyl methacrylate	0.252	0.241	4.4	97	0.00	10.46
58 M	1,4-dioxane	0.005	0.005	0.0	95	-0.01	10.46
----- True		Calc.	% Drift	-----			
59 M	cis-1,3-dichloropropene	50.000	45.590	8.8	100	0.00	10.99
----- AvgRF		CCRF	% Dev	-----			
60 S	toluene-d8 (s)	1.504	1.457	3.1	106	-0.01	11.70
61 M	4-methyl-2-pentanone	0.358	0.372	-3.9	101	-0.01	11.08
62 c	toluene	0.883	0.889	-0.7	101	-0.01	11.77
----- True		Calc.	% Drift	-----			
63 M	trans-1,3-dichloropropene	50.000	47.821	4.4	107	0.00	11.40
----- AvgRF		CCRF	% Dev	-----			
64 M	1,1,2-trichloroethane	0.289	0.289	0.0	100	0.00	11.58

5.7.3

5

Continuing Calibration Summary

Page 3 of 4

Job Number: MC8298
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2270-CC2251
Lab FileID: N60736.D

65 M	ethyl methacrylate	0.451	0.451	0.0	99	0.00	11.78
66 I	chlorobenzene-d5	1.000	1.000	0.0	98	-0.01	13.15
67 M	tetrachloroethene	0.534	0.539	-0.9	105	-0.01	12.51
68 M	1,3-dichloropropane	1.054	1.066	-1.1	101	0.00	11.81
		----- True	Calc.	% Drift	-----		
69 M	dibromochloromethane	50.000	50.931	-1.9	110	-0.01	12.10
		----- AvgRF	CCRF	% Dev	-----		
70 M	1,2-dibromoethane	0.559	0.554	0.9	100	0.00	12.36
71 M	2-hexanone	0.430	0.604	-40.5#	137	0.00	11.93
72 P	chlorobenzene	1.597	1.622	-1.6	104	-0.01	13.19
73 M	1,1,1,2-tetrachloroethane	0.465	0.511	-9.9	108	-0.01	13.10
74 C	ethylbenzene	2.973	2.976	-0.1	103	-0.01	13.36
75 M	m,p-xylene	1.099	1.117	-1.6	104	-0.01	13.55
76 M	o-xylene	1.032	1.097	-6.3	105	-0.01	13.96
77 M	styrene	1.603	1.679	-4.7	102	-0.01	13.89
		----- True	Calc.	% Drift	-----		
78 P	bromoform	50.000	48.321	3.4	113	-0.01	13.71
79 M	trans-1,4-dichloro-2-bute	50.000	36.915	26.2	86	0.00	14.10
		----- AvgRF	CCRF	% Dev	-----		
80 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	100	-0.01	15.71
81 M	isopropylbenzene	3.197	3.855	-20.6	123	-0.01	14.32
82 S	bromofluorobenzene (s)	1.378	1.310	4.9	97	-0.01	14.38
83 M	bromobenzene	0.830	0.840	-1.2	105	0.00	14.61
84 P	1,1,2,2-tetrachloroethane	1.119	1.166	-4.2	104	-0.01	13.95
85 M	1,2,3-trichloropropane	1.060	1.059	0.1	101	-0.01	14.10
86 M	n-propylbenzene	4.679	4.859	-3.8	104	-0.01	14.76
87 M	2-chlorotoluene	2.872	2.881	-0.3	103	-0.01	14.89
88 M	4-chlorotoluene	2.882	2.998	-4.0	106	-0.01	14.96
89 M	1,3,5-trimethylbenzene	3.170	3.261	-2.9	102	-0.01	15.04
90 M	tert-butylbenzene	1.951	2.025	-3.8	105	-0.01	15.35
91 M	1,2,4-trimethylbenzene	3.180	3.250	-2.2	103	-0.01	15.45
92 M	sec-butylbenzene	4.129	4.468	-8.2	108	-0.01	15.57
93 M	1,3-dichlorobenzene	1.593	1.619	-1.6	106	-0.01	15.67
94 M	p-isopropyltoluene	2.988	3.316	-11.0	110	-0.01	15.74
95 M	1,4-dichlorobenzene	1.657	1.717	-3.6	109	-0.01	15.74
96 M	1,2-dichlorobenzene	1.491	1.563	-4.8	107	-0.01	16.11
97 M	n-butylbenzene	3.204	3.501	-9.3	103	-0.01	16.16
98 M	1,2-dibromo-3-chloropropa	0.183	0.188	-2.7	101	-0.01	16.58
		----- True	Calc.	% Drift	-----		
99 M	1,2,4-trichlorobenzene	50.000	48.616	2.8	109	-0.01	17.98
		----- AvgRF	CCRF	% Dev	-----		
100 M	1,3,5-trichlorobenzene	1.074	1.121	-4.4	108	-0.01	17.41
101 M	hexachlorobutadiene	0.506	0.545	-7.7	117	-0.01	18.28
		----- True	Calc.	% Drift	-----		
102 M	naphthalene	50.000	45.258	9.5	105	-0.01	18.27
103 M	1,2,3-trichlorobenzene	50.000	47.177	5.6	107	-0.01	18.49
104 M	2-methylnaphthalene	25.000	35.953	-43.8#	227	-0.01	19.79

(8.0 %) 8 of 100 compounds'%D > 30

Continuing Calibration Summary

Job Number: MC8298
Account: WSPNYC WSP Environmental & Energy
Project: Former TTC, 1 Robert Lane, Glen Head, NY

Sample: MSN2270-CC2251
Lab FileID: N60736.D

(#) = Out of Range SPCC's out = 0 CCC's out = 0
N60252.D N021312W.M Wed Feb 29 14:38:24 2012 RP1

5.7.3
5

GC/MS Volatiles

Raw Data

9

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60740.D Vial: 21
 Acq On : 29 Feb 2012 4:01 pm Operator: JUGALP
 Sample : MC8298-1 Inst : MAMSN
 Misc : MS25182,MSN2270,,,,5,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Feb 29 17:06:28 2012 Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Wed Feb 15 16:23:00 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.58	65	131091	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	250276	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.90	114	448453	50.00	ug/L	0.00
66) chlorobenzene-d5	13.15	82	234913	50.00	ug/L	-0.01
80) 1,4-dichlorobenzene-d4	15.72	152	146355	50.00	ug/L	0.00

System Monitoring Compounds						
40) dibromofluoromethane (s)	8.66	113	143129	42.10	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	84.20%
60) toluene-d8 (s)	11.70	98	577624	42.83	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	85.66%
82) bromofluorobenzene (s)	14.38	95	191315	47.43	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	94.86%

Target Compounds						Qvalue
16) acetone	6.21	43	32595	29.30	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 N60740.D N021312W.M Wed Feb 29 17:08:14 2012 RP1

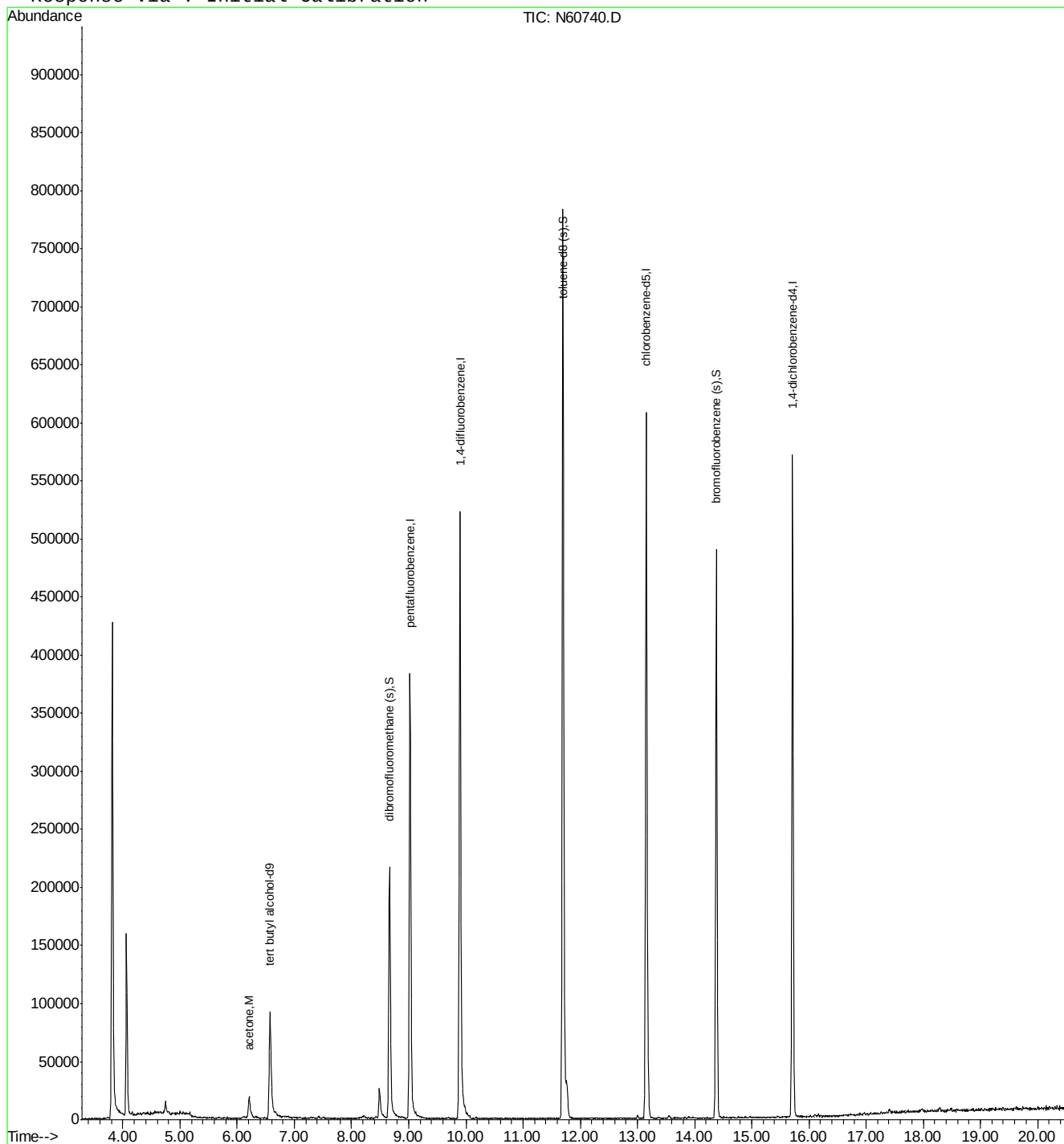
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60740.D
Acq On : 29 Feb 2012 4:01 pm
Sample : MC8298-1
Misc : MS25182,MSN2270,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 29 17:08 2012

Vial: 21
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Wed Feb 15 16:23:00 2012
Response via : Initial Calibration

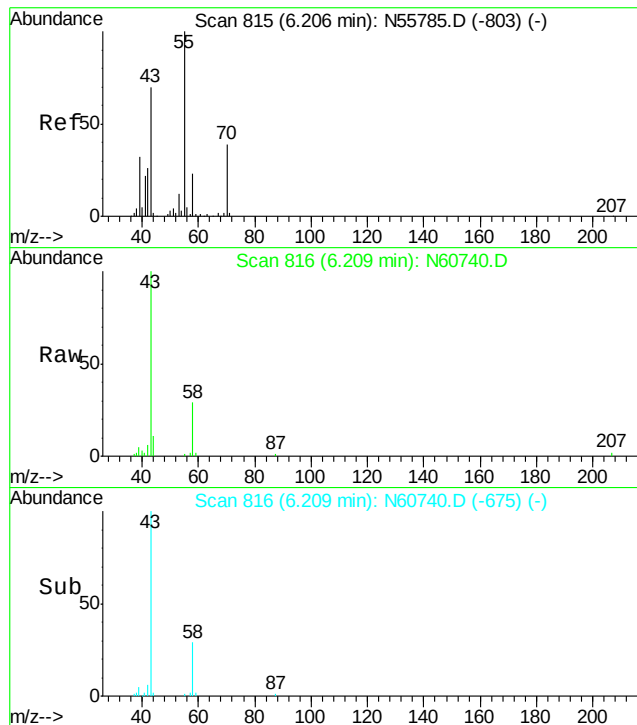


N60740.D N021312W.M

Wed Feb 29 17:08:14 2012

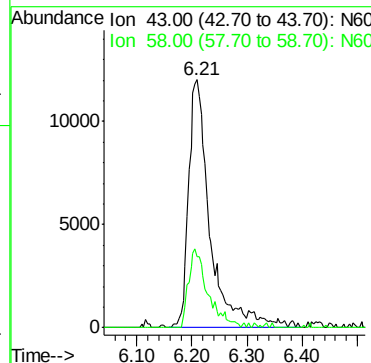
RP1

Page 2



#16
 acetone
 Concen: 29.30 ug/L
 RT: 6.21 min Scan# 816
 Delta R.T. 0.00 min
 Lab File: N60740.D
 Acq: 29 Feb 2012 4:01 pm

Tgt Ion: 43 Resp: 32595
 Ion Ratio Lower Upper
 43 100
 58 28.7 2.9 62.9



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60739.D
 Acq On : 29 Feb 2012 3:33 pm
 Sample : MB
 Misc : MS25169,MSN2270,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 29 16:18:12 2012

Vial: 20
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Wed Feb 15 16:23:00 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.58	65	131544	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	251454	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	444230	50.00	ug/L	-0.01
66) chlorobenzene-d5	13.16	82	230306	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	15.72	152	143343	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	145278	42.53	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	85.06%
60) toluene-d8 (s)	11.70	98	577708	43.24	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	86.48%
82) bromofluorobenzene (s)	14.38	95	190719	48.27	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	96.54%

Target Compounds

Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 N60739.D N021312W.M Wed Feb 29 17:06:23 2012 RP1

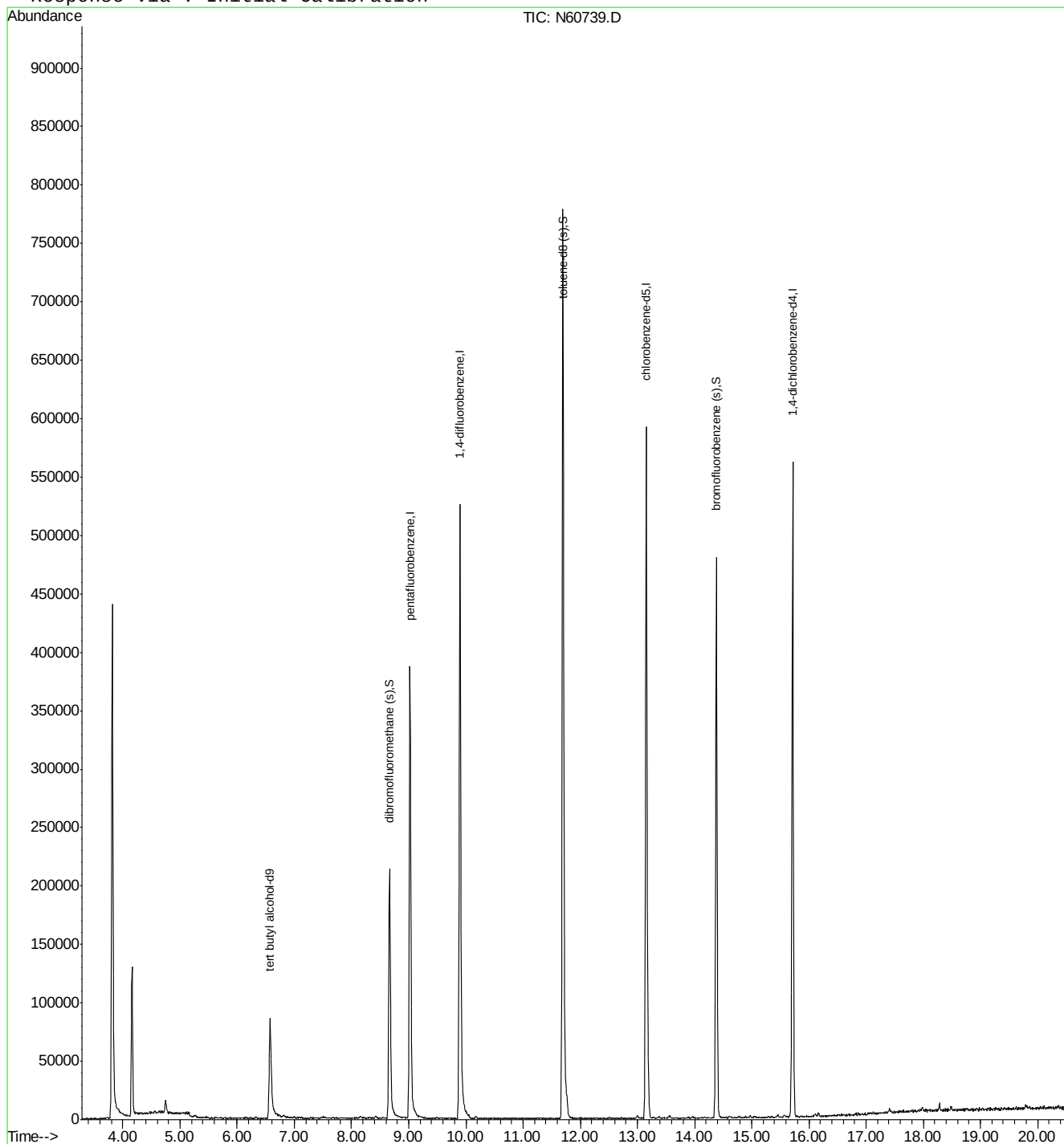
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60739.D
Acq On : 29 Feb 2012 3:33 pm
Sample : MB
Misc : MS25169,MSN2270,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 29 17:06 2012

Vial: 20
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Wed Feb 15 16:23:00 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60736.D
 Acq On : 29 Feb 2012 2:08 pm
 Sample : BS
 Misc : MS25169,MSN2270,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 29 14:34:11 2012

Vial: 17
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260
 Last Update : Wed Feb 15 16:23:00 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.56	65	148756	500.00	ug/L	-0.01
4) pentafluorobenzene	9.02	168	258726	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	469979	50.00	ug/L	-0.01
66) chlorobenzene-d5	13.15	82	267330	50.00	ug/L	-0.01
80) 1,4-dichlorobenzene-d4	15.71	152	194950	50.00	ug/L	-0.01

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	152245	43.32	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	86.64%
60) toluene-d8 (s)	11.70	98	616082	43.59	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	87.18%
82) bromofluorobenzene (s)	14.38	95	229847	42.78	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	85.56%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.65	59	171989	567.57	ug/L	88
3) Ethanol	5.42	45	273218	5296.01	ug/L	100
5) dichlorodifluoromethane	4.24	85	156229	78.44	ug/L	100
6) chloromethane	4.49	50	171899	67.36	ug/L	94
7) vinyl chloride	4.74	62	159011	50.59	ug/L	93
8) bromomethane	5.25	96	98071	45.05	ug/L	97
9) chloroethane	5.42	64	103610	46.59	ug/L	96
10) ethyl ether	6.31	59	132683	48.30	ug/L	100
11) acetonitrile	5.97	41	58853	167.55	ug/L	96
12) trichlorofluoromethane	6.08	101	230005	50.78	ug/L	100
13) freon-113	6.85	101	144814	53.58	ug/L	87
14) acrolein	6.07	56	73660	213.15	ug/L	98
15) 1,1-dichloroethene	6.66	96	137585	49.71	ug/L #	67
16) acetone	6.20	43	114288	99.37	ug/L	96
17) Methyl Acetate	6.84	43	267123	52.11	ug/L	93
18) methylene chloride	6.81	84	169939	47.40	ug/L	88
19) methyl tert butyl ether	7.60	73	357329	46.56	ug/L	95
20) acrylonitrile	6.72	53	64629	249.59	ug/L	94
21) allyl chloride	6.91	41	204096	52.93	ug/L	87
22) trans-1,2-dichloroethene	7.51	96	150441	47.79	ug/L	88
23) iodomethane	6.72	142	68760	44.94	ug/L	94
24) carbon disulfide	7.09	76	470924	45.84	ug/L	100
25) propionitrile	6.64	54	3603	87.19	ug/L	100
26) vinyl acetate	6.84	43	267123	51.96	ug/L	94
27) chloroprene	8.13	53	237499	51.53	ug/L	87
28) di-isopropyl ether	8.16	45	587580	52.38	ug/L	94
29) methacrylonitrile	8.28	41	121582	53.42	ug/L	88
30) 2-butanone	8.18	72	31402	75.07	ug/L #	49
31) Hexane	8.15	41	249768	53.39	ug/L #	91
32) 1,1-dichloroethane	7.76	63	301774	50.31	ug/L	99
33) tert-butyl ethyl ether	8.56	59	295623	35.17	ug/L	92
34) isobutyl alcohol	8.17	43	528615	289.94	ug/L	92
35) 2,2-dichloropropane	8.62	77	153467	41.56	ug/L	92
36) cis-1,2-dichloroethene	8.33	96	169389	49.36	ug/L #	78
37) ethyl acetate	8.17	43	525368	57.53	ug/L	95

(#)=qualifier out of range (m)=manual integration

N60736.D N021312W.M

Wed Feb 29 14:35:54 2012

RP1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60736.D
 Acq On : 29 Feb 2012 2:08 pm
 Sample : BS
 Misc : MS25169,MSN2270,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 29 14:34:11 2012

Vial: 17
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260
 Last Update : Wed Feb 15 16:23:00 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	8.50	128	66615	50.15	ug/L #	68
39) chloroform	8.54	83	306519	51.82	ug/L	99
41) Tetrahydrofuran	8.87	42	52826	49.77	ug/L	91
42) 1,1,1-trichloroethane	9.29	97	231822	54.03	ug/L	93
44) Cyclohexane	9.58	56	304874	51.39	ug/L	92
45) carbon tetrachloride	9.66	117	166451	44.57	ug/L	94
46) 1,1-dichloropropene	9.47	75	236386	49.59	ug/L	88
47) benzene	9.70	78	672613	47.65	ug/L	98
48) 1,2-dichloroethane	9.19	62	230258	48.24	ug/L	94
49) tert-amyl methyl ether	9.81	73	260087	36.45	ug/L	94
50) heptane	10.17	43	184890	52.32	ug/L	93
51) trichloroethene	10.31	95	173051	49.66	ug/L	84
52) 1,2-dichloropropane	10.28	63	184938	51.11	ug/L	98
53) dibromomethane	10.25	93	100304	49.53	ug/L	85
54) bromodichloromethane	10.37	83	230244	54.13	ug/L	99
55) Methylcyclohexane	10.83	83	307438	51.70	ug/L	91
56) 2-chloroethyl vinyl ether	10.28	63	184938	51.11	ug/L #	99
57) methyl methacrylate	10.46	69	113348	47.88	ug/L	83
58) 1,4-dioxane	10.46	88	10984	256.18	ug/L	90
59) cis-1,3-dichloropropene	10.99	75	243401	45.59	ug/L	94
61) 4-methyl-2-pentanone	11.08	43	174974	52.04	ug/L	93
62) toluene	11.77	92	417620	50.33	ug/L	99
63) trans-1,3-dichloropropene	11.40	75	215865	47.82	ug/L	92
64) 1,1,2-trichloroethane	11.58	83	136051	50.08	ug/L	90
65) ethyl methacrylate	11.78	69	212173	50.00	ug/L	88
67) tetrachloroethene	12.51	166	144184	50.48	ug/L	90
68) 1,3-dichloropropane	11.81	76	285037	50.57	ug/L	98
69) dibromochloromethane	12.10	129	148979	50.93	ug/L	96
70) 1,2-dibromoethane	12.36	107	148073	49.57	ug/L	95
71) 2-hexanone	11.93	43	161347	70.21	ug/L	92
72) chlorobenzene	13.19	112	433482	50.76	ug/L	89
73) 1,1,1,2-tetrachloroethane	13.10	131	136719	55.01	ug/L	98
74) ethylbenzene	13.36	91	795692	50.06	ug/L	95
75) m,p-xylene	13.55	106	597023	101.61	ug/L	85
76) o-xylene	13.96	106	293288	53.17	ug/L	90
77) styrene	13.89	104	448729	52.35	ug/L	87
78) bromoform	13.71	173	87076	48.32	ug/L	100
79) trans-1,4-dichloro-2-buten	14.10	53	26254	36.92	ug/L #	1
81) isopropylbenzene	14.32	105	751521	60.30	ug/L	96
83) bromobenzene	14.61	156	163663	50.60	ug/L #	76
84) 1,1,2,2-tetrachloroethane	13.95	83	227301	52.08	ug/L	93
85) 1,2,3-trichloropropane	14.10	75	206482	49.97	ug/L	98
86) n-propylbenzene	14.76	91	947234	51.92	ug/L	91
87) 2-chlorotoluene	14.89	91	561665	50.15	ug/L	91
88) 4-chlorotoluene	14.96	91	584416	52.00	ug/L	91
89) 1,3,5-trimethylbenzene	15.04	105	635734	51.43	ug/L	95
90) tert-butylbenzene	15.35	91	394717	51.88	ug/L	80
91) 1,2,4-trimethylbenzene	15.45	105	633665	51.11	ug/L	93
92) sec-butylbenzene	15.57	105	870951	54.10	ug/L	95

(#)=qualifier out of range (m)=manual integration

N60736.D N021312W.M

Wed Feb 29 14:35:54 2012

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60736.D

Vial: 17

Acq On : 29 Feb 2012 2:08 pm

Operator: JUGALP

Sample : BS

Inst : MAMSN

Misc : MS25169,MSN2270,,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Feb 29 14:34:11 2012

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Wed Feb 15 16:23:00 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
93) 1,3-dichlorobenzene	15.67	146	315604	50.80	ug/L	94
94) p-isopropyltoluene	15.74	119	646452	55.48	ug/L	93
95) 1,4-dichlorobenzene	15.74	146	334725	51.82	ug/L	96
96) 1,2-dichlorobenzene	16.11	146	304783	52.44	ug/L	96
97) n-butylbenzene	16.16	91	682590	54.64	ug/L	89
98) 1,2-dibromo-3-chloropropan	16.58	75	36657	51.31	ug/L #	69
99) 1,2,4-trichlorobenzene	17.98	180	180528	48.62	ug/L	99
100) 1,3,5-trichlorobenzene	17.41	180	218568	52.21	ug/L	100
101) hexachlorobutadiene	18.28	225	106219	53.84	ug/L	97
102) naphthalene	18.27	128	406264	45.26	ug/L	100
103) 1,2,3-trichlorobenzene	18.49	180	162547	47.18	ug/L	95
104) 2-methylnaphthalene	19.79	142	79729	35.95	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 N60736.D N021312W.M Wed Feb 29 14:35:54 2012 RP1

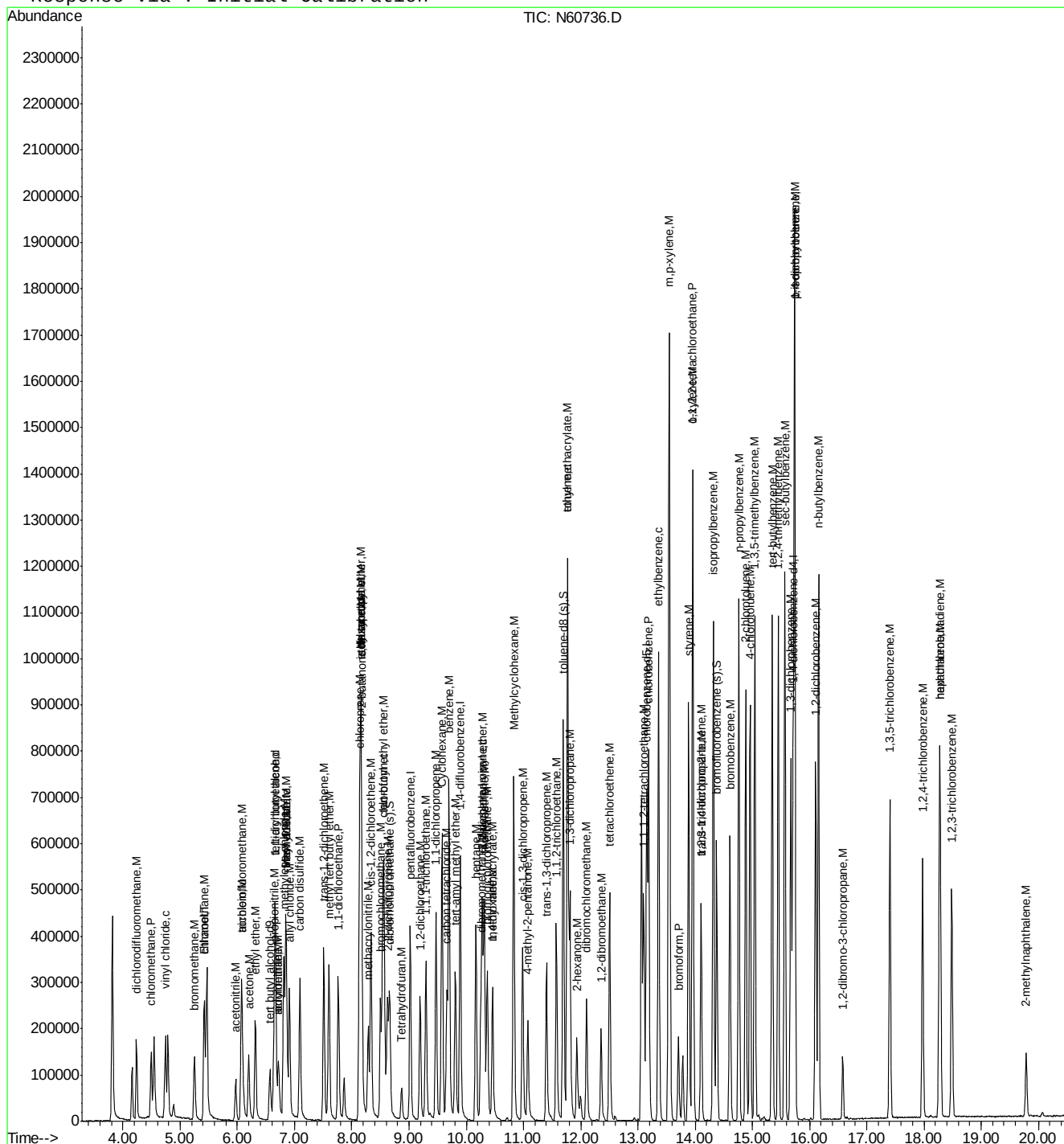
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60736.D
Acq On : 29 Feb 2012 2:08 pm
Sample : BS
Misc : MS25169,MSN2270,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 29 14:34 2012

Vial: 17
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Wed Feb 15 16:23:00 2012
Response via : Initial Calibration



N60736.D N021312W.M

Wed Feb 29 14:35:54 2012

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6.3.1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60737.D
 Acq On : 29 Feb 2012 2:36 pm
 Sample : BSD
 Misc : MS25169,MSN2270,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 29 17:02:59 2012

Vial: 18
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260
 Last Update : Wed Feb 15 16:23:00 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.57	65	139478	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	278805	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	497064	50.00	ug/L	-0.01
66) chlorobenzene-d5	13.15	82	286441	50.00	ug/L	-0.01
80) 1,4-dichlorobenzene-d4	15.71	152	198972	50.00	ug/L	-0.01

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	163612	43.20	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	86.40%
60) toluene-d8 (s)	11.70	98	653186	43.70	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	87.40%
82) bromofluorobenzene (s)	14.38	95	241379	44.01	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	88.02%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.65	59	166156	584.80	ug/L	91
3) Ethanol	5.42	45	268205	5544.67	ug/L	97
5) dichlorodifluoromethane	4.24	85	159052	74.11	ug/L	98
6) chloromethane	4.49	50	171634	62.41	ug/L	96
7) vinyl chloride	4.74	62	159902	47.21	ug/L	93
8) bromomethane	5.24	96	103007	43.91	ug/L	99
9) chloroethane	5.42	64	107590	44.89	ug/L	93
10) ethyl ether	6.31	59	141580	47.82	ug/L	97
11) acetonitrile	5.97	41	66622	170.67	ug/L	99
12) trichlorofluoromethane	6.08	101	236700	48.49	ug/L	96
13) freon-113	6.85	101	148429	50.96	ug/L	84
14) acrolein	6.06	56	68666	184.39	ug/L	100
15) 1,1-dichloroethene	6.67	96	145497	48.79	ug/L	# 70
16) acetone	6.20	43	111963	90.34	ug/L	92
17) Methyl Acetate	6.84	43	278918	50.49	ug/L	94
18) methylene chloride	6.81	84	180496	46.72	ug/L	85
19) methyl tert butyl ether	7.60	73	367253	44.41	ug/L	97
20) acrylonitrile	6.71	53	63495	227.55	ug/L	95
21) allyl chloride	6.91	41	209858	50.50	ug/L	87
22) trans-1,2-dichloroethene	7.51	96	155123	45.73	ug/L	87
23) iodomethane	6.72	142	70122	42.87	ug/L	94
24) carbon disulfide	7.10	76	487286	44.02	ug/L	100
25) propionitrile	6.64	54	3827	85.60	ug/L	100
26) vinyl acetate	6.84	43	278918	50.35	ug/L	94
27) chloroprene	8.13	53	253551	51.06	ug/L	90
28) di-isopropyl ether	8.17	45	624342	51.64	ug/L	96
29) methacrylonitrile	8.29	41	119675	48.79	ug/L	90
30) 2-butanone	8.18	72	31157	69.12	ug/L	# 31
31) Hexane	8.15	41	256429	50.87	ug/L	95
32) 1,1-dichloroethane	7.76	63	317600	49.14	ug/L	99
33) tert-butyl ethyl ether	8.56	59	292030	32.40	ug/L	92
34) isobutyl alcohol	8.17	43	543282	276.52	ug/L	99
35) 2,2-dichloropropane	8.62	77	150939	38.33	ug/L	90
36) cis-1,2-dichloroethene	8.33	96	178462	48.26	ug/L	85
37) ethyl acetate	8.17	43	547662	55.65	ug/L	100

(#) = qualifier out of range (m) = manual integration

N60737.D N021312W.M

Wed Feb 29 17:04:59 2012

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60737.D
 Acq On : 29 Feb 2012 2:36 pm
 Sample : BSD
 Misc : MS25169,MSN2270,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 29 17:02:59 2012

Vial: 18
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Wed Feb 15 16:23:00 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	8.50	128	71229	49.76	ug/L	# 72
39) chloroform	8.54	83	317617	49.83	ug/L	100
41) Tetrahydrofuran	8.87	42	54111	47.31	ug/L	94
42) 1,1,1-trichloroethane	9.29	97	239787	51.86	ug/L	91
44) Cyclohexane	9.58	56	312588	49.82	ug/L	95
45) carbon tetrachloride	9.66	117	170102	43.15	ug/L	94
46) 1,1-dichloropropene	9.47	75	245927	48.78	ug/L	87
47) benzene	9.70	78	701268	46.97	ug/L	98
48) 1,2-dichloroethane	9.20	62	240086	47.56	ug/L	93
49) tert-amyl methyl ether	9.81	73	251447	33.80	ug/L	93
50) heptane	10.17	43	189724	50.77	ug/L	92
51) trichloroethene	10.31	95	174478	47.34	ug/L	87
52) 1,2-dichloropropane	10.28	63	189096	49.41	ug/L	99
53) dibromomethane	10.25	93	106431	49.70	ug/L	86
54) bromodichloromethane	10.36	83	240911	53.56	ug/L	95
55) Methylcyclohexane	10.83	83	315125	50.10	ug/L	91
56) 2-chloroethyl vinyl ether	10.28	63	189096	49.41	ug/L	# 100
57) methyl methacrylate	10.46	69	112590	44.97	ug/L	85
58) 1,4-dioxane	10.47	88	10060	221.84	ug/L	97
59) cis-1,3-dichloropropene	10.99	75	253842	44.98	ug/L	90
61) 4-methyl-2-pentanone	11.08	43	168619	47.42	ug/L	93
62) toluene	11.77	92	437758	49.88	ug/L	99
63) trans-1,3-dichloropropene	11.40	75	224710	47.12	ug/L	88
64) 1,1,2-trichloroethane	11.58	83	140516	48.91	ug/L	90
65) ethyl methacrylate	11.78	69	211192	47.06	ug/L	90
67) tetrachloroethene	12.51	166	145075	47.40	ug/L	92
68) 1,3-dichloropropane	11.81	76	294461	48.76	ug/L	99
69) dibromochloromethane	12.10	129	154487	49.43	ug/L	98
70) 1,2-dibromoethane	12.36	107	152051	47.50	ug/L	97
71) 2-hexanone	11.93	43	148450	60.29	ug/L	92
72) chlorobenzene	13.19	112	452043	49.40	ug/L	93
73) 1,1,1,2-tetrachloroethane	13.10	131	147334	55.32	ug/L	97
74) ethylbenzene	13.36	91	822875	48.32	ug/L	95
75) m,p-xylene	13.55	106	609274	96.78	ug/L	83
76) o-xylene	13.96	106	298956	50.58	ug/L	81
77) styrene	13.89	104	465858	50.72	ug/L	87
78) bromoform	13.71	173	88387	46.19	ug/L	99
79) trans-1,4-dichloro-2-buten	14.10	53	25305	34.35	ug/L	# 1
81) isopropylbenzene	14.32	105	777071	61.09	ug/L	98
83) bromobenzene	14.61	156	168688	51.10	ug/L	# 70
84) 1,1,2,2-tetrachloroethane	13.95	83	225167	50.55	ug/L	98
85) 1,2,3-trichloropropane	14.10	75	204001	48.37	ug/L	98
86) n-propylbenzene	14.76	91	956517	51.37	ug/L	93
87) 2-chlorotoluene	14.88	91	572499	50.08	ug/L	90
88) 4-chlorotoluene	14.96	91	591581	51.58	ug/L	90
89) 1,3,5-trimethylbenzene	15.04	105	639464	50.69	ug/L	95
90) tert-butylbenzene	15.35	91	400905	51.63	ug/L	88
91) 1,2,4-trimethylbenzene	15.45	105	636792	50.33	ug/L	95
92) sec-butylbenzene	15.57	105	856258	52.11	ug/L	96

(#) = qualifier out of range (m) = manual integration

N60737.D N021312W.M

Wed Feb 29 17:04:59 2012

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60737.D
 Acq On : 29 Feb 2012 2:36 pm
 Sample : BSD
 Misc : MS25169,MSN2270,,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 29 17:02:59 2012

Vial: 18
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Wed Feb 15 16:23:00 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
93) 1,3-dichlorobenzene	15.67	146	321348	50.68	ug/L	95
94) p-isopropyltoluene	15.74	119	641725	53.96	ug/L	96
95) 1,4-dichlorobenzene	15.74	146	330267	50.10	ug/L	95
96) 1,2-dichlorobenzene	16.11	146	303305	51.13	ug/L	97
97) n-butylbenzene	16.16	91	654475	51.33	ug/L	89
98) 1,2-dibromo-3-chloropropan	16.58	75	34268	47.00	ug/L #	70
99) 1,2,4-trichlorobenzene	17.98	180	175680	46.58	ug/L	95
100) 1,3,5-trichlorobenzene	17.41	180	216913	50.76	ug/L	99
101) hexachlorobutadiene	18.29	225	101454	50.39	ug/L	96
102) naphthalene	18.27	128	385818	42.67	ug/L	100
103) 1,2,3-trichlorobenzene	18.49	180	159919	45.68	ug/L	97
104) 2-methylnaphthalene	19.79	142	89259	38.71	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 N60737.D N021312W.M Wed Feb 29 17:04:59 2012 RP1

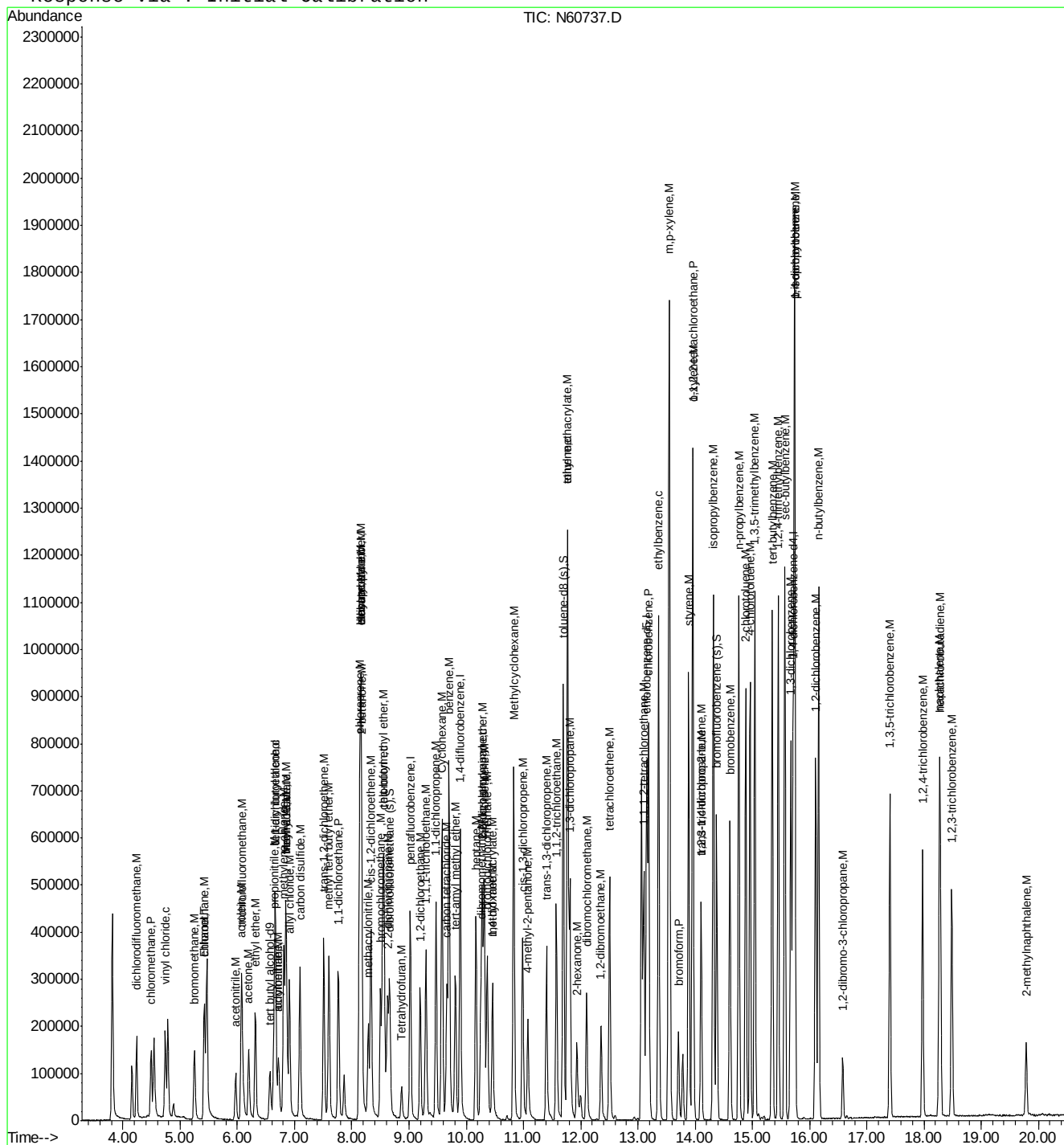
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60737.D
Acq On : 29 Feb 2012 2:36 pm
Sample : BSD
Misc : MS25169,MSN2270,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 29 17:02 2012

Vial: 18
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Wed Feb 15 16:23:00 2012
Response via : Initial Calibration



N60737.D N021312W.M

Wed Feb 29 17:05:00 2012

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60758.D
 Acq On : 1 Mar 2012 12:30 am
 Sample : MC8287-7MS,1:5
 Misc : MS25182,MSN2270,,,,,5,5
 MS Integration Params: RTEINT.P
 Quant Time: Mar 01 12:24:45 2012

Vial: 39
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260
 Last Update : Wed Feb 15 16:23:00 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.57	65	136888	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	243444	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	435552	50.00	ug/L	-0.01
66) chlorobenzene-d5	13.15	82	253881	50.00	ug/L	-0.01
80) 1,4-dichlorobenzene-d4	15.71	152	189278	50.00	ug/L	-0.01

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	143270	43.33	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	86.66%
60) toluene-d8 (s)	11.70	98	581161	44.37	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	88.74%
82) bromofluorobenzene (s)	14.38	95	221357	42.43	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	84.86%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.66	59	158320	567.76	ug/L	91
3) Ethanol	5.42	45	256815	5409.65	ug/L	99
5) dichlorodifluoromethane	4.24	85	147035	78.46	ug/L	98
6) chloromethane	4.49	50	155326	64.69	ug/L	97
7) vinyl chloride	4.75	62	148547	50.23	ug/L	96
8) bromomethane	5.25	96	89774	43.83	ug/L	99
9) chloroethane	5.42	64	98487	47.07	ug/L	95
10) ethyl ether	6.32	59	123920	47.94	ug/L	98
11) acetonitrile	5.97	41	49119	160.19	ug/L	95
12) trichlorofluoromethane	6.08	101	216568	50.81	ug/L	97
13) freon-113	6.86	101	132658	52.16	ug/L	86
14) acrolein	6.07	56	55282	170.01	ug/L	94
15) 1,1-dichloroethene	6.66	96	126777	48.68	ug/L #	61
16) acetone	6.20	43	53568	49.50	ug/L	93
17) Methyl Acetate	6.84	43	260668	54.04	ug/L	93
18) methylene chloride	6.81	84	158220	46.90	ug/L	84
19) methyl tert butyl ether	7.60	73	339330	46.99	ug/L	96
20) acrylonitrile	6.71	53	62933	258.29	ug/L	95
21) allyl chloride	6.91	41	187128	51.57	ug/L	88
22) trans-1,2-dichloroethene	7.51	96	140540	47.45	ug/L	86
23) iodomethane	6.72	142	73919	50.47	ug/L	95
24) carbon disulfide	7.10	76	443759	45.91	ug/L	99
25) propionitrile	6.64	54	3585	93.64	ug/L	100
26) vinyl acetate	6.84	43	260668	53.89	ug/L	92
27) chloroprene	8.13	53	230148	53.07	ug/L	85
28) di-isopropyl ether	8.17	45	564970	53.52	ug/L	90
29) methacrylonitrile	8.29	41	111013	51.83	ug/L	87
30) 2-butanone	8.18	72	20912	53.13	ug/L #	61
31) Hexane	8.15	41	226301	51.41	ug/L	99
32) 1,1-dichloroethane	7.77	63	288273	51.08	ug/L	98
33) tert-butyl ethyl ether	8.56	59	270098	34.21	ug/L	90
34) isobutyl alcohol	8.17	43	455021	265.24	ug/L	94
35) 2,2-dichloropropane	8.63	77	115905	34.26	ug/L	93
36) cis-1,2-dichloroethene	8.33	96	159110	49.27	ug/L	82
37) ethyl acetate	8.17	43	456068	53.07	ug/L	86

(#)=qualifier out of range (m)=manual integration

N60758.D N021312W.M

Thu Mar 01 12:55:40 2012

RP1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60758.D
 Acq On : 1 Mar 2012 12:30 am
 Sample : MC8287-7MS,1:5
 Misc : MS25182,MSN2270,,,,,5,5
 MS Integration Params: RTEINT.P
 Quant Time: Mar 01 12:24:45 2012

Vial: 39
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Wed Feb 15 16:23:00 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	8.50	128	61880	49.51	ug/L #	63
39) chloroform	8.54	83	288902	51.90	ug/L	94
41) Tetrahydrofuran	8.87	42	51243	51.31	ug/L	83
42) 1,1,1-trichloroethane	9.30	97	217968	53.99	ug/L	92
44) Cyclohexane	9.58	56	283807	51.62	ug/L	91
45) carbon tetrachloride	9.66	117	147089	42.62	ug/L	99
46) 1,1-dichloropropene	9.47	75	220180	49.84	ug/L	87
47) benzene	9.70	78	634768	48.53	ug/L	99
48) 1,2-dichloroethane	9.19	62	216596	48.96	ug/L	94
49) tert-amyl methyl ether	9.81	73	212851	32.85	ug/L	90
50) heptane	10.17	43	148231	45.27	ug/L	88
51) trichloroethene	10.31	95	158276	49.01	ug/L	82
52) 1,2-dichloropropane	10.28	63	172467	51.43	ug/L	97
53) dibromomethane	10.25	93	95737	51.02	ug/L	88
54) bromodichloromethane	10.37	83	214020	54.30	ug/L	97
55) Methylcyclohexane	10.83	83	279891	50.79	ug/L	93
56) 2-chloroethyl vinyl ether	10.28	63	172467	51.43	ug/L #	100
57) methyl methacrylate	10.46	69	101879	46.44	ug/L	83
58) 1,4-dioxane	10.47	88	9535	239.96	ug/L	93
59) cis-1,3-dichloropropene	10.99	75	216152	43.77	ug/L	91
61) 4-methyl-2-pentanone	11.08	43	156503	50.23	ug/L	91
62) toluene	11.77	92	393698	51.20	ug/L	99
63) trans-1,3-dichloropropene	11.41	75	188963	45.37	ug/L	90
64) 1,1,2-trichloroethane	11.58	83	126974	50.44	ug/L	91
65) ethyl methacrylate	11.78	69	190523	48.45	ug/L	90
67) tetrachloroethene	12.51	166	133037	49.04	ug/L	92
68) 1,3-dichloropropane	11.81	76	264954	49.50	ug/L	96
69) dibromochloromethane	12.11	129	133301	48.24	ug/L	100
70) 1,2-dibromoethane	12.36	107	137457	48.45	ug/L	96
71) 2-hexanone	11.93	43	103122	47.25	ug/L	93
72) chlorobenzene	13.19	112	406500	50.12	ug/L	93
73) 1,1,1,2-tetrachloroethane	13.10	131	126411	53.55	ug/L	99
74) ethylbenzene	13.36	91	743121	49.23	ug/L	95
75) m,p-xylene	13.55	106	556443	99.72	ug/L	85
76) o-xylene	13.96	106	271947	51.92	ug/L	83
77) styrene	13.89	104	407550	50.07	ug/L	87
78) bromoform	13.71	173	75644	44.88	ug/L	100
79) trans-1,4-dichloro-2-buten	14.10	53	21276	33.17	ug/L #	1
81) isopropylbenzene	14.32	105	701979	58.01	ug/L	96
83) bromobenzene	14.61	156	151493	48.24	ug/L #	71
84) 1,1,2,2-tetrachloroethane	13.96	83	213618	50.41	ug/L	97
85) 1,2,3-trichloropropane	14.10	75	190047	47.37	ug/L	96
86) n-propylbenzene	14.76	91	878088	49.58	ug/L	92
87) 2-chlorotoluene	14.89	91	527315	48.49	ug/L	91
88) 4-chlorotoluene	14.96	91	544918	49.94	ug/L	91
89) 1,3,5-trimethylbenzene	15.04	105	582168	48.51	ug/L	96
90) tert-butylbenzene	15.35	91	368891	49.94	ug/L	84
91) 1,2,4-trimethylbenzene	15.45	105	576839	47.92	ug/L	93
92) sec-butylbenzene	15.57	105	804286	51.45	ug/L	95

(#) = qualifier out of range (m) = manual integration

N60758.D N021312W.M

Thu Mar 01 12:55:40 2012

RP1

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60758.D
 Acq On : 1 Mar 2012 12:30 am
 Sample : MC8287-7MS,1:5
 Misc : MS25182,MSN2270,,,,5,5
 MS Integration Params: RTEINT.P
 Quant Time: Mar 01 12:24:45 2012

Vial: 39
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Wed Feb 15 16:23:00 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

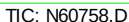
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
93) 1,3-dichlorobenzene	15.67	146	294490	48.82	ug/L	94
94) p-isopropyltoluene	15.74	119	590071	52.16	ug/L	96
95) 1,4-dichlorobenzene	15.74	146	303302	48.36	ug/L	96
96) 1,2-dichlorobenzene	16.11	146	281726	49.93	ug/L	96
97) n-butylbenzene	16.16	91	594146	48.99	ug/L	90
98) 1,2-dibromo-3-chloropropan	16.58	75	32108	46.29	ug/L #	70
99) 1,2,4-trichlorobenzene	17.98	180	148139	41.85	ug/L	98
100) 1,3,5-trichlorobenzene	17.41	180	190440	46.85	ug/L	99
101) hexachlorobutadiene	18.29	225	89829	46.90	ug/L	97
102) naphthalene	18.27	128	316785	37.94	ug/L	100
103) 1,2,3-trichlorobenzene	18.49	180	131883	40.36	ug/L	100
104) 2-methylnaphthalene	19.79	142	67939	32.38	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 N60758.D N021312W.M Thu Mar 01 12:55:40 2012 RP1

(QT Reviewed)

Vial: 39
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Wed Feb 15 16:23:00 2012
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60759.D
 Acq On : 1 Mar 2012 12:58 am
 Sample : MC8287-7MSD,1:5
 Misc : MS25182,MSN2270,,,,,5,5
 MS Integration Params: RTEINT.P
 Quant Time: Mar 01 12:24:56 2012

Vial: 40
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260
 Last Update : Wed Feb 15 16:23:00 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.57	65	125221	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	253923	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.90	114	455210	50.00	ug/L	0.00
66) chlorobenzene-d5	13.15	82	250594	50.00	ug/L	-0.01
80) 1,4-dichlorobenzene-d4	15.71	152	189013	50.00	ug/L	-0.01

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	150285	43.57	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	87.14%
60) toluene-d8 (s)	11.69	98	601345	43.93	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	87.86%
82) bromofluorobenzene (s)	14.38	95	224283	43.05	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	86.10%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.66	59	149016	584.19	ug/L	95
3) Ethanol	5.42	45	249121	5736.50	ug/L	99
5) dichlorodifluoromethane	4.24	85	148735	76.09	ug/L	95
6) chloromethane	4.49	50	170375	68.02	ug/L	96
7) vinyl chloride	4.75	62	147705	47.89	ug/L	98
8) bromomethane	5.25	96	98606	46.15	ug/L	96
9) chloroethane	5.42	64	101680	46.59	ug/L	96
10) ethyl ether	6.32	59	129373	47.98	ug/L	98
11) acetonitrile	5.97	41	54775	164.25	ug/L	98
12) trichlorofluoromethane	6.08	101	219028	49.27	ug/L	95
13) freon-113	6.86	101	132560	49.97	ug/L	90
14) acrolein	6.07	56	55217	162.80	ug/L	97
15) 1,1-dichloroethene	6.67	96	132012	48.60	ug/L #	68
16) acetone	6.20	43	50858	45.06	ug/L	93
17) Methyl Acetate	6.84	43	253758	50.44	ug/L #	89
18) methylene chloride	6.81	84	166702	47.38	ug/L	84
19) methyl tert butyl ether	7.60	73	337887	44.86	ug/L	100
20) acrylonitrile	6.71	53	58773	231.27	ug/L	99
21) allyl chloride	6.91	41	195444	51.64	ug/L	86
22) trans-1,2-dichloroethene	7.51	96	143696	46.51	ug/L	83
23) iodomethane	6.73	142	70284	46.54	ug/L	96
24) carbon disulfide	7.10	76	450551	44.69	ug/L	100
25) propionitrile	6.64	54	3512	86.43	ug/L	100
26) vinyl acetate	6.84	43	253758	50.30	ug/L	92
27) chloroprene	8.13	53	228447	50.51	ug/L	86
28) di-isopropyl ether	8.17	45	581975	52.86	ug/L	91
29) methacrylonitrile	8.29	41	112054	50.16	ug/L	88
30) 2-butanone	8.17	72	19814	48.26	ug/L #	2
31) Hexane	8.15	41	226109	49.25	ug/L	98
32) 1,1-dichloroethane	7.77	63	297427	50.52	ug/L	99
33) tert-butyl ethyl ether	8.56	59	262734	32.03	ug/L	90
34) isobutyl alcohol	8.17	43	456422	255.07	ug/L	97
35) 2,2-dichloropropane	8.63	77	110753	31.77	ug/L	96
36) cis-1,2-dichloroethene	8.33	96	166022	49.29	ug/L	85
37) ethyl acetate	8.17	43	460758	51.41	ug/L	88

(#)=qualifier out of range (m)=manual integration

N60759.D N021312W.M

Thu Mar 01 12:56:25 2012

RP1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60759.D
 Acq On : 1 Mar 2012 12:58 am
 Sample : MC8287-7MSD,1:5
 Misc : MS25182,MSN2270,,,,,5,5
 MS Integration Params: RTEINT.P
 Quant Time: Mar 01 12:24:56 2012

Vial: 40
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Wed Feb 15 16:23:00 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	8.50	128	65322	50.11	ug/L #	68
39) chloroform	8.54	83	296352	51.05	ug/L	95
41) Tetrahydrofuran	8.87	42	50012	48.01	ug/L	87
42) 1,1,1-trichloroethane	9.30	97	221093	52.50	ug/L	91
44) Cyclohexane	9.58	56	292722	50.94	ug/L	90
45) carbon tetrachloride	9.66	117	151382	42.01	ug/L	98
46) 1,1-dichloropropene	9.47	75	222651	48.22	ug/L	90
47) benzene	9.70	78	647974	47.40	ug/L	98
48) 1,2-dichloroethane	9.20	62	224105	48.47	ug/L	93
49) tert-amyl methyl ether	9.81	73	218951	32.42	ug/L	91
50) heptane	10.17	43	148945	43.52	ug/L	91
51) trichloroethene	10.32	95	163721	48.50	ug/L	83
52) 1,2-dichloropropane	10.28	63	177664	50.70	ug/L	98
53) dibromomethane	10.25	93	97375	49.65	ug/L	86
54) bromodichloromethane	10.37	83	221838	53.85	ug/L	95
55) Methylcyclohexane	10.83	83	283213	49.17	ug/L	90
56) 2-chloroethyl vinyl ether	10.28	63	177664	50.70	ug/L #	100
57) methyl methacrylate	10.46	69	104971	45.78	ug/L	83
58) 1,4-dioxane	10.47	88	9696	233.48	ug/L	98
59) cis-1,3-dichloropropene	10.99	75	226490	43.88	ug/L	91
61) 4-methyl-2-pentanone	11.08	43	152523	46.84	ug/L	92
62) toluene	11.77	92	399994	49.77	ug/L	96
63) trans-1,3-dichloropropene	11.40	75	197155	45.30	ug/L	89
64) 1,1,2-trichloroethane	11.57	83	129741	49.31	ug/L	92
65) ethyl methacrylate	11.78	69	193980	47.20	ug/L	85
67) tetrachloroethene	12.51	166	134115	50.09	ug/L	95
68) 1,3-dichloropropane	11.81	76	272466	51.57	ug/L	97
69) dibromochloromethane	12.11	129	140325	51.15	ug/L	96
70) 1,2-dibromoethane	12.36	107	139685	49.88	ug/L	97
71) 2-hexanone	11.94	43	101487	47.11	ug/L	92
72) chlorobenzene	13.19	112	414036	51.72	ug/L	92
73) 1,1,1,2-tetrachloroethane	13.10	131	128801	55.28	ug/L	99
74) ethylbenzene	13.36	91	756257	50.76	ug/L	93
75) m,p-xylene	13.55	106	563040	102.23	ug/L	82
76) o-xylene	13.96	106	278785	53.92	ug/L	87
77) styrene	13.89	104	420543	52.34	ug/L	85
78) bromoform	13.71	173	78446	46.75	ug/L	98
79) trans-1,4-dichloro-2-buten	14.10	53	20901	33.07	ug/L #	1
81) isopropylbenzene	14.32	105	711334	58.87	ug/L	96
83) bromobenzene	14.61	156	155539	49.60	ug/L #	75
84) 1,1,2,2-tetrachloroethane	13.96	83	210394	49.72	ug/L	99
85) 1,2,3-trichloropropane	14.10	75	186938	46.66	ug/L	99
86) n-propylbenzene	14.77	91	891524	50.40	ug/L	93
87) 2-chlorotoluene	14.89	91	531869	48.98	ug/L	90
88) 4-chlorotoluene	14.96	91	552838	50.74	ug/L	93
89) 1,3,5-trimethylbenzene	15.04	105	589623	49.20	ug/L	93
90) tert-butylbenzene	15.35	91	377536	51.18	ug/L	81
91) 1,2,4-trimethylbenzene	15.45	105	586709	48.81	ug/L	94
92) sec-butylbenzene	15.57	105	814253	52.16	ug/L	97

(#) = qualifier out of range (m) = manual integration

N60759.D N021312W.M

Thu Mar 01 12:56:25 2012

RP1

Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60759.D
Acq On : 1 Mar 2012 12:58 am
Sample : MC8287-7MSD,1:5
Misc : MS25182,MSN2270,,,,5,5
MS Integration Params: RTEINT.P
Quant Time: Mar 01 12:24:56 2012

Vial: 40
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Wed Feb 15 16:23:00 2012
Response via : Initial Calibration
DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
93) 1,3-dichlorobenzene	15.67	146	297730	49.43	ug/L	94
94) p-isopropyltoluene	15.74	119	592269	52.43	ug/L	96
95) 1,4-dichlorobenzene	15.74	146	309790	49.47	ug/L	97
96) 1,2-dichlorobenzene	16.11	146	289805	51.43	ug/L	97
97) n-butylbenzene	16.16	91	604365	49.90	ug/L	89
98) 1,2-dibromo-3-chloropropan	16.58	75	32062	46.29	ug/L #	61
99) 1,2,4-trichlorobenzene	17.98	180	157257	44.18	ug/L	95
100) 1,3,5-trichlorobenzene	17.41	180	199278	49.09	ug/L	100
101) hexachlorobutadiene	18.29	225	93504	48.89	ug/L	99
102) naphthalene	18.27	128	350630	41.18	ug/L	100
103) 1,2,3-trichlorobenzene	18.49	180	146183	44.17	ug/L	99
104) 2-methylnaphthalene	19.79	142	79900	36.92	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
N60759.D N021312W.M Thu Mar 01 12:56:26 2012 RP1

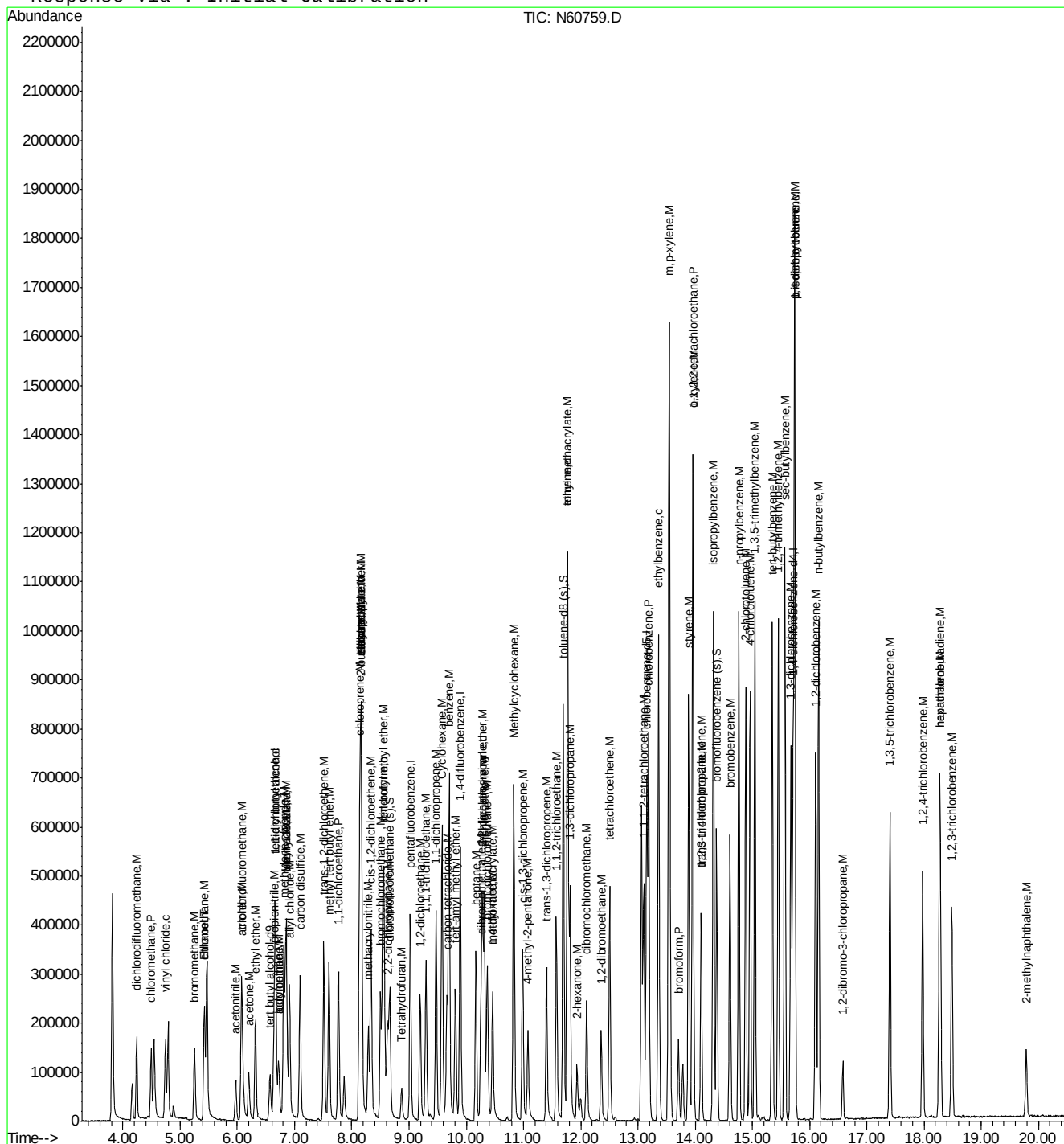
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60759.D
Acq On : 1 Mar 2012 12:58 am
Sample : MC8287-7MSD,1:5
Misc : MS25182,MSN2270,,,,5,5
MS Integration Params: RTEINT.P
Quant Time: Mar 1 12:24 2012

Vial: 40
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Wed Feb 15 16:23:00 2012
Response via : Initial Calibration



N60759.D N021312W.M

Thu Mar 01 12:56:26 2012

RP1

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SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\N60246.D

Acq On : 13 Feb 2012 12:34 pm

Sample : BFB

Misc : MS25046,MSN2251,,,,,5,1

MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

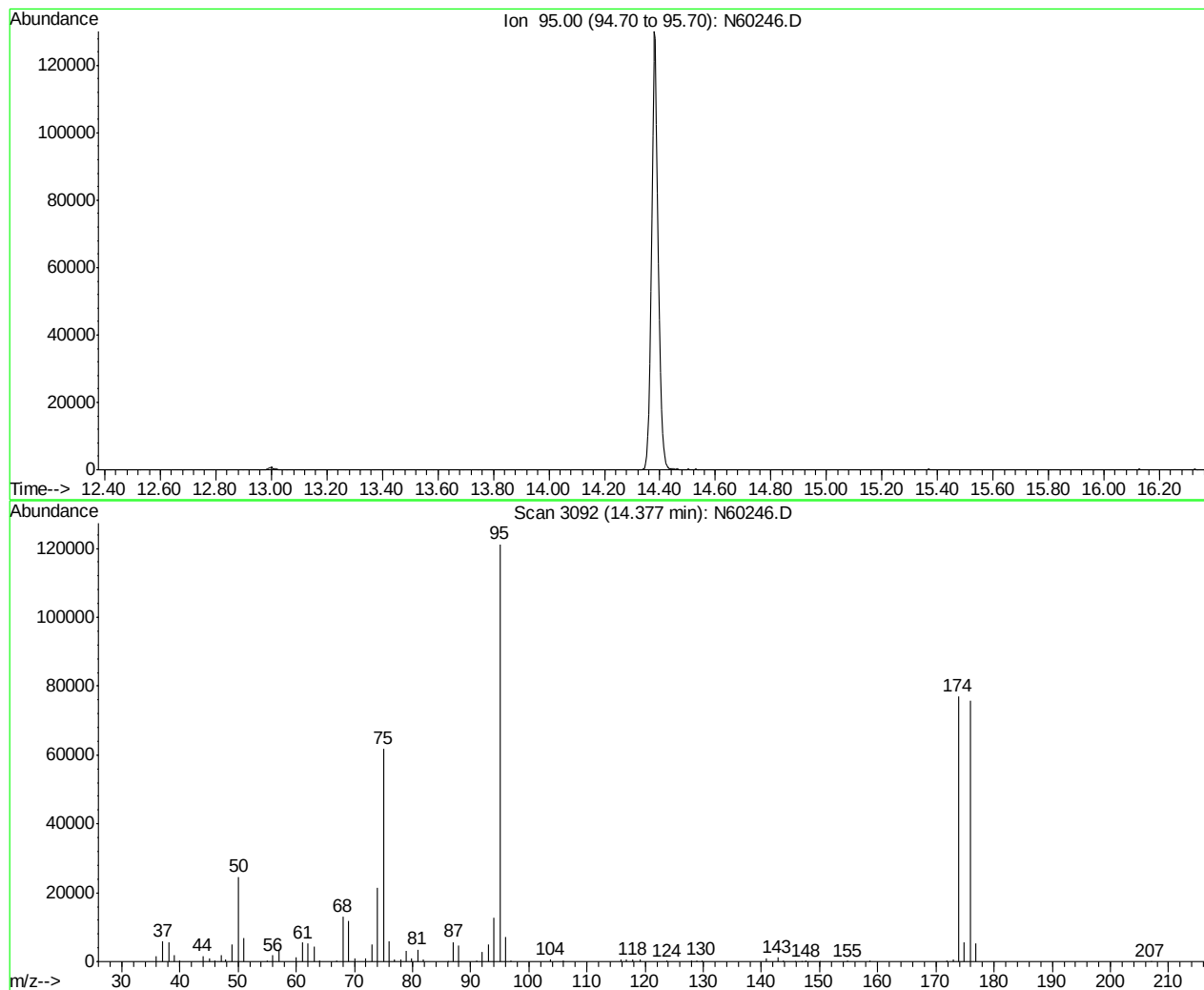
Title : SW-846 Method 8260

Vial: 20

Operator: JUGALP

Inst : MAMSN

Multiplr: 1.00



Spectrum Information: Scan 3092

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
Mass	Mass	Limit%	Limit%	Abn%	Abn	Pass/Fail
50	95	15	40	20.3	24576	PASS
75	95	30	60	51.0	61872	PASS
95	95	100	100	100.0	121256	PASS
96	95	5	9	6.0	7246	PASS
173	174	0.00	2	0.9	681	PASS
174	95	50	150	63.6	77064	PASS
175	174	5	9	7.4	5723	PASS
176	174	95	101	98.3	75752	PASS
177	176	5	9	6.8	5148	PASS

N60246.D N021312W.M

Tue Feb 14 14:01:56 2012 RP1

Scan 3092 (14.377 min): N60246.D
BFB

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1453	50.10	24576	68.00	13137	79.90	948
37.10	5877	51.00	6771	69.00	11914	80.90	3548
38.10	5578	55.00	335	70.00	952	81.90	782
39.00	1955	56.00	1777	72.00	919	86.00	162
40.00	466	57.00	3447	73.00	5004	87.00	5657
44.00	1614	60.00	1149	74.00	21504	88.00	4800
45.10	896	61.10	5490	75.00	61872	91.00	472
46.10	194	62.00	5388	76.00	5789	92.00	2705
47.10	1745	63.10	4326	76.90	638	93.00	5103
47.80	767	64.00	433	78.00	649	94.00	12741
49.00	4970	67.00	360	78.90	3091	95.00	121256

Scan 3092 (14.377 min): N60246.D
BFB

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.00	7246	129.80	353	172.90	681		
97.00	259	140.90	1043	173.90	77064		
103.80	574	142.80	1234	174.90	5723		
105.90	383	143.70	180	175.90	75752		
115.80	486	145.80	162	176.90	5148		
116.80	476	146.90	158	206.90	165		
117.90	526	147.70	200				
119.10	491	150.10	159				
123.80	174	154.80	303				
127.90	310	158.70	293				
128.80	240	171.90	179				

SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\N60736.D

Acq On : 29 Feb 2012 2:08 pm

Sample : BS

Misc : MS25169,MSN2270,,,,5,1

MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

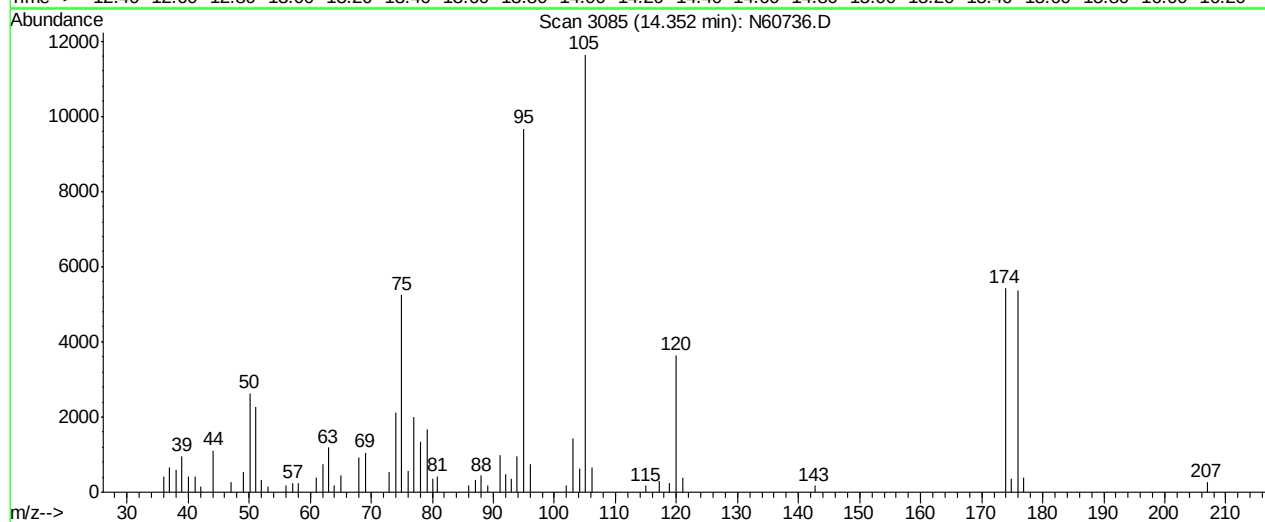
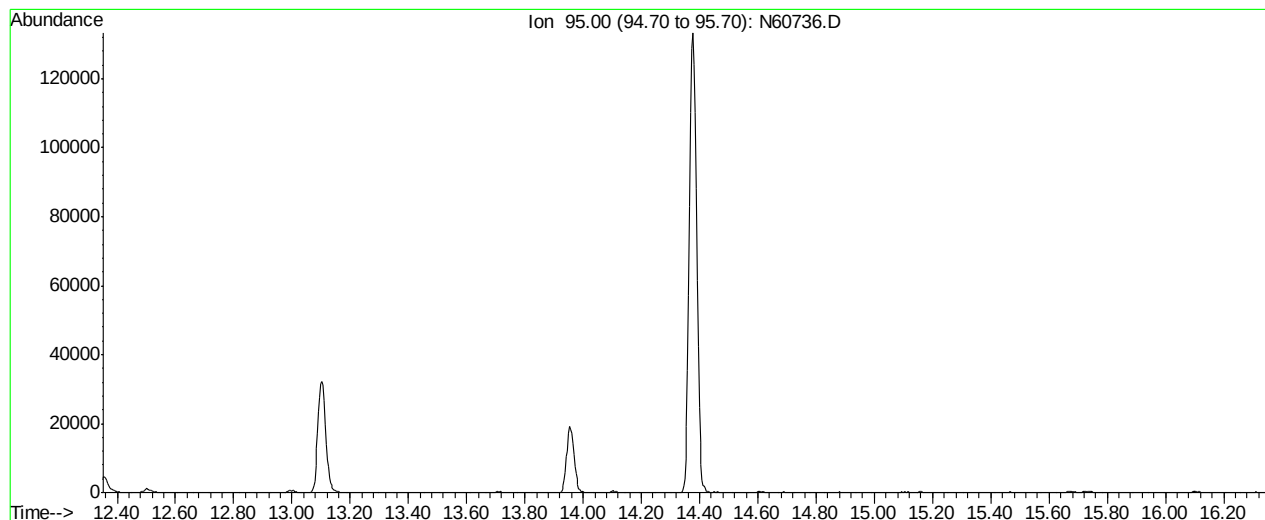
Title : SW-846 Method 8260

Vial: 17

Operator: JUGALP

Inst : MAMSN

Multiplr: 1.00



Spectrum Information: Scan 3085

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	27.2	2630	PASS
75	95	30	60	54.1	5236	PASS
95	95	100	100	100.0	9673	PASS
96	95	5	9	7.7	746	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	56.2	5433	PASS
175	174	5	9	6.7	364	PASS
176	174	95	101	98.7	5363	PASS
177	176	5	9	7.5	401	PASS

Scan 3085 (14.352 min): N60736.D
BS

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	410	51.10	2256	68.00	934	86.00	174
37.00	655	52.00	317	69.00	1059	87.00	315
38.10	597	53.10	161	72.90	523	88.00	437
39.00	956	56.00	179	74.00	2124	89.00	181
40.00	420	57.20	242	75.00	5236	91.10	999
41.20	410	58.00	239	76.00	579	92.00	474
42.10	151	61.00	388	77.00	2006	92.90	358
44.10	1108	62.00	761	78.10	1356	93.90	942
47.00	257	63.00	1189	79.10	1682	95.00	9673
49.10	546	64.00	176	80.00	361	96.00	746
50.10	2630	65.00	445	80.90	422	102.00	176

Scan 3085 (14.352 min): N60736.D
BS

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
103.00	1430	174.90	364				
104.10	640	175.90	5363				
105.00	11644	176.80	401				
106.10	661	206.90	279				
115.00	168						
117.10	289						
118.90	243						
120.00	3639						
121.10	402						
142.70	166						
173.90	5433						

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60247.D

Acq On : 13 Feb 2012 1:02 pm

Sample : ic2251-25

Misc : MS25046,MSN2251,,,,5,1

MS Integration Params: RTEINT.P

Quant Time: Feb 14 09:56:33 2012

Vial: 21

Operator: JUGALP

Inst : MAMSN

Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 09:56:12 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.57	65	162249	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	280713	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.90	114	488894	50.00	ug/L	0.00
66) chlorobenzene-d5	13.16	82	278912	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	15.71	152	194459	50.00	ug/L	-0.01

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	82160	22.20	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	44.40%#
60) toluene-d8 (s)	11.70	98	324846	22.39	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	44.78%#
82) bromofluorobenzene (s)	14.38	95	126618	21.31	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	42.62%#

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.66	59	82202	228.68	ug/L	87
3) Ethanol	5.42	45	142452	2392.03	ug/L	99
5) dichlorodifluoromethane	4.24	85	63413	32.31	ug/L	97
6) chloromethane	4.49	50	63508	23.67	ug/L	93
7) vinyl chloride	4.75	62	87460	31.54	ug/L	95
8) bromomethane	5.25	96	55902	25.64	ug/L	98
9) chloroethane	5.42	64	62987	27.79	ug/L	98
10) ethyl ether	6.32	59	75757	25.06	ug/L	99
11) acetonitrile	5.97	41	29918	39.94	ug/L	99
12) trichlorofluoromethane	6.08	101	130385	27.52	ug/L	96
13) freon-113	6.86	101	76858	27.30	ug/L	84
14) acrolein	6.06	56	45823	118.76	ug/L	99
15) 1,1-dichloroethene	6.67	96	75266	26.60	ug/L	# 75
16) acetone	6.20	43	28308	22.86	ug/L	89
17) Methyl Acetate	6.84	43	139286	25.40	ug/L	95
18) methylene chloride	6.81	84	95142	25.39	ug/L	89
19) methyl tert butyl ether	7.60	73	197607	21.32	ug/L	93
20) acrylonitrile	6.72	53	34415	119.50	ug/L	95
21) allyl chloride	6.91	41	113826	25.98	ug/L	90
22) trans-1,2-dichloroethene	7.51	96	87087	25.88	ug/L	87
23) iodomethane	6.73	142	24194	15.98	ug/L	96
24) carbon disulfide	7.10	76	287072	26.45	ug/L	100
25) propionitrile	6.64	54	1561	40.00	ug/L	100
26) vinyl acetate	6.84	43	139286	25.25	ug/L	94
27) chloroprene	8.13	53	131838	24.61	ug/L	89
28) di-isopropyl ether	8.17	45	316886	26.13	ug/L	90
29) methacrylonitrile	8.29	41	61052	24.01	ug/L	86
30) 2-butanone	8.18	72	11225	23.61	ug/L	# 78
31) Hexane	8.15	41	134464	28.28	ug/L	94
32) 1,1-dichloroethane	7.77	63	170252	26.30	ug/L	95
33) tert-butyl ethyl ether	8.56	59	188773	20.14	ug/L	93
34) isobutyl alcohol	8.16	43	256248	133.35	ug/L	78
35) 2,2-dichloropropane	8.63	77	84570	22.86	ug/L	94
36) cis-1,2-dichloroethene	8.33	96	94836	25.51	ug/L	84
37) ethyl acetate	8.16	43	257876	26.89	ug/L	97

(#) = qualifier out of range (m) = manual integration

N60247.D N021312W.M

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Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60247.D

Acq On : 13 Feb 2012 1:02 pm

Sample : ic2251-25

Misc : MS25046,MSN2251,,,,5,1

MS Integration Params: RTEINT.P

Quant Time: Feb 14 09:56:33 2012

Vial: 21

Operator: JUGALP

Inst : MAMSN

Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 09:56:12 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	8.50	128	36191	24.25	ug/L #	71
39) chloroform	8.54	83	164297	25.72	ug/L	93
41) Tetrahydrofuran	8.88	42	28018	23.52	ug/L	86
42) 1,1,1-trichloroethane	9.30	97	126206	25.05	ug/L	93
44) Cyclohexane	9.58	56	165983	27.22	ug/L	94
45) carbon tetrachloride	9.66	117	83981	24.39	ug/L	94
46) 1,1-dichloropropene	9.47	75	130101	26.34	ug/L	89
47) benzene	9.70	78	372719	25.40	ug/L	100
48) 1,2-dichloroethane	9.20	62	126956	25.88	ug/L	91
49) tert-amyl methyl ether	9.81	73	155208	19.51	ug/L	93
50) heptane	10.17	43	96735	27.10	ug/L	90
51) trichloroethene	10.31	95	93957	26.44	ug/L	84
52) 1,2-dichloropropane	10.29	63	96715	25.46	ug/L	99
53) dibromomethane	10.26	93	55450	26.83	ug/L	85
54) bromodichloromethane	10.37	83	116888	24.74	ug/L	94
55) Methylcyclohexane	10.83	83	165770	26.48	ug/L	93
56) 2-chloroethyl vinyl ether	10.29	63	96715	25.46	ug/L #	99
57) methyl methacrylate	10.47	69	56188	21.87	ug/L	82
58) 1,4-dioxane	10.47	88	5444	115.80	ug/L	90
59) cis-1,3-dichloropropene	10.99	75	125719	24.33	ug/L	90
61) 4-methyl-2-pentanone	11.08	43	82235	22.27	ug/L	93
62) toluene	11.77	92	222075	25.48	ug/L	99
63) trans-1,3-dichloropropene	11.41	75	98040	23.51	ug/L	92
64) 1,1,2-trichloroethane	11.57	83	70850	24.53	ug/L	85
65) ethyl methacrylate	11.78	69	101443	21.26	ug/L	90
67) tetrachloroethene	12.51	166	75856	26.04	ug/L	92
68) 1,3-dichloropropane	11.81	76	148404	25.47	ug/L	96
69) dibromochloromethane	12.10	129	68809	22.37	ug/L	93
70) 1,2-dibromoethane	12.36	107	75314	23.69	ug/L	93
71) 2-hexanone	11.94	43	52555	20.73	ug/L	95
72) chlorobenzene	13.19	112	220884	25.05	ug/L	89
73) 1,1,1,2-tetrachloroethane	13.10	131	66660	23.78	ug/L	98
74) ethylbenzene	13.37	91	417696	24.98	ug/L	92
75) m,p-xylene	13.55	106	308615	49.90	ug/L	86
76) o-xylene	13.96	106	148876	25.87	ug/L	86
77) styrene	13.89	104	220872	24.12	ug/L	84
78) bromoform	13.71	173	37006	19.22	ug/L	99
79) trans-1,4-dichloro-2-buten	14.10	53	12173	14.21	ug/L #	1
81) isopropylbenzene	14.32	105	326600	26.88	ug/L	99
83) bromobenzene	14.61	156	81256	25.86	ug/L #	76
84) 1,1,2,2-tetrachloroethane	13.96	83	109027	25.91	ug/L	93
85) 1,2,3-trichloropropane	14.10	75	97895	22.71	ug/L	99
86) n-propylbenzene	14.76	91	474352	26.68	ug/L	91
87) 2-chlorotoluene	14.89	91	285909	26.81	ug/L	91
88) 4-chlorotoluene	14.96	91	283825	26.30	ug/L	90
89) 1,3,5-trimethylbenzene	15.05	105	326072	26.62	ug/L	95
90) tert-butylbenzene	15.35	91	198617	27.28	ug/L	81
91) 1,2,4-trimethylbenzene	15.46	105	319205	25.95	ug/L	90
92) sec-butylbenzene	15.57	105	417473	26.39	ug/L	96

(#) = qualifier out of range (m) = manual integration

N60247.D N021312W.M

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60247.D

Vial: 21

Acq On : 13 Feb 2012 1:02 pm

Operator: JUGALP

Sample : ic2251-25

Inst : MAMSN

Misc : MS25046,MSN2251,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Feb 14 09:56:33 2012

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 09:56:12 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
93) 1,3-dichlorobenzene	15.68	146	149860	25.08	ug/L	91
94) p-isopropyltoluene	15.74	119	301948	26.38	ug/L	95
95) 1,4-dichlorobenzene	15.74	146	155206	25.52	ug/L	95
96) 1,2-dichlorobenzene	16.11	146	142247	24.71	ug/L	96
97) n-butylbenzene	16.16	91	316166	24.09	ug/L	87
98) 1,2-dibromo-3-chloropropan	16.58	75	16054	20.55	ug/L #	60
99) 1,2,4-trichlorobenzene	17.98	180	70358	18.67	ug/L	94
100) 1,3,5-trichlorobenzene	17.41	180	99217	22.93	ug/L	99
101) hexachlorobutadiene	18.29	225	45487	23.65	ug/L	100
102) naphthalene	18.27	128	147186	15.61	ug/L	100
103) 1,2,3-trichlorobenzene	18.49	180	64151	18.22	ug/L	99
104) 2-methylnaphthalene	19.79	142	19427	7.16	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 N60247.D N021312W.M Tue Feb 14 10:03:28 2012 RP1

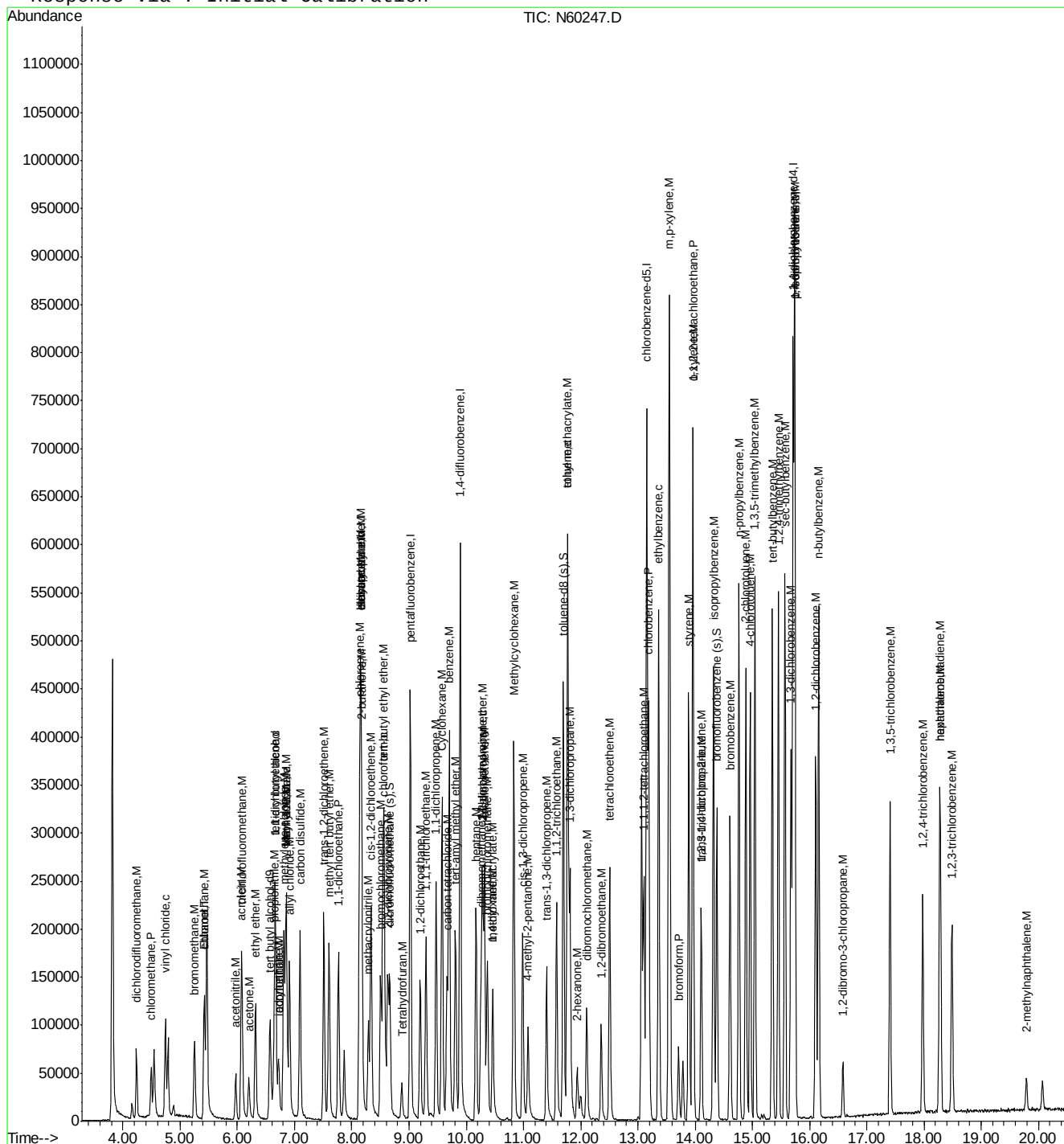
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60247.D
Acq On : 13 Feb 2012 1:02 pm
Sample : ic2251-25
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:56 2012

Vial: 21
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:56:12 2012
Response via : Initial Calibration



N60247.D N021312W.M

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6.6.1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60248.D
 Acq On : 13 Feb 2012 1:31 pm
 Sample : ic2251-5
 Misc : MS25046,MSN2251,,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 14 10:04:01 2012

Vial: 22
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260
 Last Update : Tue Feb 14 10:03:43 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.57	65	186639	500.00	ug/L	0.00
4) pentafluorobenzene	9.03	168	275150	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.90	114	492590	50.00	ug/L	0.00
66) chlorobenzene-d5	13.15	82	265510	50.00	ug/L	-0.01
80) 1,4-dichlorobenzene-d4	15.71	152	178894	50.00	ug/L	-0.01

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	15550	4.30	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	8.60%#
60) toluene-d8 (s)	11.70	98	62650	4.29	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	8.58%#
82) bromofluorobenzene (s)	14.38	95	25512	4.71	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	9.42%#

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.67	59	16328	40.17	ug/L	91
3) Ethanol	5.43	45	28903	425.59	ug/L	96
5) dichlorodifluoromethane	4.24	85	11435	5.62	ug/L	92
6) chloromethane	4.49	50	13901	5.34	ug/L	86
7) vinyl chloride	4.75	62	17023	5.95	ug/L	97
8) bromomethane	5.25	96	11981	5.58	ug/L	89
9) chloroethane	5.42	64	12668	5.58	ug/L	96
10) ethyl ether	6.32	59	14737	4.97	ug/L	98
11) acetonitrile	5.97	41	10381	12.63	ug/L	91
12) trichlorofluoromethane	6.08	101	24925	5.26	ug/L	98
13) freon-113	6.86	101	14731	5.24	ug/L	85
14) acrolein	6.07	56	9143	24.42	ug/L	94
15) 1,1-dichloroethene	6.67	96	15083	5.37	ug/L #	62
16) acetone	6.21	43	6905	5.79	ug/L	97
17) Methyl Acetate	6.85	43	29039	5.38	ug/L	94
18) methylene chloride	6.81	84	19573	5.31	ug/L	85
19) methyl tert butyl ether	7.61	73	36394	4.13	ug/L	100
20) acrylonitrile	6.72	53	6331	22.63	ug/L	76
21) allyl chloride	6.91	41	20031	4.63	ug/L	81
22) trans-1,2-dichloroethene	7.51	96	17371	5.23	ug/L	88
23) iodomethane	6.72	142	3337	2.42	ug/L	90
24) carbon disulfide	7.10	76	57092	5.30	ug/L	97
25) propionitrile	6.57	54	659	15.38	ug/L	100
26) vinyl acetate	6.85	43	29039	5.36	ug/L	95
27) chloroprene	8.14	53	23607	4.51	ug/L	82
28) di-isopropyl ether	8.17	45	61274	5.11	ug/L	84
29) methacrylonitrile	8.29	41	12796	5.18	ug/L	93
30) 2-butanone	8.19	72	1826	3.96	ug/L #	1
31) Hexane	8.15	41	27101	5.67	ug/L	95
32) 1,1-dichloroethane	7.77	63	32726	5.10	ug/L	94
33) tert-butyl ethyl ether	8.56	59	31936	3.62	ug/L	96
34) isobutyl alcohol	8.16	43	52667	27.59	ug/L	65
35) 2,2-dichloropropane	8.63	77	9905	2.78	ug/L	90
36) cis-1,2-dichloroethene	8.33	96	18246	4.99	ug/L #	68
37) ethyl acetate	8.16	43	51201	5.37	ug/L	92

(#)=qualifier out of range (m)=manual integration

N60248.D N021312W.M

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RP1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60248.D
 Acq On : 13 Feb 2012 1:31 pm
 Sample : ic2251-5
 Misc : MS25046,MSN2251,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 14 10:04:01 2012

Vial: 22
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260
 Last Update : Tue Feb 14 10:03:43 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	8.51	128	6761	4.65	ug/L #	75
39) chloroform	8.54	83	31583	5.02	ug/L	95
41) Tetrahydrofuran	8.88	42	5767	5.00	ug/L	91
42) 1,1,1-trichloroethane	9.30	97	21490	4.35	ug/L	90
44) Cyclohexane	9.58	56	32556	5.21	ug/L	86
45) carbon tetrachloride	9.66	117	13723	3.98	ug/L	89
46) 1,1-dichloropropene	9.48	75	25250	5.02	ug/L	87
47) benzene	9.70	78	74345	5.02	ug/L	100
48) 1,2-dichloroethane	9.20	62	26210	5.27	ug/L	86
49) tert-amyl methyl ether	9.81	73	27583	3.60	ug/L	93
50) heptane	10.17	43	19982	5.46	ug/L	87
51) trichloroethene	10.32	95	19361	5.35	ug/L	84
52) 1,2-dichloropropane	10.29	63	19806	5.16	ug/L	97
53) dibromomethane	10.26	93	11071	5.24	ug/L	83
54) bromodichloromethane	10.37	83	22280	4.69	ug/L	96
55) Methylcyclohexane	10.83	83	31472	4.93	ug/L	87
56) 2-chloroethyl vinyl ether	10.29	63	19806	5.16	ug/L #	98
57) methyl methacrylate	10.47	69	11343	4.49	ug/L	85
58) 1,4-dioxane	10.47	88	907	19.43	ug/L	70
59) cis-1,3-dichloropropene	10.99	75	22724	4.38	ug/L	91
61) 4-methyl-2-pentanone	11.08	43	14740	4.05	ug/L	89
62) toluene	11.77	92	43123	4.89	ug/L	92
63) trans-1,3-dichloropropene	11.41	75	17431	4.19	ug/L	95
64) 1,1,2-trichloroethane	11.58	83	14541	5.01	ug/L	94
65) ethyl methacrylate	11.79	69	16832	3.61	ug/L	87
67) tetrachloroethene	12.51	166	14961	5.35	ug/L	95
68) 1,3-dichloropropane	11.82	76	29541	5.31	ug/L	94
69) dibromochloromethane	12.10	129	12041	4.20	ug/L	84
70) 1,2-dibromoethane	12.36	107	15267	5.10	ug/L	96
71) 2-hexanone	11.96	43	10186	4.37	ug/L	88
72) chlorobenzene	13.19	112	43234	5.15	ug/L	90
73) 1,1,1,2-tetrachloroethane	13.10	131	11849	4.48	ug/L	85
74) ethylbenzene	13.37	91	80119	5.03	ug/L	94
75) m,p-xylene	13.55	106	58384	9.92	ug/L	89
76) o-xylene	13.96	106	28418	5.16	ug/L #	79
77) styrene	13.89	104	37955	4.38	ug/L	84
78) bromoform	13.71	173	6454	3.69	ug/L	88
79) trans-1,4-dichloro-2-buten	14.11	53	1594	2.14	ug/L #	1
81) isopropylbenzene	14.32	105	60949	5.37	ug/L	98
83) bromobenzene	14.61	156	15556	5.34	ug/L #	67
84) 1,1,2,2-tetrachloroethane	13.96	83	21162	5.43	ug/L	92
85) 1,2,3-trichloropropane	14.11	75	18622	4.78	ug/L	97
86) n-propylbenzene	14.77	91	87183	5.26	ug/L	92
87) 2-chlorotoluene	14.89	91	55302	5.56	ug/L	91
88) 4-chlorotoluene	14.97	91	56073	5.59	ug/L	96
89) 1,3,5-trimethylbenzene	15.04	105	60391	5.29	ug/L	90
90) tert-butylbenzene	15.35	91	37816	5.54	ug/L	83
91) 1,2,4-trimethylbenzene	15.46	105	57567	5.05	ug/L	91
92) sec-butylbenzene	15.57	105	78018	5.30	ug/L	95

(#) = qualifier out of range (m) = manual integration

N60248.D N021312W.M

Tue Feb 14 10:14:33 2012

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Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60248.D
Acq On : 13 Feb 2012 1:31 pm
Sample : ic2251-5
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 10:04:01 2012

Vial: 22
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 10:03:43 2012
Response via : Initial Calibration
DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
93) 1,3-dichlorobenzene	15.67	146	30379	5.52	ug/L	93
94) p-isopropyltoluene	15.74	119	57302	5.38	ug/L	95
95) 1,4-dichlorobenzene	15.74	146	31501	5.61	ug/L	98
96) 1,2-dichlorobenzene	16.11	146	28384	5.37	ug/L	89
97) n-butylbenzene	16.16	91	59350	4.95	ug/L	87
98) 1,2-dibromo-3-chloropropan	16.58	75	3061	4.42	ug/L #	51
99) 1,2,4-trichlorobenzene	17.98	180	13694	4.16	ug/L	96
100) 1,3,5-trichlorobenzene	17.41	180	19217	4.91	ug/L	97
101) hexachlorobutadiene	18.29	225	10124	5.78	ug/L	99
102) naphthalene	18.27	128	24757	3.09	ug/L	100
103) 1,2,3-trichlorobenzene	18.49	180	12981	4.24	ug/L	97
104) 2-methylnaphthalene	19.79	142	4268	1.87	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
N60248.D N021312W.M Tue Feb 14 10:14:33 2012 RP1

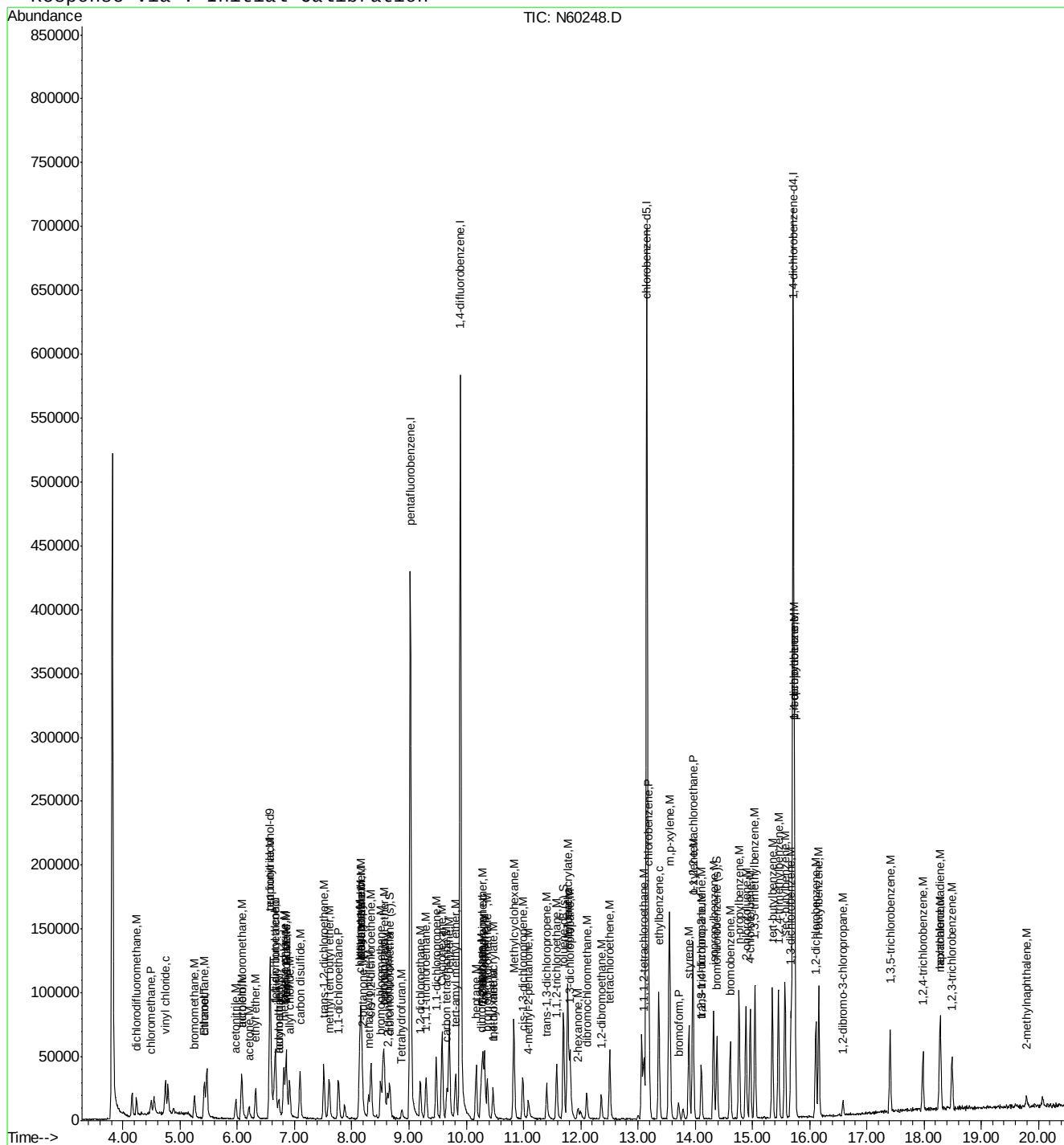
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60248.D
Acq On : 13 Feb 2012 1:31 pm
Sample : ic2251-5
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 10:04 2012

Vial: 22
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 10:03:43 2012
Response via : Initial Calibration



N60248.D N021312W.M

Tue Feb 14 10:14:34 2012

RP1

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6.6.2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60249.D
 Acq On : 13 Feb 2012 1:59 pm
 Sample : ic2251-2
 Misc : MS25046,MSN2251,,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 14 10:16:36 2012

Vial: 23
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260
 Last Update : Tue Feb 14 10:14:51 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.58	65	146598	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	264734	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.90	114	479765	50.00	ug/L	0.00
66) chlorobenzene-d5	13.16	82	257415	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	15.72	152	167519	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	8.67	113	6685	1.93	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	3.86%#		
60) toluene-d8 (s)	11.70	98	26043	1.84	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	3.68%#		
82) bromofluorobenzene (s)	14.38	95	10546	2.06	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	4.12%#		

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.67	59	4951	16.03	ug/L	100
3) Ethanol	5.43	45	9520	183.01	ug/L	93
5) dichlorodifluoromethane	4.24	85	3735	1.87	ug/L	95
6) chloromethane	4.49	50	5353	2.11	ug/L	93
7) vinyl chloride	4.75	62	6398	2.25	ug/L	76
8) bromomethane	5.25	96	5000	2.37	ug/L	95
9) chloroethane	5.42	64	4359	1.96	ug/L	79
10) ethyl ether	6.32	59	4587	1.61	ug/L	86
11) acetonitrile	5.97	41	4823	4.86	ug/L	93
12) trichlorofluoromethane	6.08	101	8260	1.80	ug/L	94
13) freon-113	6.86	101	5225	1.92	ug/L	76
14) acrolein	6.07	56	2957	8.24	ug/L	94
15) 1,1-dichloroethene	6.67	96	5702	2.08	ug/L	86
16) acetone	6.22	43	2338	1.98	ug/L	87
17) Methyl Acetate	6.86	43	8826	1.68	ug/L #	84
18) methylene chloride	6.81	84	7109	1.98	ug/L	82
19) methyl tert butyl ether	7.61	73	12054	1.46	ug/L	90
20) acrylonitrile	6.73	53	1564	5.90	ug/L #	62
21) allyl chloride	6.92	41	6291	1.53	ug/L	59
22) trans-1,2-dichloroethene	7.51	96	5802	1.80	ug/L	87
23) iodomethane	6.72	142	1248	1.03	ug/L	83
24) carbon disulfide	7.10	76	19364	1.85	ug/L	99
25) propionitrile	6.56	54	330m	5.95	ug/L	
26) vinyl acetate	6.86	43	8826	1.67	ug/L	83
27) chloroprene	8.14	53	7327	1.48	ug/L	93
28) di-isopropyl ether	8.17	45	20011	1.73	ug/L	92
29) methacrylonitrile	8.30	41	4025	1.68	ug/L	75
30) 2-butanone	8.21	72	306m	0.71	ug/L	
31) Hexane	8.15	41	9424	2.00	ug/L #	84
32) 1,1-dichloroethane	7.77	63	11073	1.79	ug/L	92
33) tert-butyl ethyl ether	8.57	59	9383	1.16	ug/L	91
34) isobutyl alcohol	8.17	43	17253	9.24	ug/L	64
35) 2,2-dichloropropane	8.64	77	1545	0.49	ug/L	89
36) cis-1,2-dichloroethene	8.34	96	6414	1.82	ug/L	84
37) ethyl acetate	8.17	43	17254	1.86	ug/L	94

(#)=qualifier out of range (m)=manual integration

N60249.D N021312W.M

Tue Feb 14 10:25:28 2012

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Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60249.D

Acq On : 13 Feb 2012 1:59 pm

Sample : ic2251-2

Misc : MS25046,MSN2251,,,,5,1

MS Integration Params: RTEINT.P

Quant Time: Feb 14 10:16:36 2012

Vial: 23

Operator: JUGALP

Inst : MAMSN

Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 10:14:51 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	8.50	128	2452	1.77	ug/L	86
39) chloroform	8.54	83	11301	1.86	ug/L	92
41) Tetrahydrofuran	8.88	42	1653	1.49	ug/L	68
42) 1,1,1-trichloroethane	9.30	97	7156	1.54	ug/L	88
44) Cyclohexane	9.58	56	10685	1.74	ug/L #	92
45) carbon tetrachloride	9.66	117	4097	1.26	ug/L	83
46) 1,1-dichloropropene	9.47	75	8326	1.70	ug/L	82
47) benzene	9.70	78	25632	1.77	ug/L	91
48) 1,2-dichloroethane	9.20	62	9204	1.88	ug/L	84
49) tert-amyl methyl ether	9.81	73	8504	1.20	ug/L	83
50) heptane	10.18	43	6617	1.83	ug/L	89
51) trichloroethene	10.32	95	6449	1.81	ug/L	82
52) 1,2-dichloropropane	10.29	63	6255	1.66	ug/L	92
53) dibromomethane	10.25	93	3760	1.81	ug/L #	68
54) bromodichloromethane	10.37	83	6894	1.51	ug/L	88
55) Methylcyclohexane	10.84	83	10416	1.68	ug/L #	89
56) 2-chloroethyl vinyl ether	10.29	63	6255	1.66	ug/L #	95
57) methyl methacrylate	10.47	69	2944	1.22	ug/L	94
58) 1,4-dioxane	10.49	88	146m	3.34	ug/L	
59) cis-1,3-dichloropropene	10.99	75	6810	1.37	ug/L	89
61) 4-methyl-2-pentanone	11.09	43	4585	1.34	ug/L #	74
62) toluene	11.77	92	15098	1.77	ug/L	89
63) trans-1,3-dichloropropene	11.41	75	4931	1.25	ug/L	95
64) 1,1,2-trichloroethane	11.59	83	5036	1.78	ug/L #	76
65) ethyl methacrylate	11.80	69	4819	1.11	ug/L #	30
67) tetrachloroethene	12.51	166	5275	1.92	ug/L #	71
68) 1,3-dichloropropane	11.82	76	9478	1.74	ug/L	85
69) dibromochloromethane	12.11	129	3828	1.42	ug/L	88
70) 1,2-dibromoethane	12.36	107	5070	1.74	ug/L	80
71) 2-hexanone	11.98	43	2625	1.19	ug/L #	54
72) chlorobenzene	13.19	112	15052	1.84	ug/L	90
73) 1,1,1,2-tetrachloroethane	13.11	131	3753	1.49	ug/L	91
74) ethylbenzene	13.37	91	27155	1.76	ug/L	95
75) m,p-xylene	13.56	106	20257	3.55	ug/L	93
76) o-xylene	13.97	106	9531	1.78	ug/L	90
77) styrene	13.90	104	11975	1.45	ug/L	82
78) bromoform	13.71	173	2075	1.28	ug/L	95
79) trans-1,4-dichloro-2-buten	14.11	53	359m	0.55	ug/L	
81) isopropylbenzene	14.32	105	19835	1.84	ug/L	93
83) bromobenzene	14.62	156	5373	1.95	ug/L #	78
84) 1,1,2,2-tetrachloroethane	13.95	83	7350	1.98	ug/L	97
85) 1,2,3-trichloropropane	14.11	75	5890	1.63	ug/L	88
86) n-propylbenzene	14.76	91	28965	1.85	ug/L	86
87) 2-chlorotoluene	14.89	91	18679	1.97	ug/L	85
88) 4-chlorotoluene	14.97	91	17800	1.86	ug/L	87
89) 1,3,5-trimethylbenzene	15.05	105	19330	1.79	ug/L	85
90) tert-butylbenzene	15.35	91	12104	1.86	ug/L #	60
91) 1,2,4-trimethylbenzene	15.46	105	19114	1.79	ug/L	88
92) sec-butylbenzene	15.57	105	25319	1.82	ug/L	96

(#) = qualifier out of range (m) = manual integration

N60249.D N021312W.M

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60249.D

Vial: 23

Acq On : 13 Feb 2012 1:59 pm

Operator: JUGALP

Sample : ic2251-2

Inst : MAMSN

Misc : MS25046,MSN2251,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Feb 14 10:16:36 2012

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 10:14:51 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
93) 1,3-dichlorobenzene	15.67	146	10405	1.99	ug/L	96
94) p-isopropyltoluene	15.74	119	18248	1.81	ug/L	88
95) 1,4-dichlorobenzene	15.74	146	11389	2.12	ug/L	86
96) 1,2-dichlorobenzene	16.11	146	9700	1.94	ug/L	93
97) n-butylbenzene	16.16	91	17615	1.57	ug/L	88
98) 1,2-dibromo-3-chloropropan	16.59	75	918	1.44	ug/L #	57
99) 1,2,4-trichlorobenzene	17.98	180	4719	1.58	ug/L	83
100) 1,3,5-trichlorobenzene	17.41	180	6468	1.77	ug/L	95
101) hexachlorobutadiene	18.29	225	3337	1.98	ug/L	100
102) naphthalene	18.28	128	6721	0.96	ug/L	100
103) 1,2,3-trichlorobenzene	18.49	180	3752	1.34	ug/L	77
104) 2-methylnaphthalene	19.79	142	1844	0.90	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 N60249.D N021312W.M Tue Feb 14 10:25:28 2012 RP1

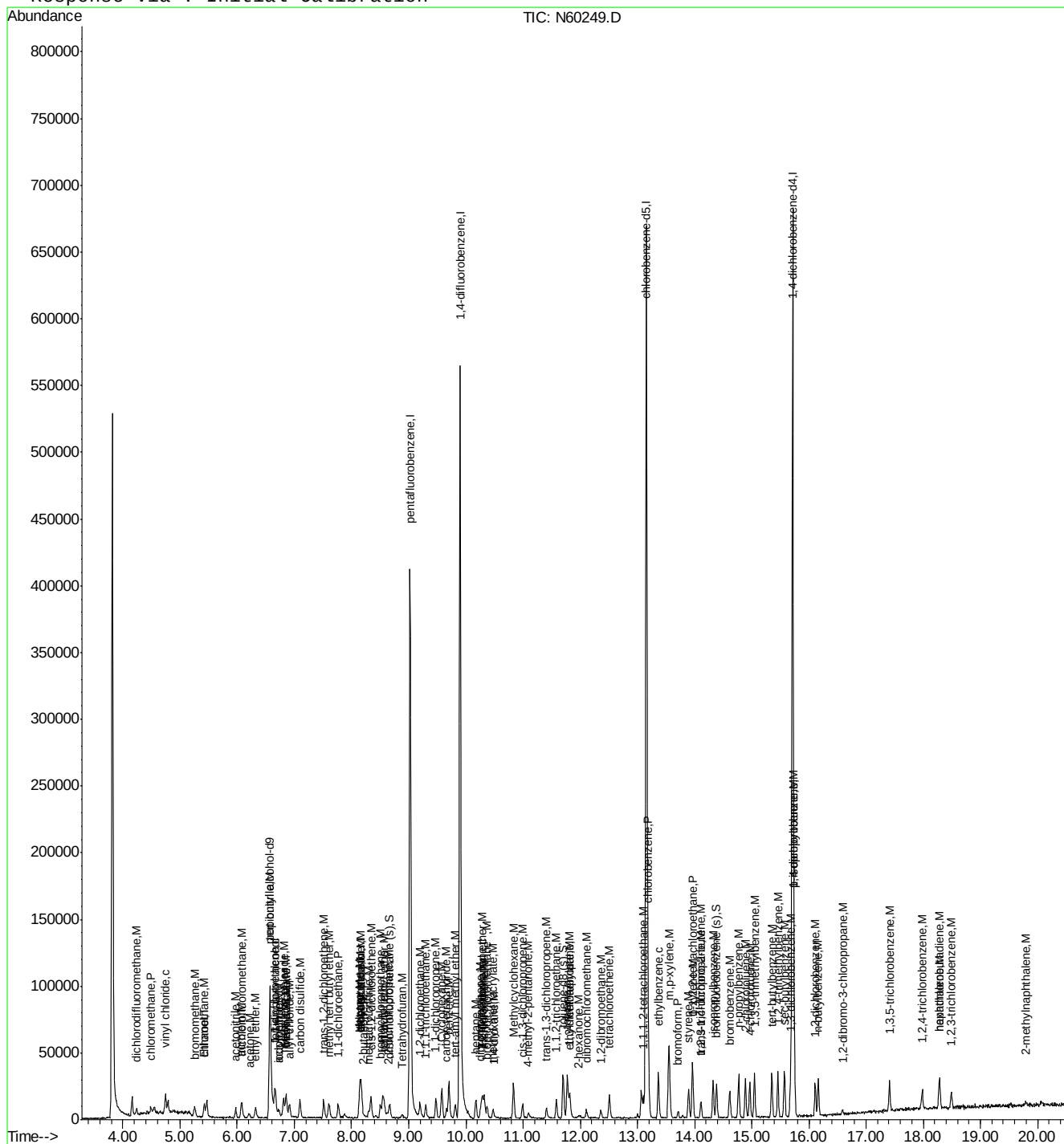
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60249.D
Acq On : 13 Feb 2012 1:59 pm
Sample : ic2251-2
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 10:24 2012

Vial: 23
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 10:14:51 2012
Response via : Initial Calibration



N60249.D N021312W.M

Tue Feb 14 10:25:29 2012

RP1

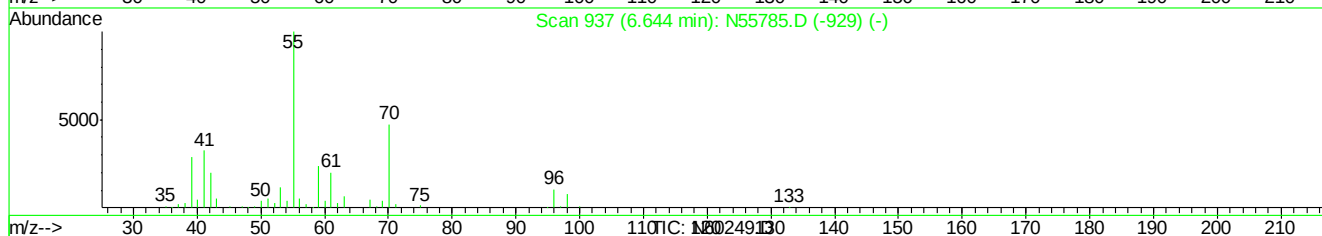
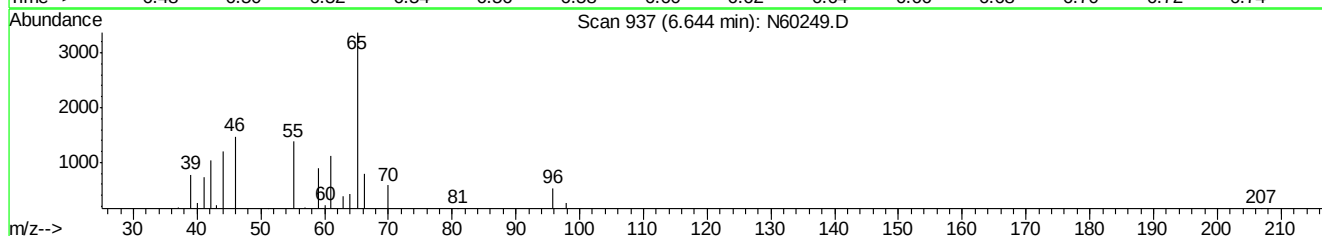
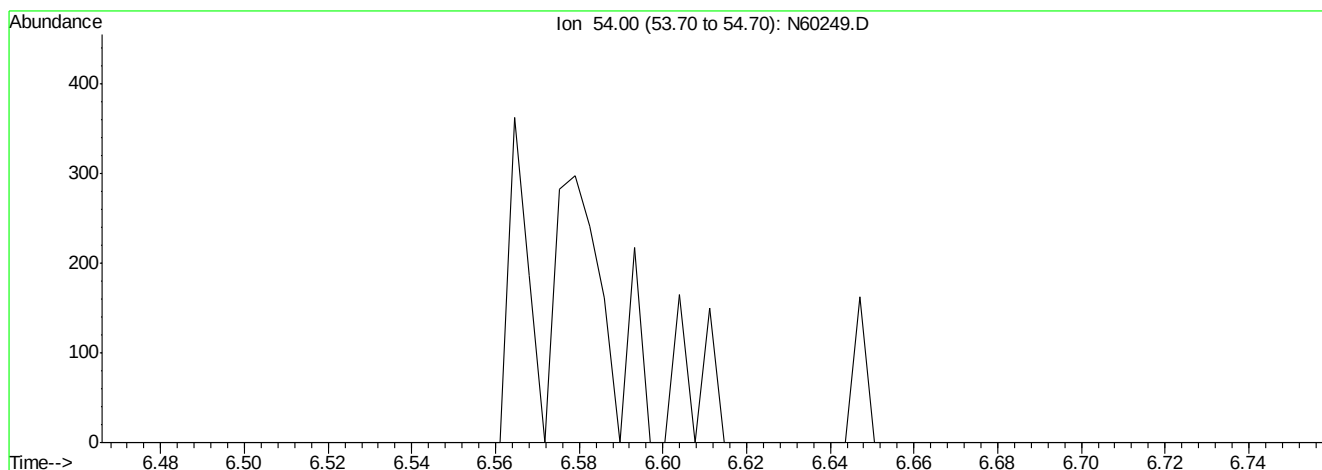
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Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60249.D
Acq On : 13 Feb 2012 1:59 pm
Sample : ic2251-2
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 10:16 2012

Vial: 23
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 10:14:51 2012
Response via : Multiple Level Calibration



(25) propionitrile (M)

6.64min 0.00ug/L

response 0

Ion	Exp%	Act%
54.00	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

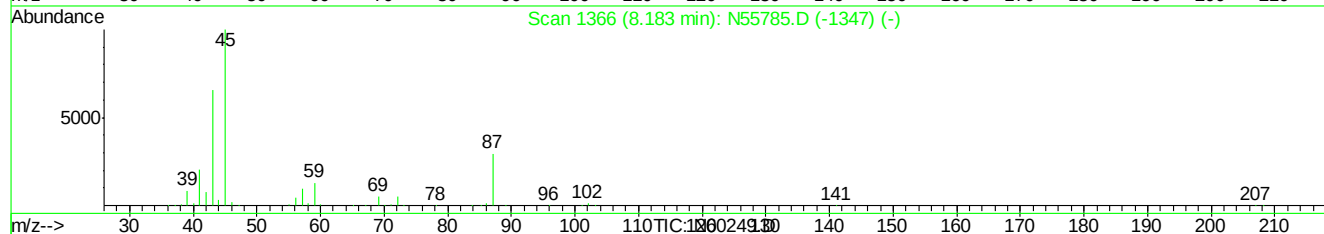
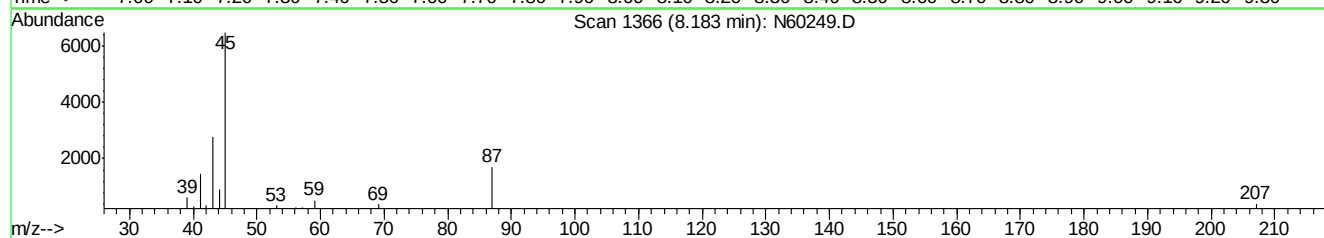
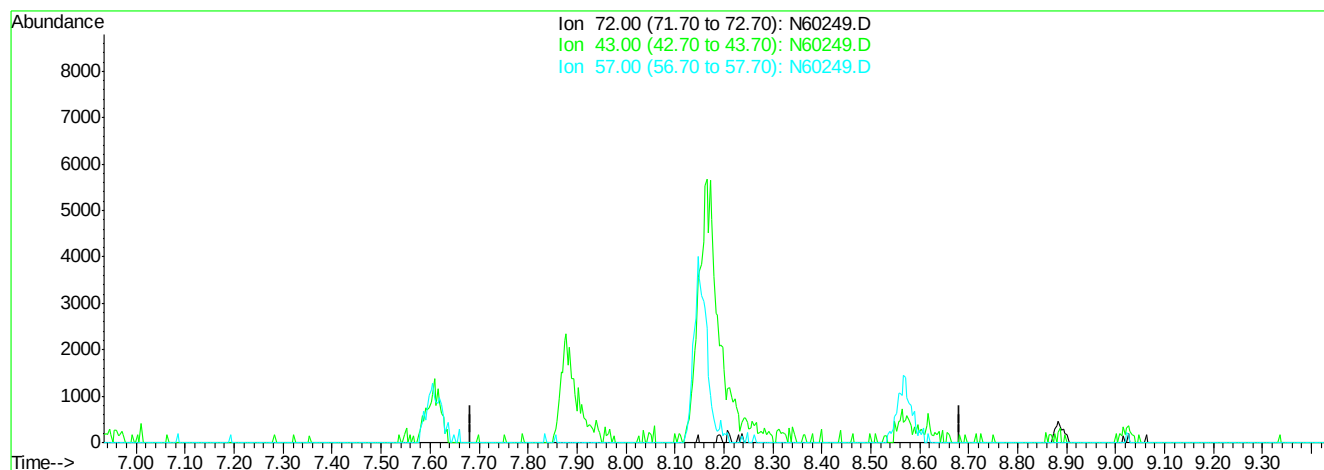
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60249.D
Acq On : 13 Feb 2012 1:59 pm
Sample : ic2251-2
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 10:19 2012

Vial: 23
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 10:14:51 2012
Response via : Multiple Level Calibration



(30) 2-butanone (M)

8.18min 0.00ug/L

response 0

Ion	Exp%	Act%
72.00	100	0.00
43.00	1298.10	0.00#
57.00	192.80	0.00#
0.00	0.00	0.00

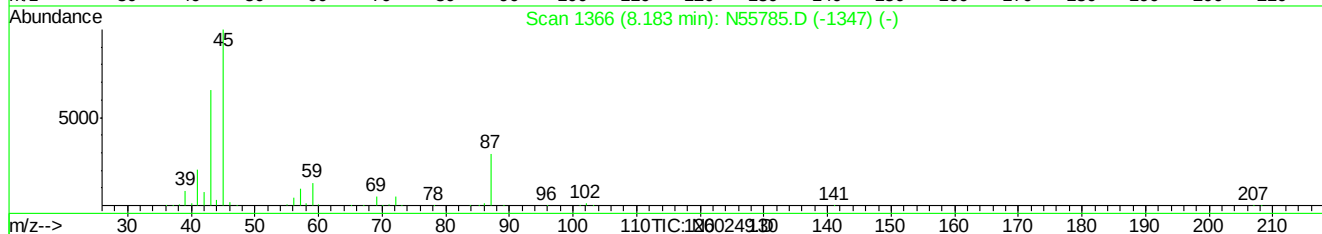
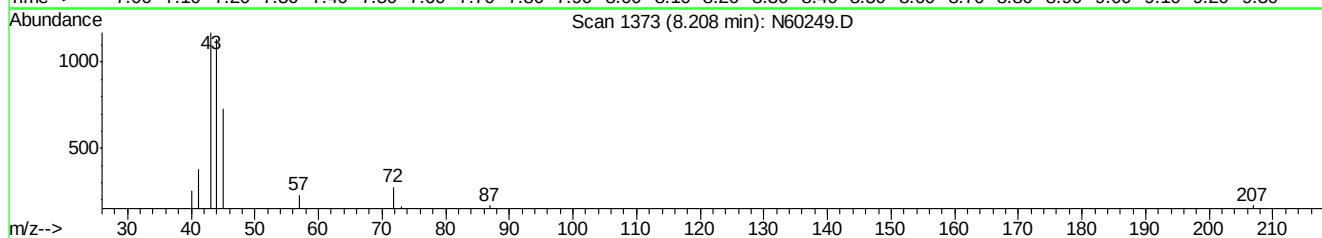
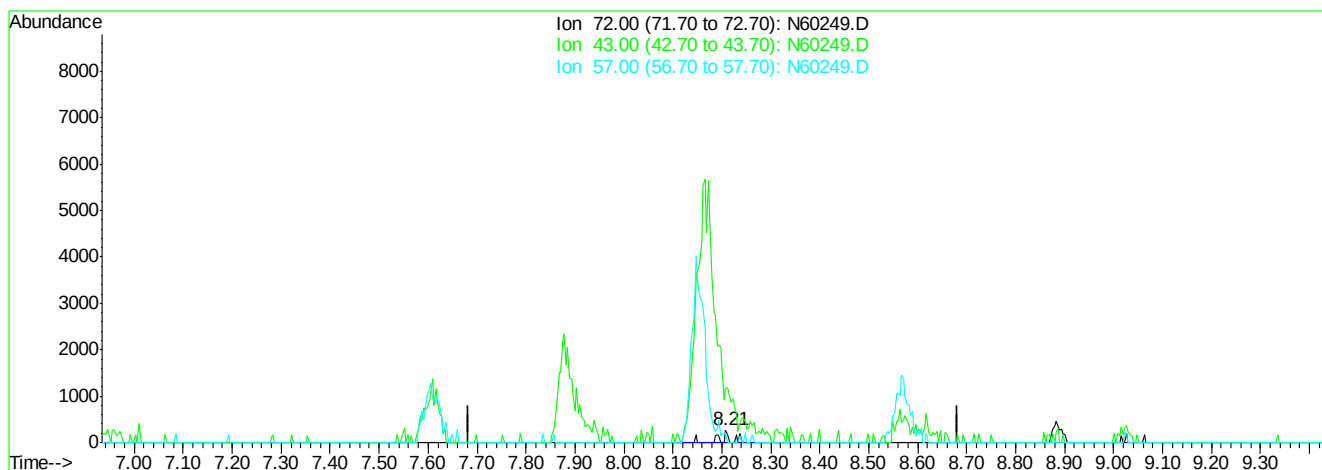
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60249.D
Acq On : 13 Feb 2012 1:59 pm
Sample : ic2251-2
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 10:19 2012

Vial: 23
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 10:14:51 2012
Response via : Multiple Level Calibration



(30) 2-butanone (M)

8.21min 0.71ug/L m

response 306

Ion	Exp%	Act%
72.00	100	100
43.00	1298.10	425.82#
57.00	192.80	83.64#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60249.D

Acq On : 13 Feb 2012 1:59 pm

Sample : ic2251-2

Misc : MS25046,MSN2251,,,,5,1

MS Integration Params: RTEINT.P

Quant Time: Feb 14 10:19 2012

Vial: 23

Operator: JUGALP

Inst : MAMSN

Multiplr: 1.00

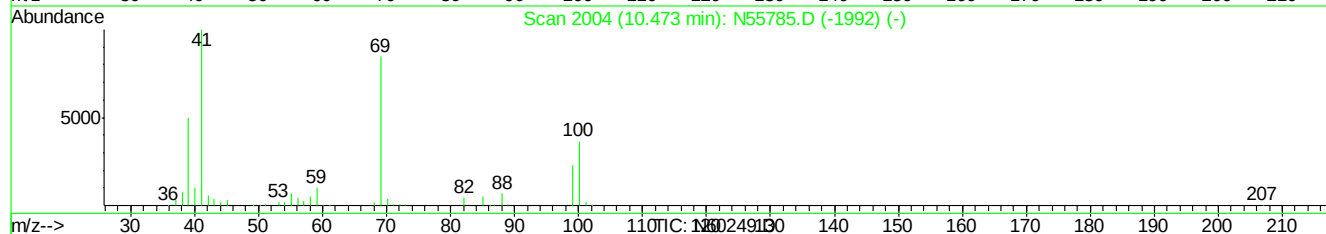
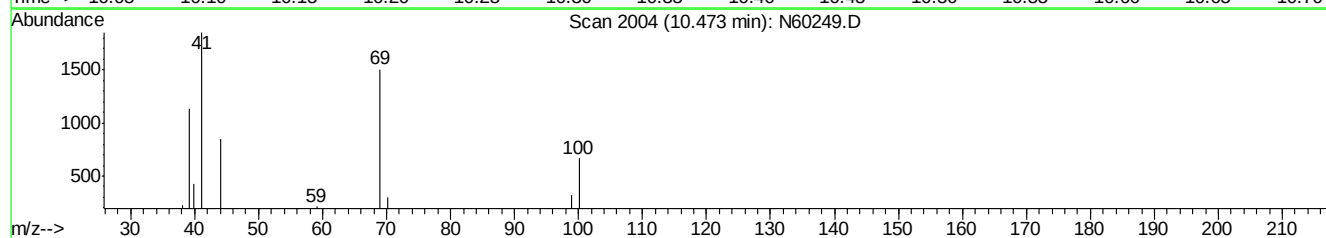
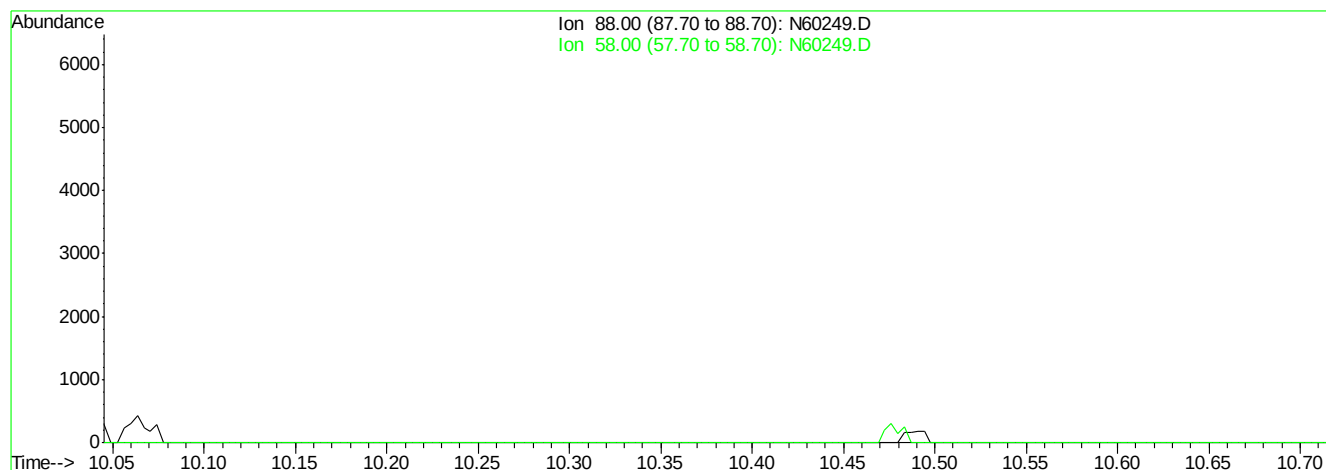
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 10:14:51 2012

Response via : Multiple Level Calibration



(58) 1,4-dioxane (M)

10.47min 0.00ug/L

response 0

Ion	Exp%	Act%
88.00	100	0.00
58.00	73.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60249.D

Acq On : 13 Feb 2012 1:59 pm

Sample : ic2251-2

Misc : MS25046,MSN2251,,,,5,1

MS Integration Params: RTEINT.P

Quant Time: Feb 14 10:22 2012

Vial: 23

Operator: JUGALP

Inst : MAMSN

Multiplr: 1.00

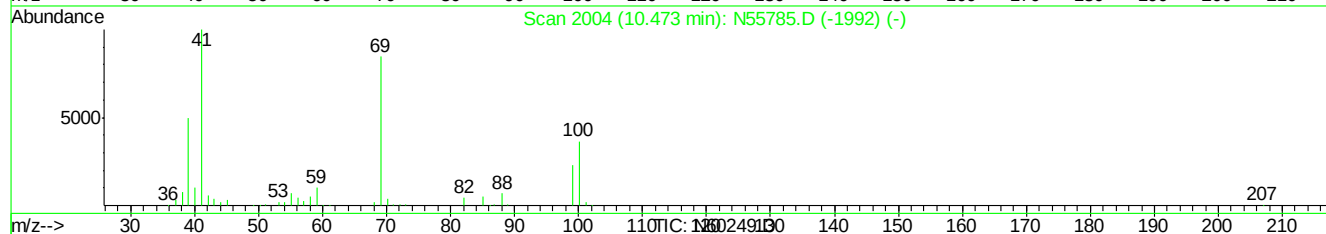
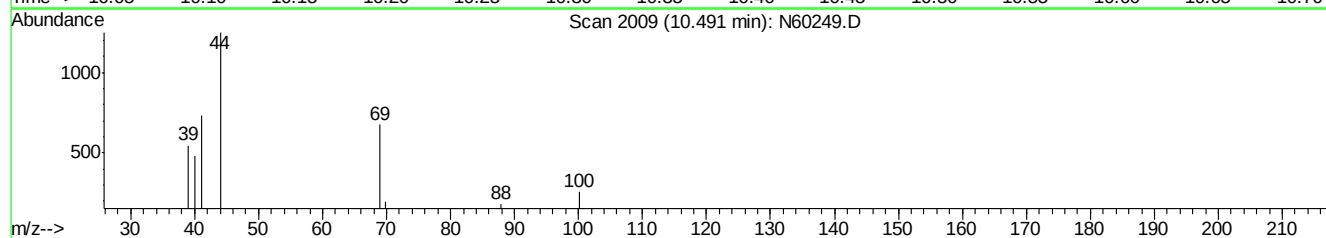
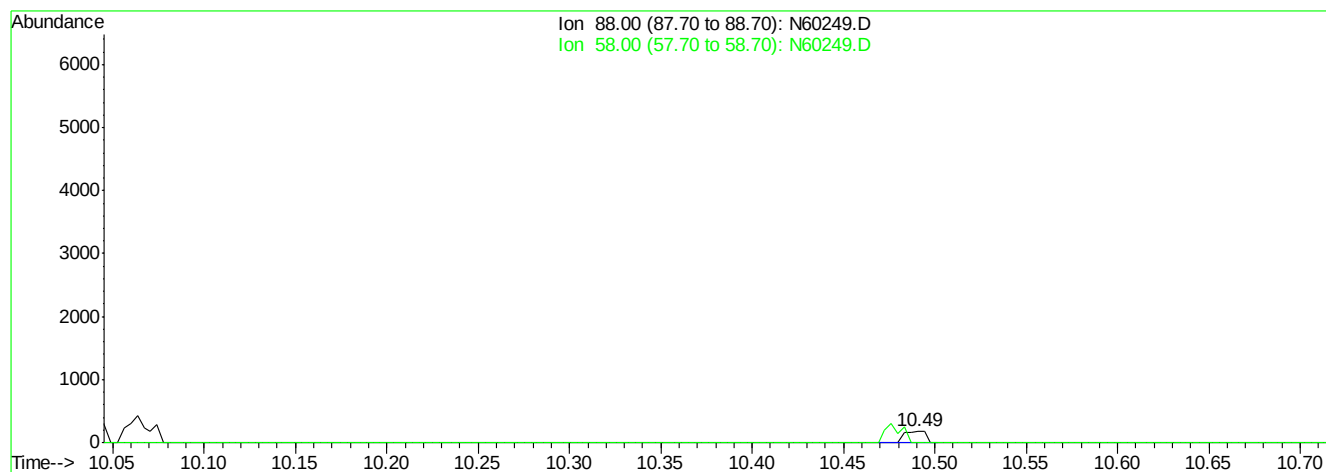
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 10:14:51 2012

Response via : Multiple Level Calibration



(58) 1,4-dioxane (M)

10.49min 3.34ug/L m

response 146

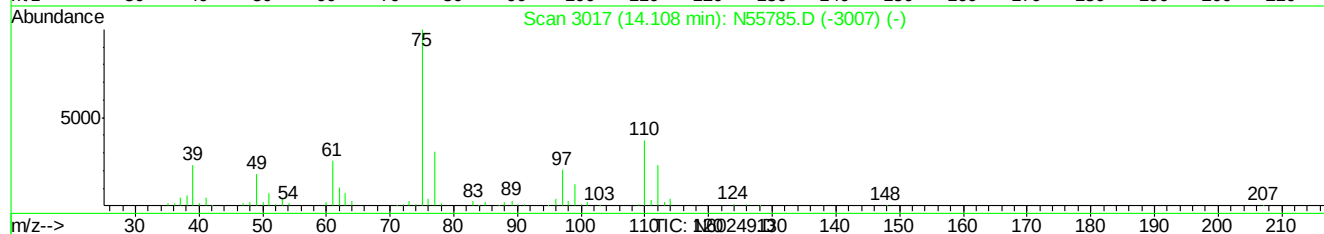
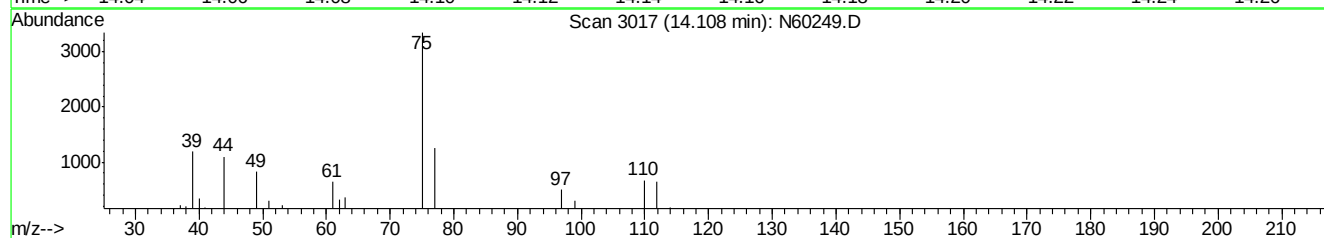
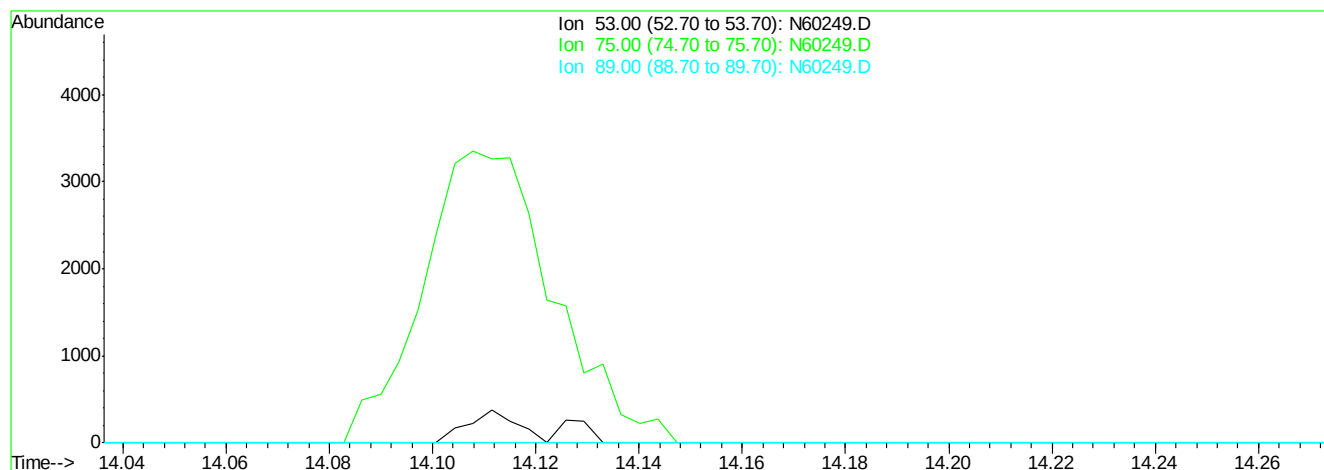
Ion	Exp%	Act%
88.00	100	100
58.00	73.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60249.D
Acq On : 13 Feb 2012 1:59 pm
Sample : ic2251-2
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 10:22 2012

Vial: 23
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 10:14:51 2012
Response via : Multiple Level Calibration



(79) trans-1,4-dichloro-2-butene (M)

14.11min 0.00ug/L

response 0

Ion	Exp%	Act%
53.00	100	0.00
75.00	2281.30	0.00#
89.00	63.20	0.00#
0.00	0.00	0.00

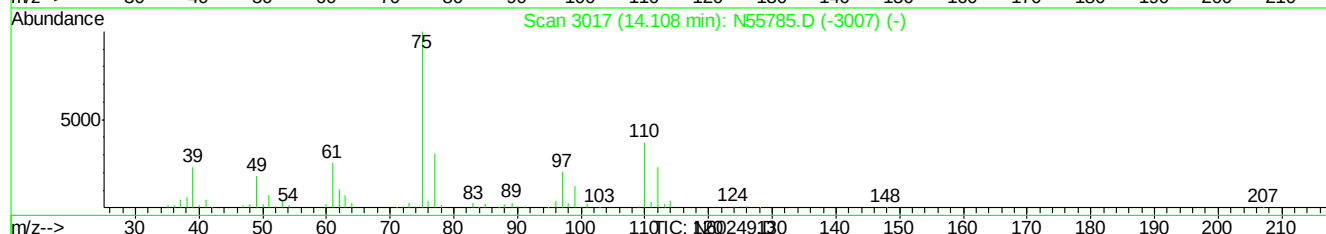
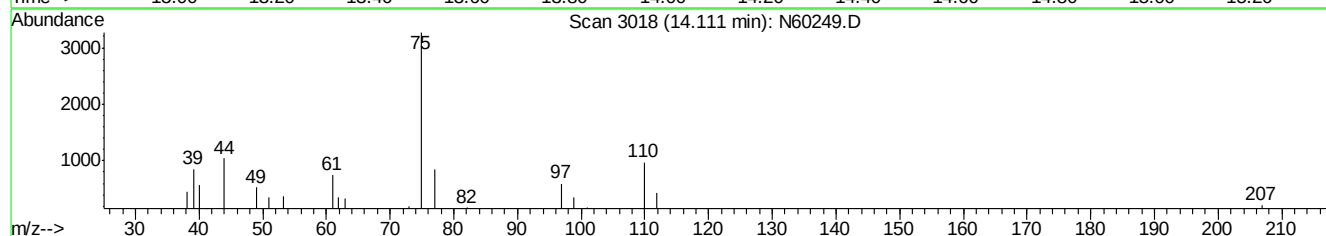
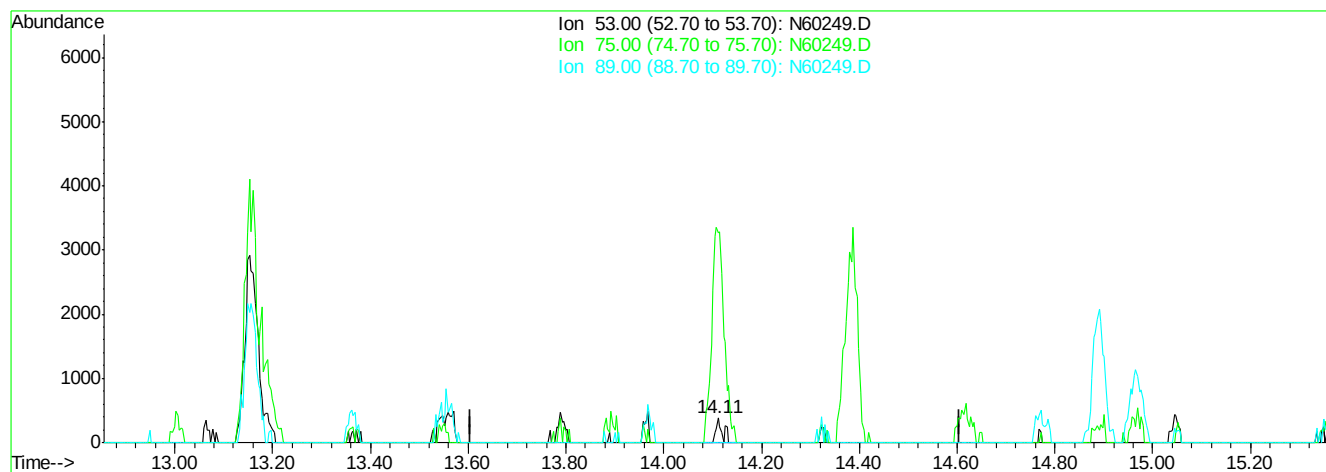
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60249.D
 Acq On : 13 Feb 2012 1:59 pm
 Sample : ic2251-2
 Misc : MS25046,MSN2251,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 14 10:24 2012

Vial: 23
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Tue Feb 14 10:14:51 2012
 Response via : Multiple Level Calibration



(79) trans-1,4-dichloro-2-butene (M)

14.11min 0.55ug/L m

response 359

Ion	Exp%	Act%
53.00	100	100
75.00	2281.30	860.00#
89.00	63.20	0.00#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60250.D
 Acq On : 13 Feb 2012 2:27 pm
 Sample : ic2251-1
 Misc : MS25046,MSN2251,,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 14 10:26:15 2012

Vial: 24
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260
 Last Update : Tue Feb 14 10:25:37 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.58	65	160579	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	256725	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.90	114	463874	50.00	ug/L	0.00
66) chlorobenzene-d5	13.15	82	252351	50.00	ug/L	-0.01
80) 1,4-dichlorobenzene-d4	15.72	152	163941	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	3866	1.14	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	2.28%#
60) toluene-d8 (s)	11.70	98	14327	1.05	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	2.10%#
82) bromofluorobenzene (s)	14.38	95	5925	1.16	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	2.32%#

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.67	59	3163	9.62	ug/L	99
3) Ethanol	5.43	45	5149	91.47	ug/L	100
5) dichlorodifluoromethane	4.24	85	2366	1.23	ug/L	92
6) chloromethane	4.49	50	2931	1.18	ug/L	98
7) vinyl chloride	4.74	62	4066	1.45	ug/L	54
8) bromomethane	5.25	96	2599	1.24	ug/L	89
9) chloroethane	5.43	64	2581	1.20	ug/L	87
10) ethyl ether	6.32	59	3002	1.12	ug/L	84
11) acetonitrile	5.97	41	3101	2.68	ug/L	79
12) trichlorofluoromethane	6.08	101	5199	1.18	ug/L	81
13) freon-113	6.86	101	3062	1.17	ug/L	73
14) acrolein	6.08	56	1843	5.43	ug/L	94
15) 1,1-dichloroethene	6.67	96	3287	1.23	ug/L	84
16) acetone	6.22	43	1677	1.47	ug/L	# 42
17) Methyl Acetate	6.86	43	5834	1.17	ug/L	# 82
18) methylene chloride	6.81	84	4171	1.20	ug/L	# 79
19) methyl tert butyl ether	7.60	73	7150	0.93	ug/L	100
20) acrylonitrile	6.72	53	924	3.82	ug/L	85
21) allyl chloride	6.91	41	3631	0.94	ug/L	73
22) trans-1,2-dichloroethene	7.51	96	3435	1.12	ug/L	86
23) iodomethane	6.72	142	446m	0.41	ug/L	
24) carbon disulfide	7.10	76	11291	1.12	ug/L	97
25) propionitrile	6.59	54	757	10.97	ug/L	100
26) vinyl acetate	6.86	43	5834	1.17	ug/L	83
27) chloroprene	8.13	53	4207	0.91	ug/L	82
28) di-isopropyl ether	8.17	45	11958	1.09	ug/L	87
29) methacrylonitrile	8.31	41	2195	0.97	ug/L	# 61
30) 2-butanone	8.20	72	151m	0.40	ug/L	
31) Hexane	8.17	41	5197	1.14	ug/L	# 47
32) 1,1-dichloroethane	7.77	63	6226	1.05	ug/L	92
33) tert-butyl ethyl ether	8.56	59	5004	0.68	ug/L	84
34) isobutyl alcohol	8.17	43	9650	5.39	ug/L	97
35) 2,2-dichloropropane	8.64	77	708	0.26	ug/L	54
36) cis-1,2-dichloroethene	8.34	96	3659	1.09	ug/L	# 74
37) ethyl acetate	8.17	43	10060	1.13	ug/L	81

(#)=qualifier out of range (m)=manual integration

N60250.D N021312W.M

Tue Feb 14 10:32:01 2012

RP1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60250.D

Acq On : 13 Feb 2012 2:27 pm

Sample : ic2251-1

Misc : MS25046,MSN2251,,,,5,1

MS Integration Params: RTEINT.P

Quant Time: Feb 14 10:26:15 2012

Vial: 24

Operator: JUGALP

Inst : MAMSN

Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 10:25:37 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	8.51	128	1310	0.99	ug/L	88
39) chloroform	8.55	83	6209	1.07	ug/L	97
41) Tetrahydrofuran	8.89	42	1166	1.12	ug/L	91
42) 1,1,1-trichloroethane	9.30	97	3531	0.81	ug/L	89
44) Cyclohexane	9.58	56	6106	1.05	ug/L #	92
45) carbon tetrachloride	9.66	117	2329	0.78	ug/L	80
46) 1,1-dichloropropene	9.48	75	5173	1.12	ug/L	77
47) benzene	9.71	78	15232	1.11	ug/L	89
48) 1,2-dichloroethane	9.20	62	4870	1.04	ug/L	72
49) tert-amyl methyl ether	9.81	73	4992	0.77	ug/L	85
50) heptane	10.18	43	3720	1.08	ug/L	89
51) trichloroethene	10.31	95	3700	1.09	ug/L	74
52) 1,2-dichloropropane	10.29	63	3727	1.05	ug/L	88
53) dibromomethane	10.25	93	2138	1.08	ug/L #	57
54) bromodichloromethane	10.37	83	3688	0.86	ug/L	96
55) Methylcyclohexane	10.84	83	5947	1.02	ug/L #	83
56) 2-chloroethyl vinyl ether	10.29	63	3727	1.05	ug/L #	95
57) methyl methacrylate	10.48	69	1770	0.80	ug/L #	82
59) cis-1,3-dichloropropene	10.99	75	3836	0.83	ug/L	88
61) 4-methyl-2-pentanone	11.10	43	2395	0.76	ug/L #	72
62) toluene	11.78	92	8594	1.06	ug/L	87
63) trans-1,3-dichloropropene	11.41	75	2560	0.70	ug/L	96
64) 1,1,2-trichloroethane	11.58	83	2623	0.98	ug/L #	72
65) ethyl methacrylate	11.80	69	2654	0.68	ug/L #	39
67) tetrachloroethene	12.51	166	2856	1.07	ug/L	91
68) 1,3-dichloropropane	11.82	76	5843	1.11	ug/L	92
69) dibromochloromethane	12.10	129	1942	0.76	ug/L	96
70) 1,2-dibromoethane	12.36	107	2941	1.05	ug/L	78
71) 2-hexanone	11.99	43	1242	0.61	ug/L #	54
72) chlorobenzene	13.19	112	8980	1.13	ug/L	77
73) 1,1,1,2-tetrachloroethane	13.11	131	2121	0.89	ug/L #	61
74) ethylbenzene	13.37	91	15735	1.06	ug/L	95
75) m,p-xylene	13.56	106	11683	2.12	ug/L	89
76) o-xylene	13.96	106	5369	1.04	ug/L	94
77) styrene	13.90	104	6289	0.80	ug/L	77
78) bromoform	13.72	173	864	0.57	ug/L	96
79) trans-1,4-dichloro-2-buten	14.11	53	105m	0.18	ug/L	
81) isopropylbenzene	14.32	105	10977	1.05	ug/L	86
83) bromobenzene	14.62	156	2942	1.09	ug/L #	66
84) 1,1,2,2-tetrachloroethane	13.96	83	4021	1.11	ug/L	93
85) 1,2,3-trichloropropane	14.10	75	3665	1.06	ug/L	96
86) n-propylbenzene	14.77	91	16625	1.10	ug/L	94
87) 2-chlorotoluene	14.89	91	10468	1.13	ug/L	76
88) 4-chlorotoluene	14.96	91	10654	1.15	ug/L	89
89) 1,3,5-trimethylbenzene	15.05	105	10329	0.99	ug/L	99
90) tert-butylbenzene	15.35	91	7081	1.12	ug/L #	71
91) 1,2,4-trimethylbenzene	15.46	105	11257	1.09	ug/L	86
92) sec-butylbenzene	15.57	105	14201	1.06	ug/L	82
93) 1,3-dichlorobenzene	15.68	146	5935	1.16	ug/L	85

(#) = qualifier out of range (m) = manual integration

N60250.D N021312W.M

Tue Feb 14 10:32:01 2012

RP1

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60250.D

Vial: 24

Acq On : 13 Feb 2012 2:27 pm

Operator: JUGALP

Sample : ic2251-1

Inst : MAMSN

Misc : MS25046,MSN2251,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Feb 14 10:26:15 2012

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 10:25:37 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
94) p-isopropyltoluene	15.75	119	10170	1.04	ug/L	86
95) 1,4-dichlorobenzene	15.74	146	6367	1.20	ug/L	90
96) 1,2-dichlorobenzene	16.11	146	4942	1.01	ug/L	84
97) n-butylbenzene	16.16	91	9628	0.91	ug/L	80
98) 1,2-dibromo-3-chloropropan	16.59	75	620	1.04	ug/L #	39
99) 1,2,4-trichlorobenzene	17.98	180	2360	0.83	ug/L	88
100) 1,3,5-trichlorobenzene	17.41	180	3539	1.01	ug/L	85
101) hexachlorobutadiene	18.29	225	1762	1.07	ug/L	84
102) naphthalene	18.27	128	3189	0.50	ug/L	100
103) 1,2,3-trichlorobenzene	18.50	180	1844	0.71	ug/L	74
104) 2-methylnaphthalene	19.80	142	844	0.43	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
N60250.D N021312W.M Tue Feb 14 10:32:01 2012 RP1

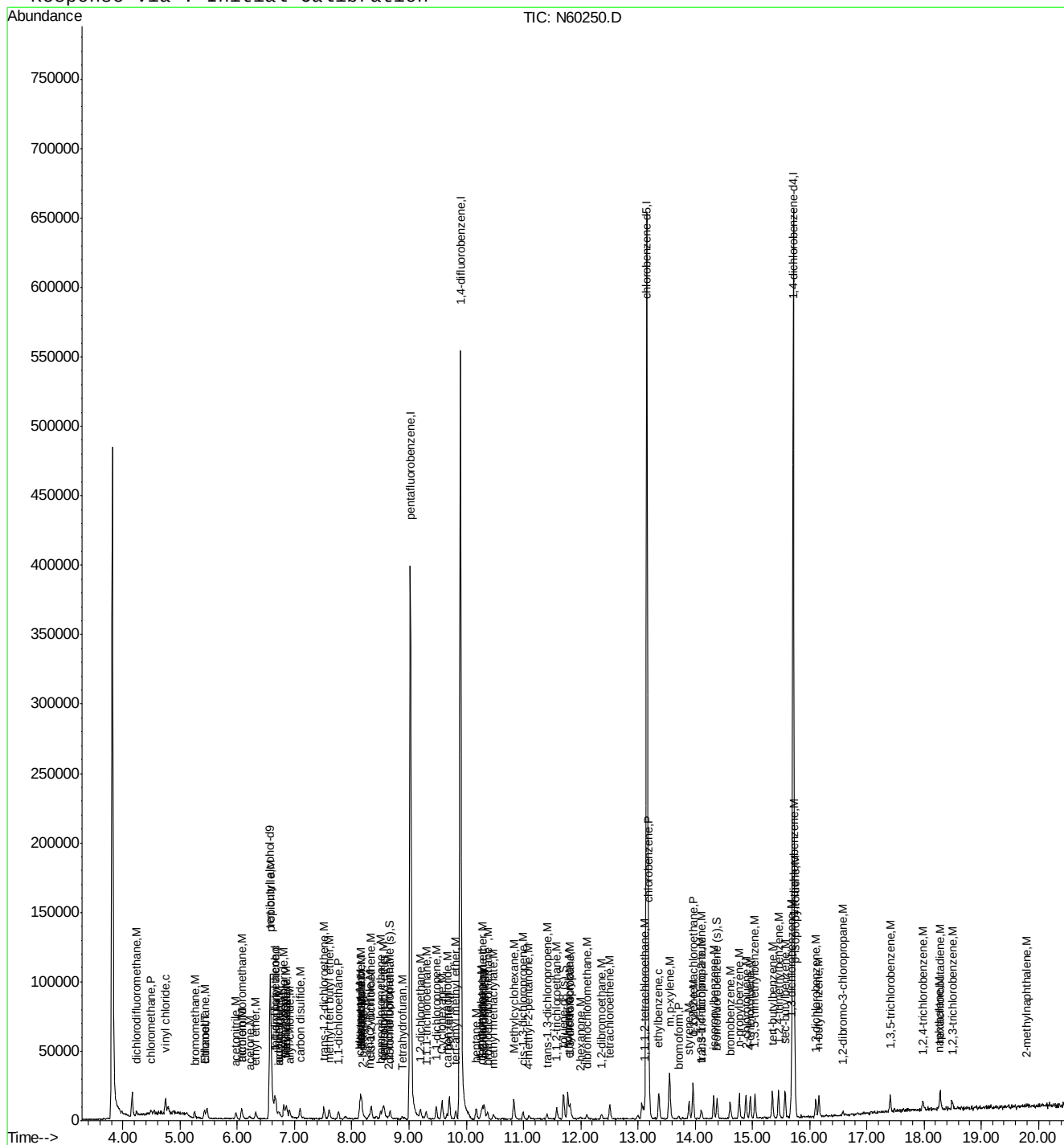
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60250.D
Acq On : 13 Feb 2012 2:27 pm
Sample : ic2251-1
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 10:31 2012

Vial: 24
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 10:25:37 2012
Response via : Initial Calibration



N60250.D N021312W.M

Tue Feb 14 10:32:02 2012

RP1

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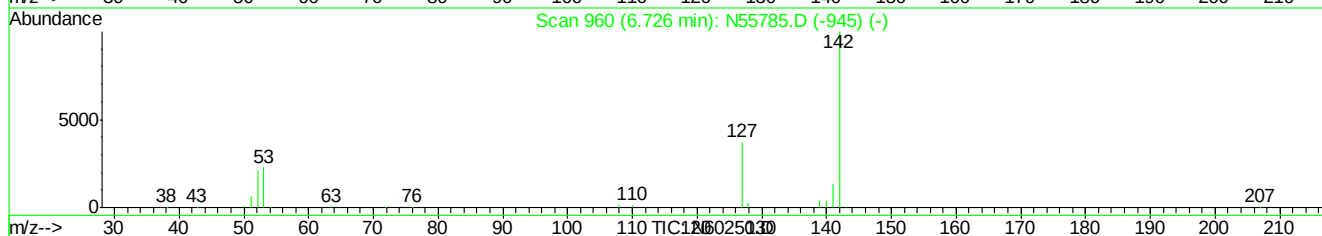
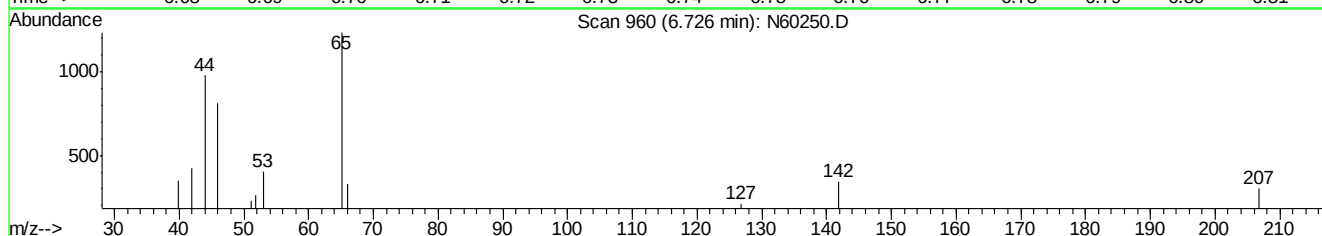
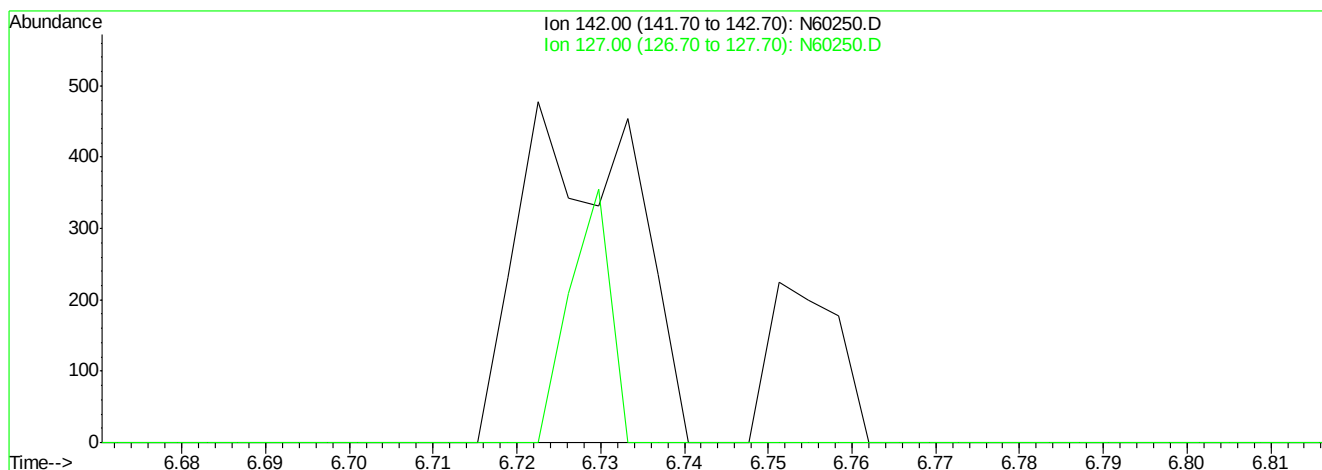
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60250.D
Acq On : 13 Feb 2012 2:27 pm
Sample : ic2251-1
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 10:26 2012

Vial: 24
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 10:25:37 2012
Response via : Multiple Level Calibration



(23) iodomethane (M)

6.73min 0.00ug/L

response 0

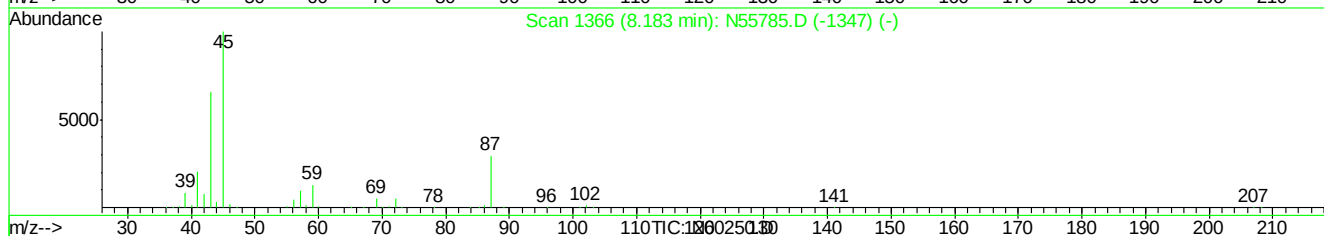
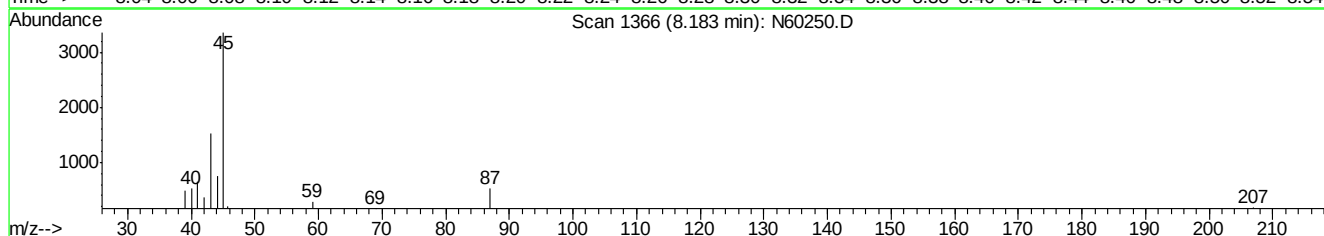
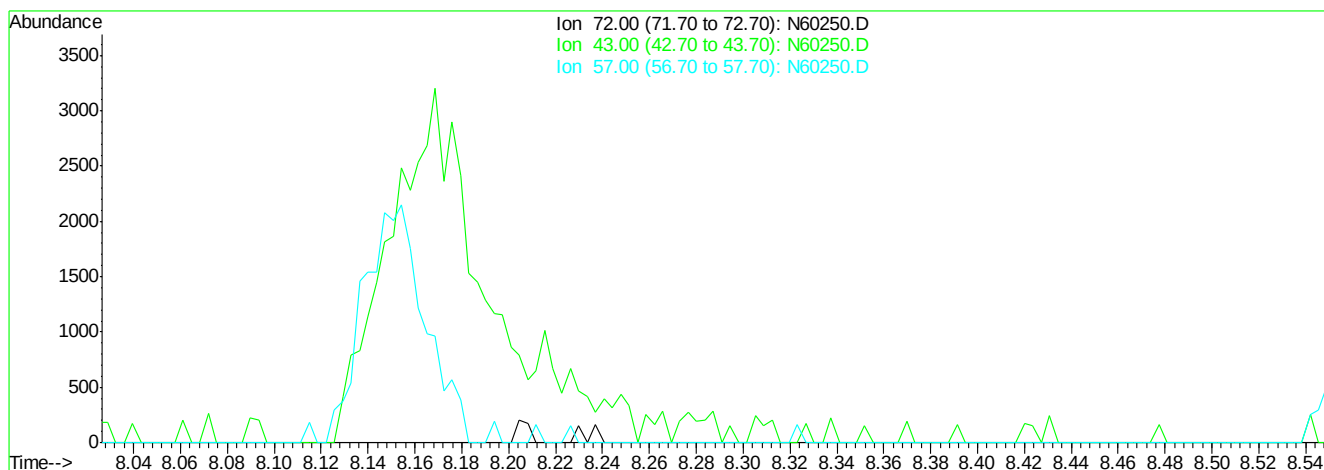
Ion	Exp%	Act%
142.00	100	0.00
127.00	37.20	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60250.D
Acq On : 13 Feb 2012 2:27 pm
Sample : ic2251-1
Misc : MS25046,MSN2251,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 10:27 2012

Vial: 24
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 10:25:37 2012
Response via : Multiple Level Calibration



(30) 2-butanone (M)

8.18min 0.00ug/L

response 0

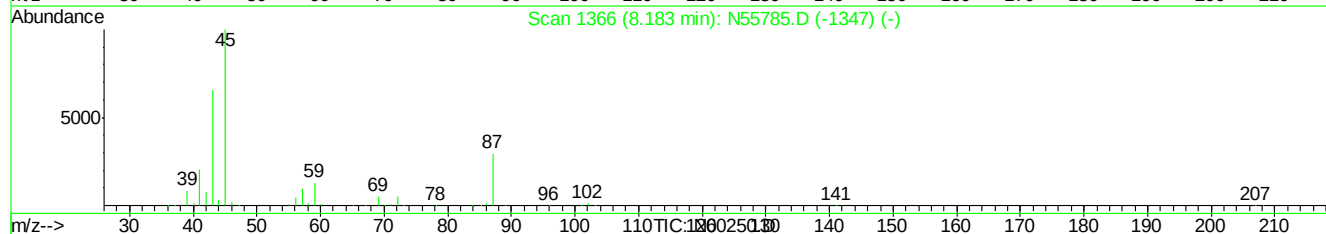
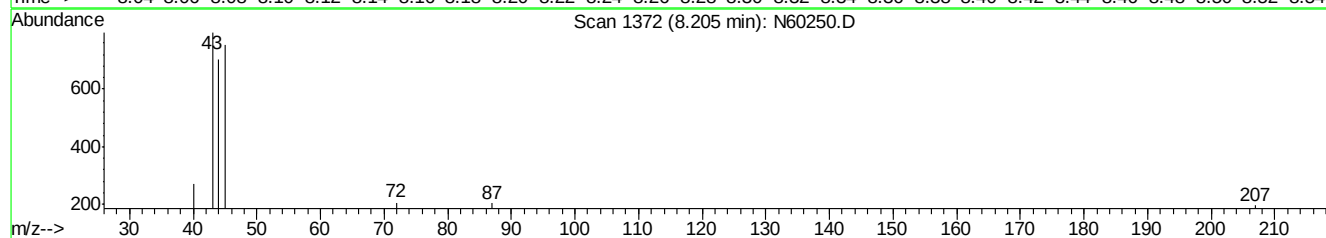
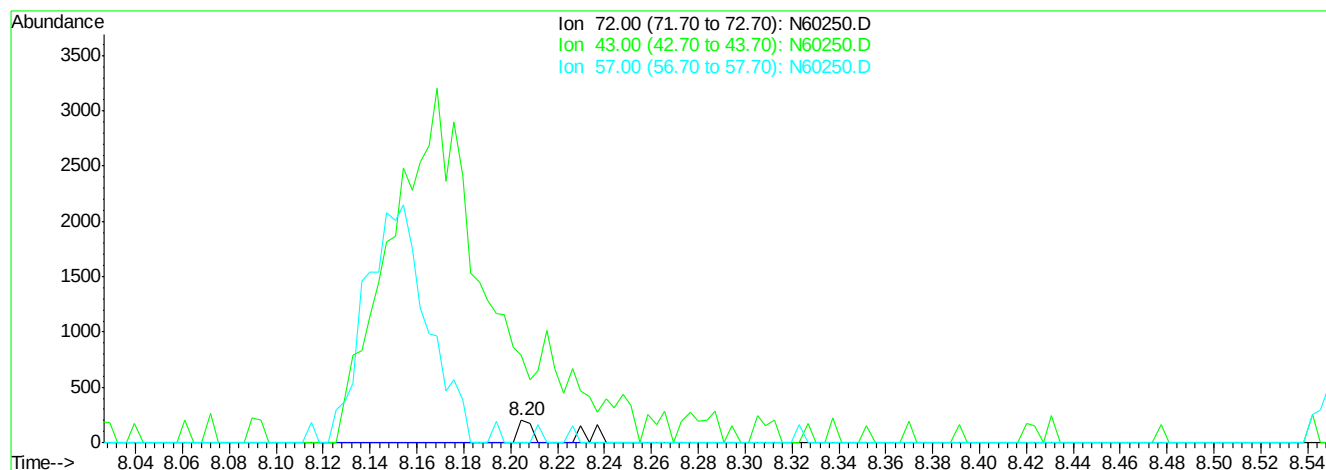
Ion	Exp%	Act%
72.00	100	0.00
43.00	1298.10	0.00#
57.00	192.80	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60250.D
 Acq On : 13 Feb 2012 2:27 pm
 Sample : ic2251-1
 Misc : MS25046,MSN2251,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 14 10:28 2012

Vial: 24
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00
 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Tue Feb 14 10:25:37 2012
 Response via : Multiple Level Calibration



(30) 2-butanone (M)

8.20min 0.40ug/L m

response 151

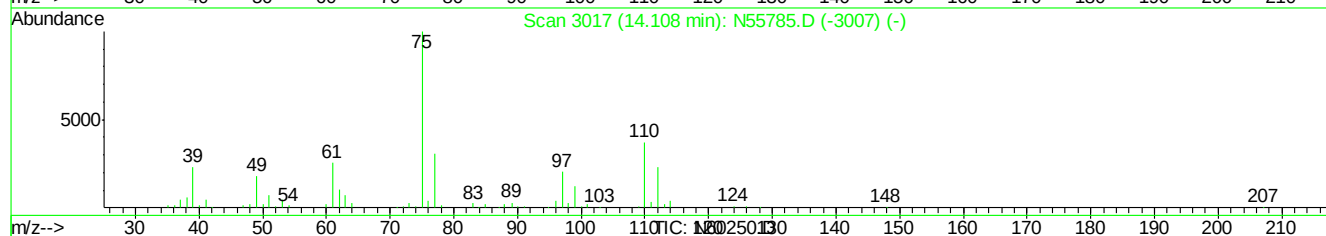
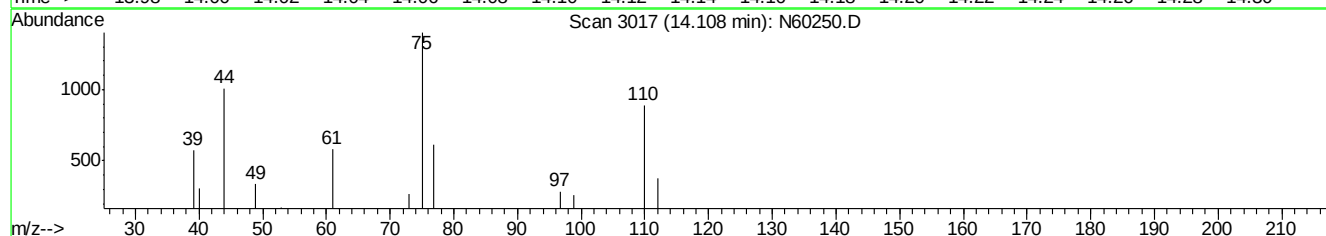
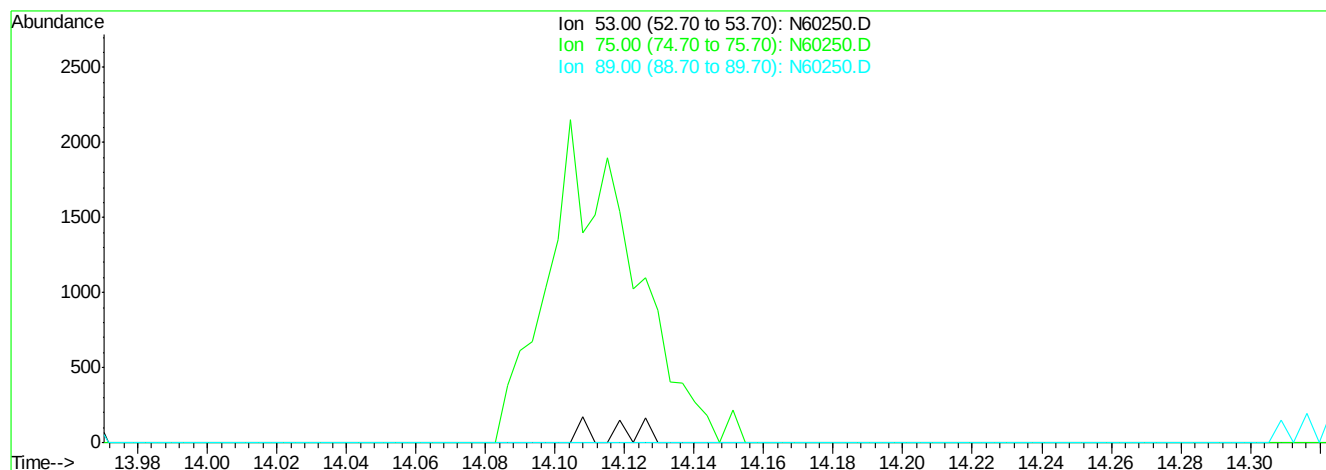
Ion	Exp%	Act%
72.00	100	100
43.00	1298.10	388.29#
57.00	192.80	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60250.D
Acq On : 13 Feb 2012 2:27 pm
Sample : ic2251-1
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 10:28 2012

Vial: 24
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 10:25:37 2012
Response via : Multiple Level Calibration



(79) trans-1,4-dichloro-2-butene (M)

14.11min 0.00ug/L

response 0

Ion	Exp%	Act%
53.00	100	0.00
75.00	2281.30	0.00#
89.00	63.20	0.00#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60251.D
 Acq On : 13 Feb 2012 2:55 pm
 Sample : ic2251-0.5
 Misc : MS25046,MSN2251,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 14 09:53:35 2012

Vial: 25
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
 Title : SW-846 Method 8260
 Last Update : Tue Feb 14 09:53:17 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.58	65	142414	500.00	ug/L	0.00
4) pentafluorobenzene	9.03	168	250104	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	456041	50.00	ug/L	-0.01
66) chlorobenzene-d5	13.15	82	246319	50.00	ug/L	-0.01
80) 1,4-dichlorobenzene-d4	15.72	152	153322	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	8.67	113	1898	0.62	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	1.24%#
60) toluene-d8 (s)	11.70	98	7873	0.63	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	1.26%#
82) bromofluorobenzene (s)	14.39	95	3315	0.83	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	1.66%#

Target Compounds

						Qvalue
47) benzene	9.70	78	7544	0.57	ug/L	90
59) cis-1,3-dichloropropene	10.99	75	1674	0.32	ug/L	51
63) trans-1,3-dichloropropene	11.40	75	939	0.21	ug/L	49
74) ethylbenzene	13.37	91	7745	0.53	ug/L	87
75) m,p-xylene	13.55	106	5877	1.10	ug/L	81
76) o-xylene	13.97	106	2285	0.44	ug/L	97
77) styrene	13.90	104	2953	0.34	ug/L	84

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 N60251.D N021312W.M Tue Feb 14 09:55:58 2012 RP1

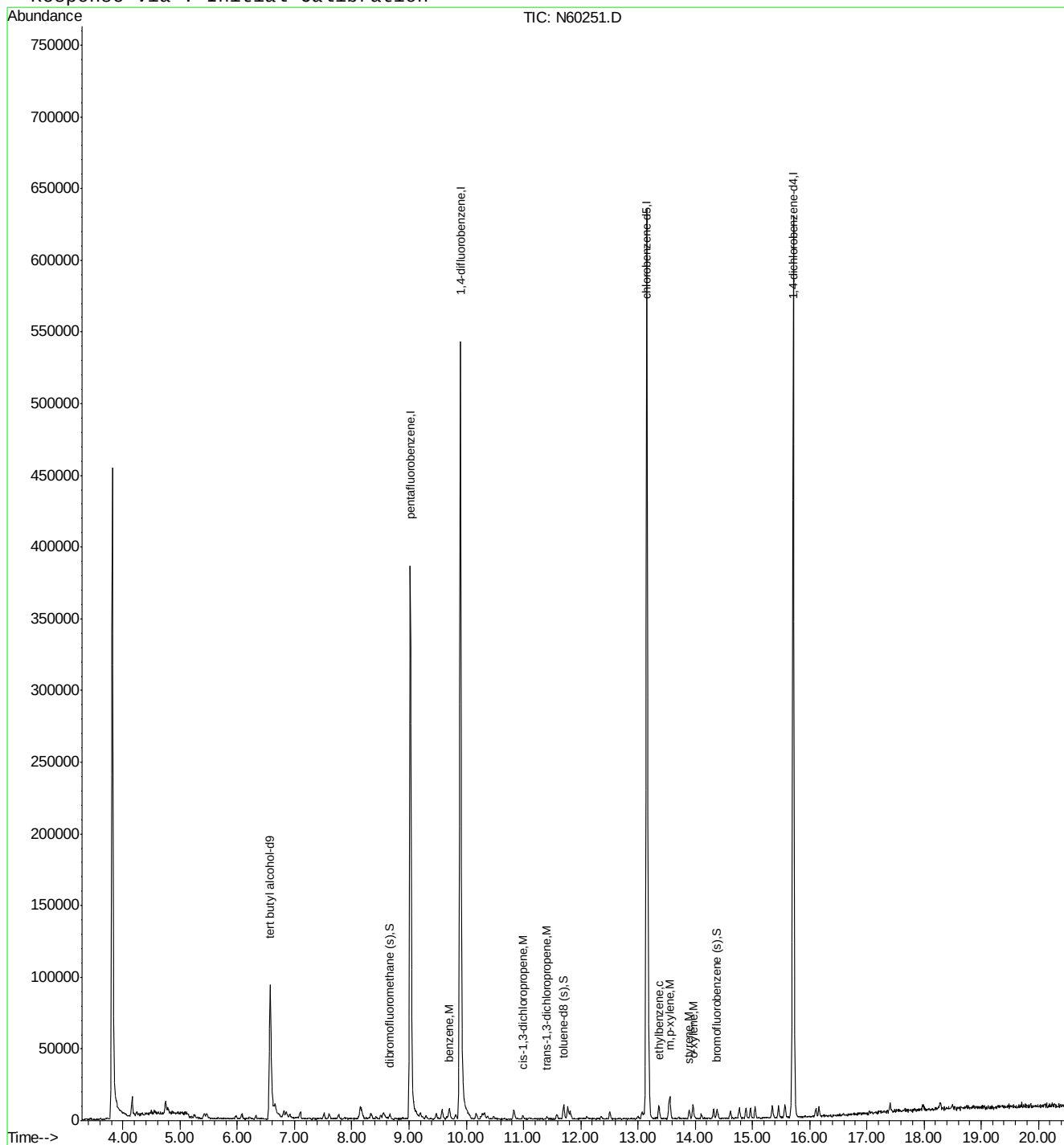
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60251.D
Acq On : 13 Feb 2012 2:55 pm
Sample : ic2251-0.5
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:54 2012

Vial: 25
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:53:17 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60252.D

Acq On : 13 Feb 2012 3:24 pm

Sample : icc2251-50

Misc : MS25046,MSN2251,,,,5,1

MS Integration Params: RTEINT.P

Quant Time: Feb 14 09:42:26 2012

Vial: 26

Operator: JUGALP

Inst : MAMSN

Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 09:38:58 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.56	65	150308	500.00	ug/L	-0.01
4) pentafluorobenzene	9.02	168	258573	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	466471	50.00	ug/L	-0.01
66) chlorobenzene-d5	13.15	82	273973	50.00	ug/L	-0.01
80) 1,4-dichlorobenzene-d4	15.71	152	194295	50.00	ug/L	-0.01

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	146896	46.78	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	93.56%
60) toluene-d8 (s)	11.70	98	578921	45.16	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	90.32%
82) bromofluorobenzene (s)	14.38	95	238009	47.40	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	94.80%

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.65	59	168832	509.38	ug/L	83
3) Ethanol	5.42	45	286408	5258.49	ug/L	97
5) dichlorodifluoromethane	4.24	85	96065	54.27	ug/L	97
6) chloromethane	4.49	50	119475	47.82	ug/L	97
7) vinyl chloride	4.74	62	150239	62.48	ug/L	91
8) bromomethane	5.25	96	96826	47.63	ug/L	100
9) chloroethane	5.42	64	110441	53.94	ug/L	96
10) ethyl ether	6.31	59	139965	50.34	ug/L	98
11) acetonitrile	5.97	41	34351	49.71	ug/L	97
12) trichlorofluoromethane	6.08	101	221783	51.10	ug/L	94
13) freon-113	6.86	101	131898	51.15	ug/L	86
14) acrolein	6.06	56	85298	236.85	ug/L	98
15) 1,1-dichloroethene	6.66	96	127135	48.40	ug/L #	67
16) acetone	6.20	43	53519	45.97	ug/L	96
17) Methyl Acetate	6.84	43	276832	56.61	ug/L	92
18) methylene chloride	6.81	84	172181	49.85	ug/L	84
19) methyl tert butyl ether	7.60	73	398412	45.66	ug/L	96
20) acrylonitrile	6.72	53	67620	256.57	ug/L	98
21) allyl chloride	6.91	41	212203	53.50	ug/L	90
22) trans-1,2-dichloroethene	7.51	96	154251	49.68	ug/L	84
23) iodomethane	6.72	142	60052	41.15	ug/L	83
24) carbon disulfide	7.09	76	512210	51.65	ug/L	99
25) propionitrile	6.64	54	2334	72.09	ug/L	100
26) vinyl acetate	6.84	43	276832	56.16	ug/L	91
27) chloroprene	8.13	53	252609	51.61	ug/L	86
28) di-isopropyl ether	8.17	45	595165	54.46	ug/L	93
29) methacrylonitrile	8.28	41	118439	50.77	ug/L	89
30) 2-butanone	8.17	72	22041	50.45	ug/L #	53
31) Hexane	8.15	41	238030	55.97	ug/L	98
32) 1,1-dichloroethane	7.76	63	307286	52.06	ug/L	97
33) tert-butyl ethyl ether	8.56	59	391629	44.01	ug/L	89
34) isobutyl alcohol	8.17	43	478616	277.97	ug/L	96
35) 2,2-dichloropropane	8.62	77	176345	52.37	ug/L	90
36) cis-1,2-dichloroethene	8.33	96	170724	49.81	ug/L #	81
37) ethyl acetate	8.17	43	474661	55.10	ug/L	92

(#) = qualifier out of range (m) = manual integration

N60252.D N021312W.M

Tue Feb 14 09:52:59 2012

RP1

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60252.D

Acq On : 13 Feb 2012 3:24 pm

Sample : icc2251-50

Misc : MS25046,MSN2251,,,,,5,1

MS Integration Params: RTEINT.P

Quant Time: Feb 14 09:42:26 2012

Vial: 26

Operator: JUGALP

Inst : MAMSN

Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 09:38:58 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	8.50	128	68583	49.85	ug/L #	66
39) chloroform	8.54	83	300007	51.33	ug/L	97
41) Tetrahydrofuran	8.87	42	55205	50.43	ug/L	90
42) 1,1,1-trichloroethane	9.30	97	234594	50.73	ug/L	91
44) Cyclohexane	9.58	56	297634	51.56	ug/L	92
45) carbon tetrachloride	9.66	117	158568	47.72	ug/L	97
46) 1,1-dichloropropene	9.47	75	237143	50.42	ug/L	90
47) benzene	9.70	78	683361	50.12	ug/L	97
48) 1,2-dichloroethane	9.20	62	239697	51.64	ug/L	91
49) tert-amyl methyl ether	9.81	73	338165	43.00	ug/L	93
50) heptane	10.17	43	173305	51.19	ug/L	96
51) trichloroethene	10.32	95	171463	50.76	ug/L	84
52) 1,2-dichloropropane	10.28	63	182950	50.63	ug/L	98
53) dibromomethane	10.25	93	103290	53.23	ug/L	85
54) bromodichloromethane	10.37	83	219921	48.40	ug/L	97
55) Methylcyclohexane	10.83	83	300381	50.40	ug/L	92
56) 2-chloroethyl vinyl ether	10.28	63	182950	50.63	ug/L #	100
57) methyl methacrylate	10.46	69	116539	46.78	ug/L	83
58) 1,4-dioxane	10.46	88	11528	259.42	ug/L	97
59) cis-1,3-dichloropropene	10.99	75	244308	44.86	ug/L	89
61) 4-methyl-2-pentanone	11.08	43	173222	48.90	ug/L	92
62) toluene	11.77	92	412279	49.45	ug/L	99
63) trans-1,3-dichloropropene	11.40	75	200881	43.17	ug/L	89
64) 1,1,2-trichloroethane	11.58	83	136031	49.14	ug/L	90
65) ethyl methacrylate	11.78	69	215042	46.38	ug/L	86
67) tetrachloroethene	12.51	166	137539	47.47	ug/L	93
68) 1,3-dichloropropane	11.81	76	281386	48.88	ug/L	96
69) dibromochloromethane	12.10	129	135616	43.41	ug/L	98
70) 1,2-dibromoethane	12.36	107	148283	46.70	ug/L	96
71) 2-hexanone	11.93	43	118082	46.60	ug/L	92
72) chlorobenzene	13.19	112	417356	47.60	ug/L	90
73) 1,1,1,2-tetrachloroethane	13.10	131	126370	44.67	ug/L	98
74) ethylbenzene	13.36	91	774170	47.01	ug/L	95
75) m,p-xylene	13.55	106	573334	95.01	ug/L	85
76) o-xylene	13.96	106	278647	47.49	ug/L	85
77) styrene	13.89	104	438827	44.42	ug/L	87
78) bromoform	13.71	173	77385	38.58	ug/L	99
79) trans-1,4-dichloro-2-buten	14.10	53	30529	33.24	ug/L #	1
81) isopropylbenzene	14.32	105	612673	50.62	ug/L	98
83) bromobenzene	14.61	156	155703	49.45	ug/L #	76
84) 1,1,2,2-tetrachloroethane	13.96	83	217901	52.47	ug/L	94
85) 1,2,3-trichloropropane	14.10	75	204424	46.66	ug/L	97
86) n-propylbenzene	14.76	91	912770	51.86	ug/L	92
87) 2-chlorotoluene	14.89	91	543893	51.41	ug/L	91
88) 4-chlorotoluene	14.96	91	550076	51.37	ug/L	92
89) 1,3,5-trimethylbenzene	15.04	105	622057	51.11	ug/L	94
90) tert-butylbenzene	15.35	91	376090	52.29	ug/L	80
91) 1,2,4-trimethylbenzene	15.45	105	618205	50.41	ug/L	91
92) sec-butylbenzene	15.57	105	807763	51.49	ug/L	95

(#) = qualifier out of range (m) = manual integration

N60252.D N021312W.M

Tue Feb 14 09:52:59 2012

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60252.D

Vial: 26

Acq On : 13 Feb 2012 3:24 pm

Operator: JUGALP

Sample : icc2251-50

Inst : MAMSN

Misc : MS25046,MSN2251,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Feb 14 09:42:26 2012

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 09:38:58 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
93) 1,3-dichlorobenzene	15.67	146	298012	49.90	ug/L	94
94) p-isopropyltoluene	15.74	119	590278	52.17	ug/L	93
95) 1,4-dichlorobenzene	15.74	146	307430	50.80	ug/L	92
96) 1,2-dichlorobenzene	16.11	146	283720	49.11	ug/L	93
97) n-butylbenzene	16.16	91	659543	50.41	ug/L	89
98) 1,2-dibromo-3-chloropropan	16.58	75	36174	45.25	ug/L #	69
99) 1,2,4-trichlorobenzene	17.98	180	164986	42.08	ug/L	96
100) 1,3,5-trichlorobenzene	17.41	180	202817	45.96	ug/L	99
101) hexachlorobutadiene	18.29	225	90777	46.37	ug/L	98
102) naphthalene	18.27	128	385433	38.56	ug/L	100
103) 1,2,3-trichlorobenzene	18.49	180	151536	41.16	ug/L	99
104) 2-methylnaphthalene	19.79	142	35195	11.20	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
N60252.D N021312W.M Tue Feb 14 09:53:00 2012 RP1

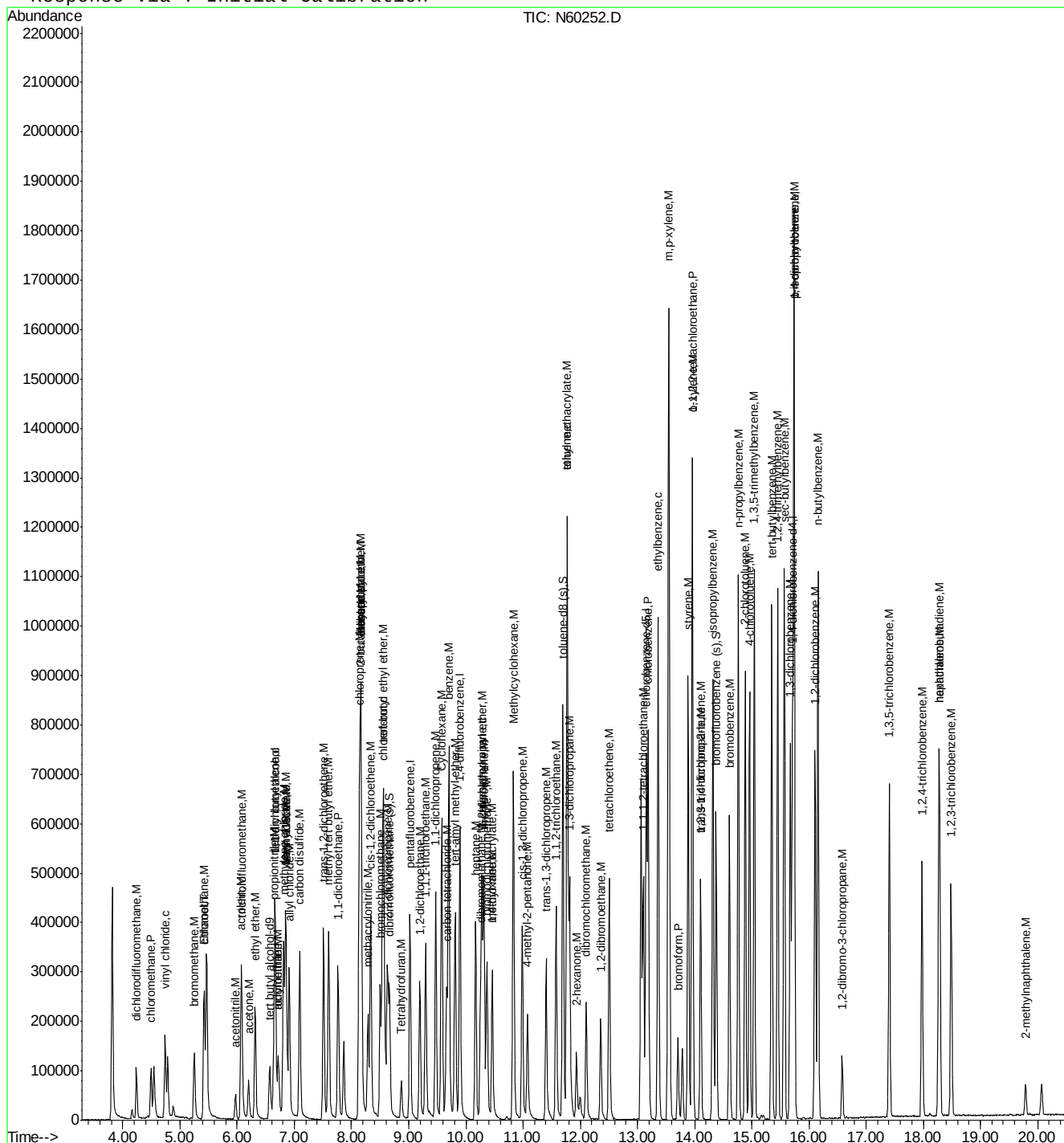
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60252.D
Acq On : 13 Feb 2012 3:24 pm
Sample : icc2251-50
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:42 2012

Vial: 26
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:38:58 2012
Response via : Initial Calibration



N60252.D N021312W.M

Tue Feb 14 09:53:00 2012

RP1

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60253.D
 Acq On : 13 Feb 2012 3:52 pm
 Sample : ic2251-100
 Misc : MS25046,MSN2251,,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 14 09:30:11 2012

Vial: 27
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260
 Last Update : Tue Feb 14 09:29:45 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.56	65	157387	500.00	ug/L	-0.01
4) pentafluorobenzene	9.02	168	272192	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	489619	50.00	ug/L	-0.01
66) chlorobenzene-d5	13.15	82	279841	50.00	ug/L	-0.01
80) 1,4-dichlorobenzene-d4	15.71	152	211664	50.00	ug/L	-0.01

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	299212	90.77	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	181.54%#
60) toluene-d8 (s)	11.70	98	1196325	88.36	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	176.72%#
82) bromofluorobenzene (s)	14.38	95	499084	91.88	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	183.76%#

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.65	59	345931	995.14	ug/L	# 78
3) Ethanol	5.42	45	553498	9564.25	ug/L	100
5) dichlorodifluoromethane	4.24	85	194224	106.49	ug/L	98
6) chloromethane	4.49	50	253090	94.45	ug/L	96
7) vinyl chloride	4.74	62	285035	120.19	ug/L	94
8) bromomethane	5.25	96	213325	99.54	ug/L	97
9) chloroethane	5.42	64	229408	109.99	ug/L	93
10) ethyl ether	6.31	59	301067	104.36	ug/L	100
11) acetonitrile	5.97	41	37604	41.64	ug/L	93
12) trichlorofluoromethane	6.08	101	466071	103.06	ug/L	97
13) freon-113	6.85	101	275322	102.15	ug/L	85
14) acrolein	6.06	56	190429	503.46	ug/L	99
15) 1,1-dichloroethene	6.66	96	276709	100.09	ug/L	# 69
16) acetone	6.20	43	108974	84.24	ug/L	96
17) Methyl Acetate	6.84	43	539733m	107.45	ug/L	
18) methylene chloride	6.81	84	366596	101.24	ug/L	86
19) methyl tert butyl ether	7.60	73	929501	101.80	ug/L	96
20) acrylonitrile	6.71	53	139130	502.22	ug/L	90
21) allyl chloride	6.91	41	447001	110.98	ug/L	87
22) trans-1,2-dichloroethene	7.51	96	329286	101.11	ug/L	84
23) iodomethane	6.72	142	170049	116.96	ug/L	88
24) carbon disulfide	7.10	76	1052097m	101.17	ug/L	
25) propionitrile	6.64	54	4145	136.37	ug/L	100
26) vinyl acetate	6.84	43	538920m	105.91	ug/L	
27) chloroprene	8.13	53	544402	108.73	ug/L	88
28) di-isopropyl ether	8.17	45	1248964	113.43	ug/L	91
29) methacrylonitrile	8.28	41	252699	104.41	ug/L	91
30) 2-butanone	8.17	72	46668	102.22	ug/L	# 52
31) Hexane	8.15	41	494118	116.41	ug/L	97
32) 1,1-dichloroethane	7.77	63	641502	104.93	ug/L	97
33) tert-butyl ethyl ether	8.56	59	927324	98.51	ug/L	91
34) isobutyl alcohol	8.16	43	980908	564.42	ug/L	89
35) 2,2-dichloropropane	8.63	77	432666	137.18	ug/L	93
36) cis-1,2-dichloroethene	8.33	96	362117	100.54	ug/L	# 81
37) ethyl acetate	8.16	43	981657	112.92	ug/L	96

(#)=qualifier out of range (m)=manual integration

N60253.D N021312W.M

Tue Feb 14 09:38:45 2012

RP1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60253.D

Acq On : 13 Feb 2012 3:52 pm

Sample : ic2251-100

Misc : MS25046,MSN2251,,,,,5,1

MS Integration Params: RTEINT.P

Quant Time: Feb 14 09:30:11 2012

Vial: 27

Operator: JUGALP

Inst : MAMSN

Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 09:29:45 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	8.50	128	143930	99.08	ug/L #	72
39) chloroform	8.54	83	630522	103.78	ug/L	98
41) Tetrahydrofuran	8.87	42	113193	97.36	ug/L	87
42) 1,1,1-trichloroethane	9.30	97	504934	105.69	ug/L	92
44) Cyclohexane	9.58	56	625578	104.96	ug/L	92
45) carbon tetrachloride	9.66	117	361404	105.55	ug/L	94
46) 1,1-dichloropropene	9.47	75	503204	102.91	ug/L	91
47) benzene	9.70	78	1444316	101.39	ug/L	98
48) 1,2-dichloroethane	9.20	62	504404	105.38	ug/L	92
49) tert-amyl methyl ether	9.81	73	771250	90.47	ug/L	91
50) heptane	10.17	43	368362	105.58	ug/L	93
51) trichloroethene	10.31	95	356544	100.86	ug/L	83
52) 1,2-dichloropropane	10.28	63	388762	103.81	ug/L	98
53) dibromomethane	10.25	93	213804	107.64	ug/L	84
54) bromodichloromethane	10.37	83	477595	100.19	ug/L	98
55) Methylcyclohexane	10.83	83	626718	100.27	ug/L	93
56) 2-chloroethyl vinyl ether	10.28	63	388762	103.81	ug/L #	100
57) methyl methacrylate	10.46	69	250510	93.82	ug/L	81
58) 1,4-dioxane	10.47	88	22174	463.98	ug/L	92
59) cis-1,3-dichloropropene	10.98	75	552259	95.02	ug/L	91
61) 4-methyl-2-pentanone	11.08	43	360686	95.58	ug/L	93
62) toluene	11.77	92	884824	101.67	ug/L	99
63) trans-1,3-dichloropropene	11.40	75	459126	91.28	ug/L	91
64) 1,1,2-trichloroethane	11.58	83	285247	97.28	ug/L	94
65) ethyl methacrylate	11.78	69	476955	97.05	ug/L	89
67) tetrachloroethene	12.51	166	290494	97.25	ug/L	93
68) 1,3-dichloropropane	11.81	76	599874	103.08	ug/L	97
69) dibromochloromethane	12.11	129	306132	94.02	ug/L	99
70) 1,2-dibromoethane	12.36	107	316610	96.47	ug/L	98
71) 2-hexanone	11.93	43	249502	94.70	ug/L	92
72) chlorobenzene	13.19	112	882354	97.79	ug/L	91
73) 1,1,1,2-tetrachloroethane	13.10	131	278920	94.89	ug/L	98
74) ethylbenzene	13.36	91	1664913	98.47	ug/L	95
75) m,p-xylene	13.55	106	1242423	202.35	ug/L	88
76) o-xylene	13.96	106	602004	100.67	ug/L	87
77) styrene	13.89	104	974506	94.96	ug/L	84
78) bromoform	13.71	173	184284	85.63	ug/L	99
79) trans-1,4-dichloro-2-buten	14.10	53	78036	76.75	ug/L #	1
81) isopropylbenzene	14.32	105	1328605	101.14	ug/L	98
83) bromobenzene	14.61	156	341715	99.45	ug/L #	72
84) 1,1,2,2-tetrachloroethane	13.96	83	463030	103.55	ug/L	96
85) 1,2,3-trichloropropane	14.10	75	459243	94.44	ug/L	97
86) n-propylbenzene	14.76	91	1963165	103.63	ug/L	92
87) 2-chlorotoluene	14.89	91	1170264	102.32	ug/L	89
88) 4-chlorotoluene	14.96	91	1184313	102.29	ug/L	90
89) 1,3,5-trimethylbenzene	15.04	105	1339769	101.57	ug/L	95
90) tert-butylbenzene	15.35	91	804077	103.99	ug/L	81
91) 1,2,4-trimethylbenzene	15.45	105	1349093	101.47	ug/L	94
92) sec-butylbenzene	15.57	105	1735066	102.30	ug/L	95

(#)=qualifier out of range (m)=manual integration

N60253.D N021312W.M

Tue Feb 14 09:38:45 2012

RP1

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60253.D

Vial: 27

Acq On : 13 Feb 2012 3:52 pm

Operator: JUGALP

Sample : ic2251-100

Inst : MAMSN

Misc : MS25046,MSN2251,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Feb 14 09:30:11 2012

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 09:29:45 2012

Response via : Initial Calibration

DataAcq Meth : N8260

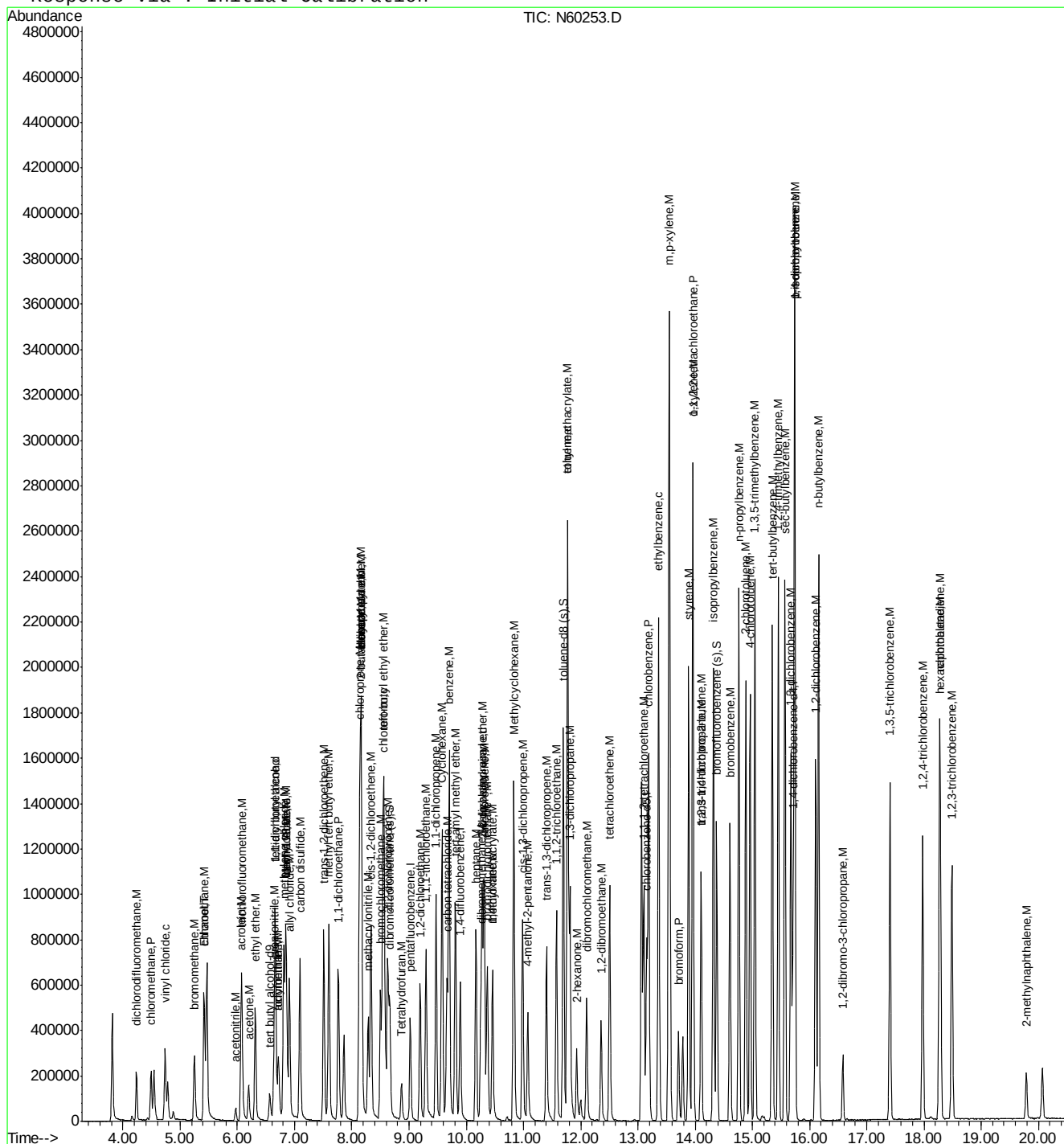
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
93) 1,3-dichlorobenzene	15.67	146	638840	97.32	ug/L	94
94) p-isopropyltoluene	15.74	119	1276538	105.45	ug/L	96
95) 1,4-dichlorobenzene	15.74	146	670843	102.65	ug/L	95
96) 1,2-dichlorobenzene	16.11	146	622844	98.46	ug/L	95
97) n-butylbenzene	16.16	91	1448863	102.49	ug/L	88
98) 1,2-dibromo-3-chloropropan	16.58	75	83185	93.41	ug/L #	65
99) 1,2,4-trichlorobenzene	17.98	180	401666	91.33	ug/L	100
100) 1,3,5-trichlorobenzene	17.41	180	464927	95.15	ug/L	100
101) hexachlorobutadiene	18.29	225	207998	96.35	ug/L	97
102) naphthalene	18.27	128	1002691	88.58	ug/L	100
103) 1,2,3-trichlorobenzene	18.49	180	374450	90.36	ug/L	100
104) 2-methylnaphthalene	19.79	142	115826	29.12	ug/L #	100

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 N60253.D N021312W.M Tue Feb 14 09:38:45 2012 RP1

(QT Reviewed)

Vial: 27
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:29:45 2012
Response via : Initial Calibration



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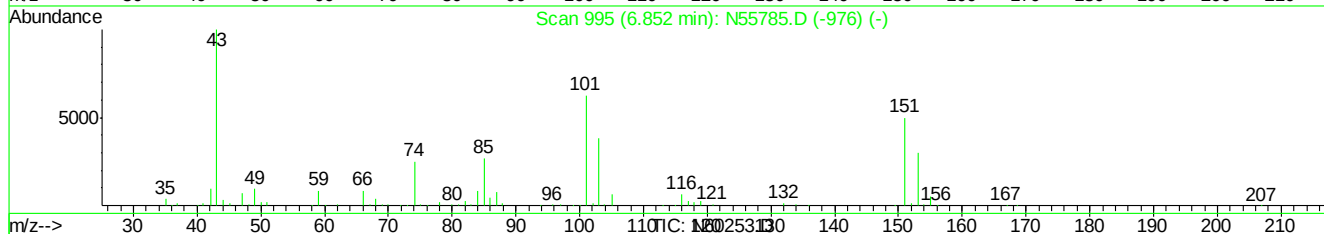
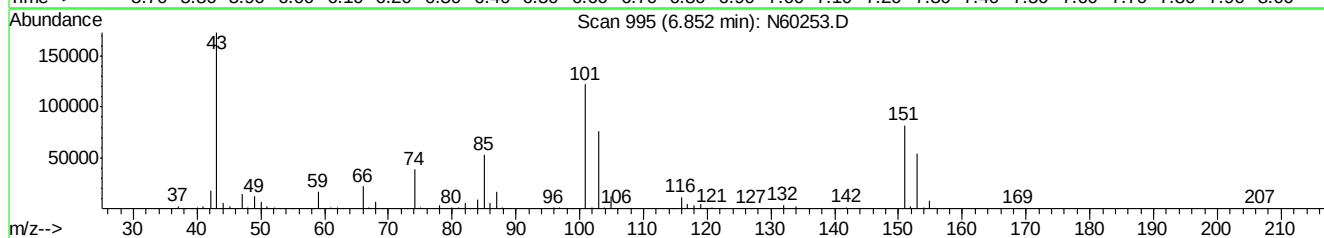
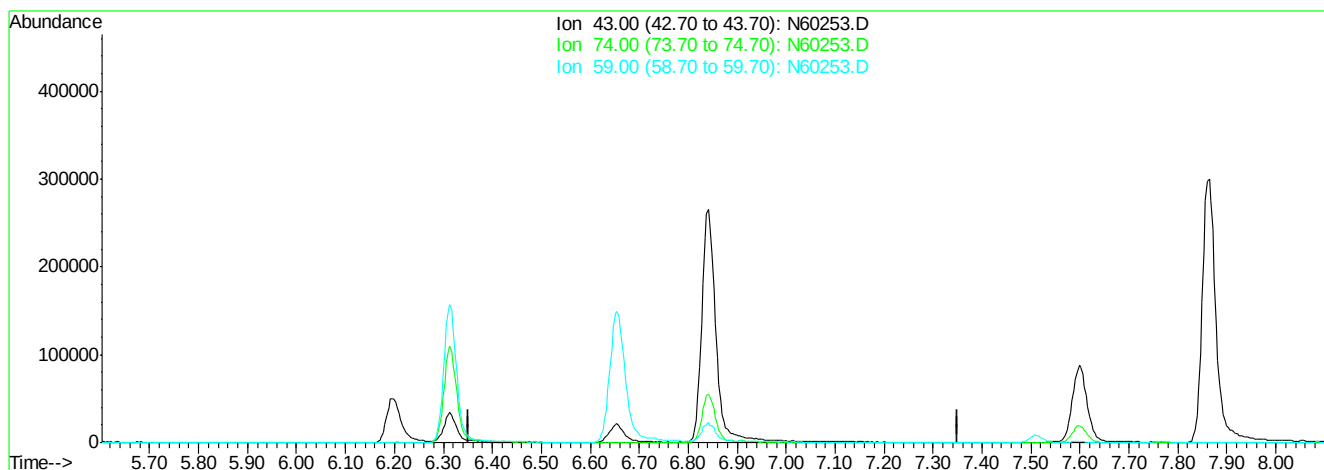
6.6.7

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60253.D
Acq On : 13 Feb 2012 3:52 pm
Sample : ic2251-100
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:30 2012

Vial: 27
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:29:45 2012
Response via : Multiple Level Calibration



(17) Methyl Acetate (M)

6.85min 0.00ug/L

response 0

Ion	Exp%	Act%
43.00	100	0.00
74.00	25.00	0.00#
59.00	9.10	0.00#
0.00	0.00	0.00

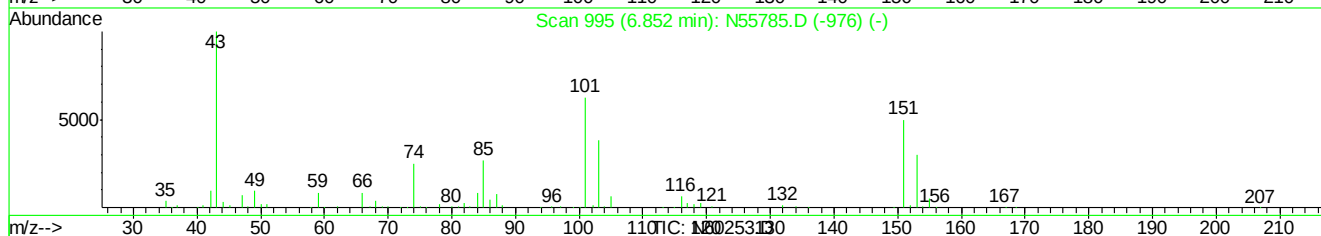
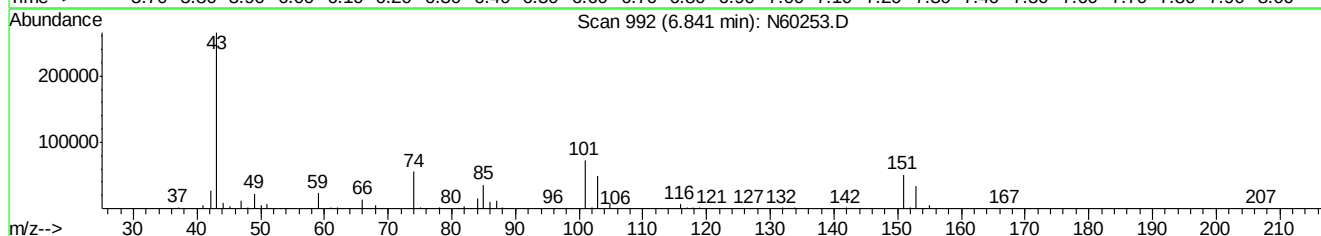
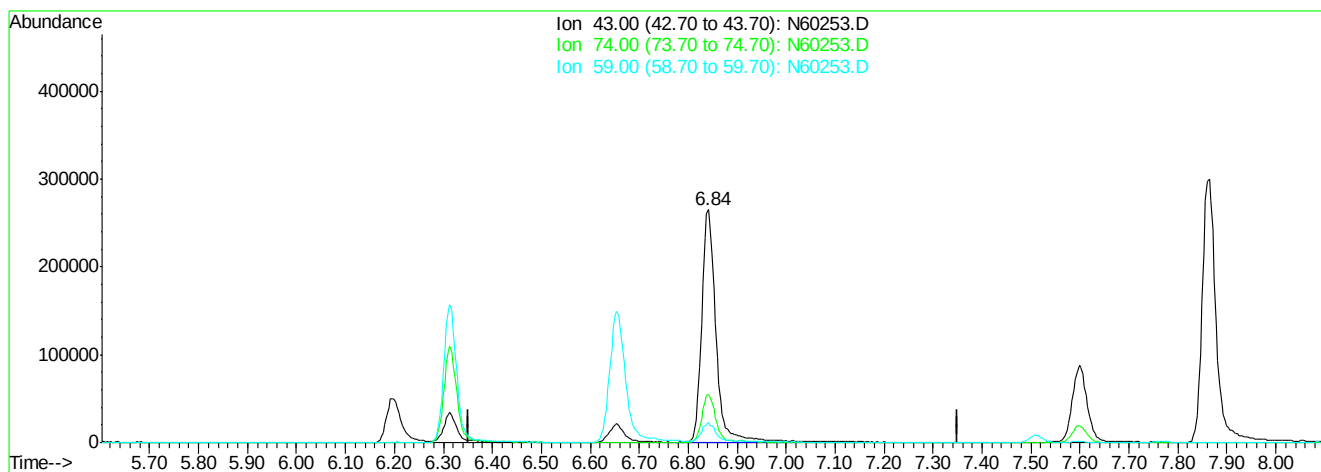
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60253.D
Acq On : 13 Feb 2012 3:52 pm
Sample : ic2251-100
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:31 2012

Vial: 27
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:29:45 2012
Response via : Multiple Level Calibration



(17) Methyl Acetate (M)

6.84min 107.45ug/L m

response 539733

Ion	Exp%	Act%
43.00	100	100
74.00	25.00	20.81
59.00	9.10	8.68
0.00	0.00	0.00

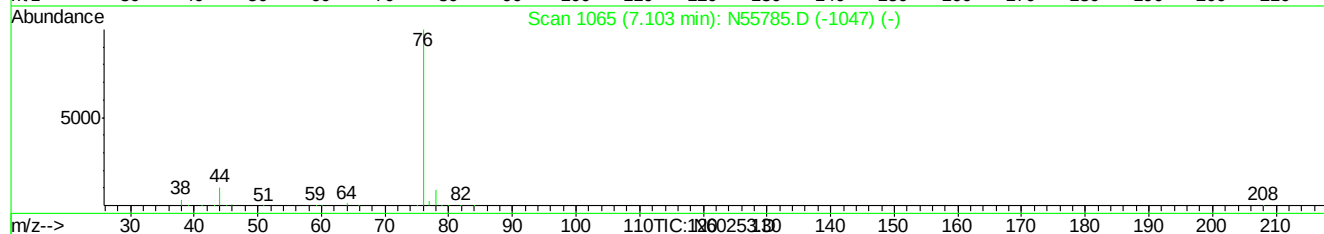
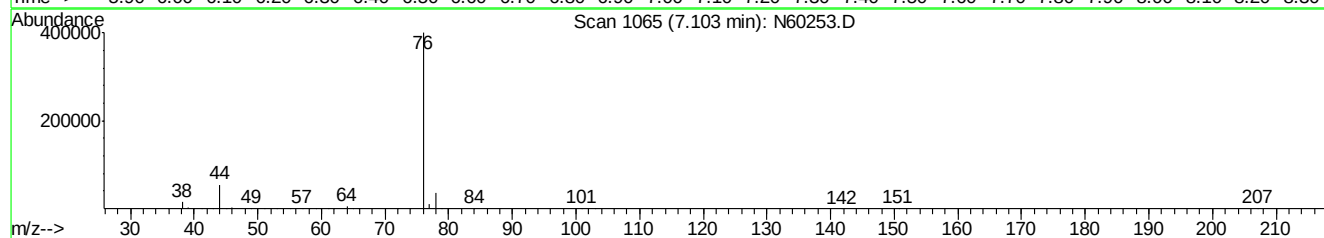
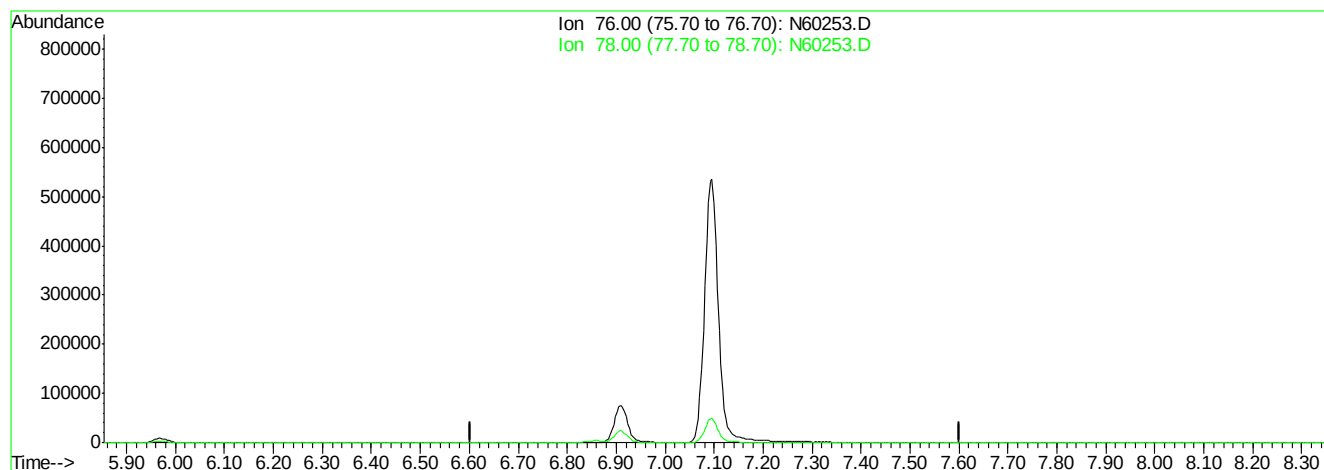
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60253.D
Acq On : 13 Feb 2012 3:52 pm
Sample : ic2251-100
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:31 2012

Vial: 27
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:29:45 2012
Response via : Multiple Level Calibration



(24) carbon disulfide (M)

7.10min 0.00ug/L

response 0

Ion	Exp%	Act%
76.00	100	0.00
78.00	9.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

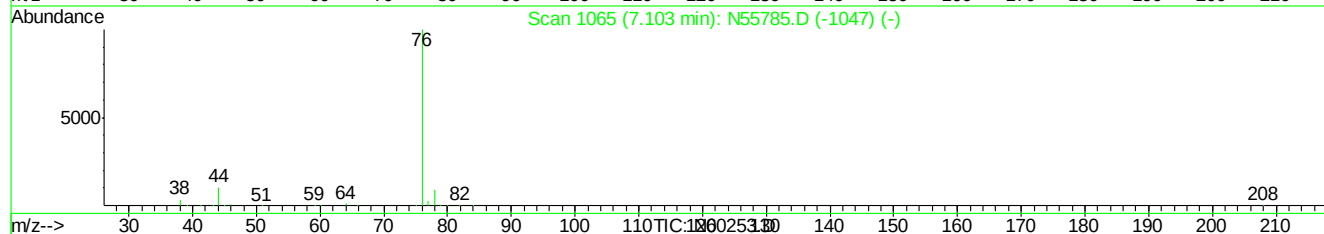
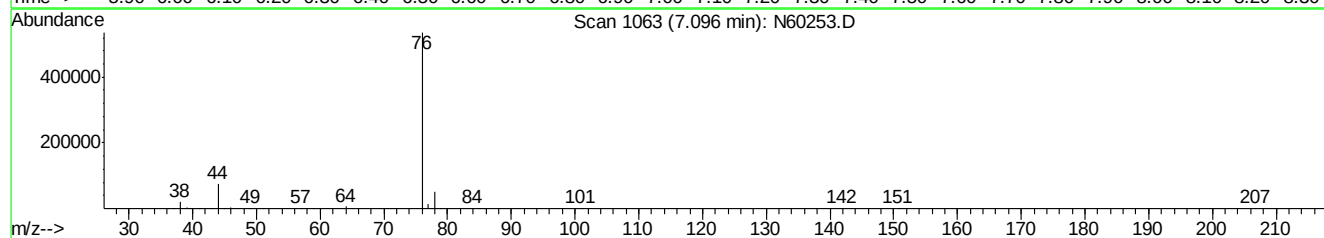
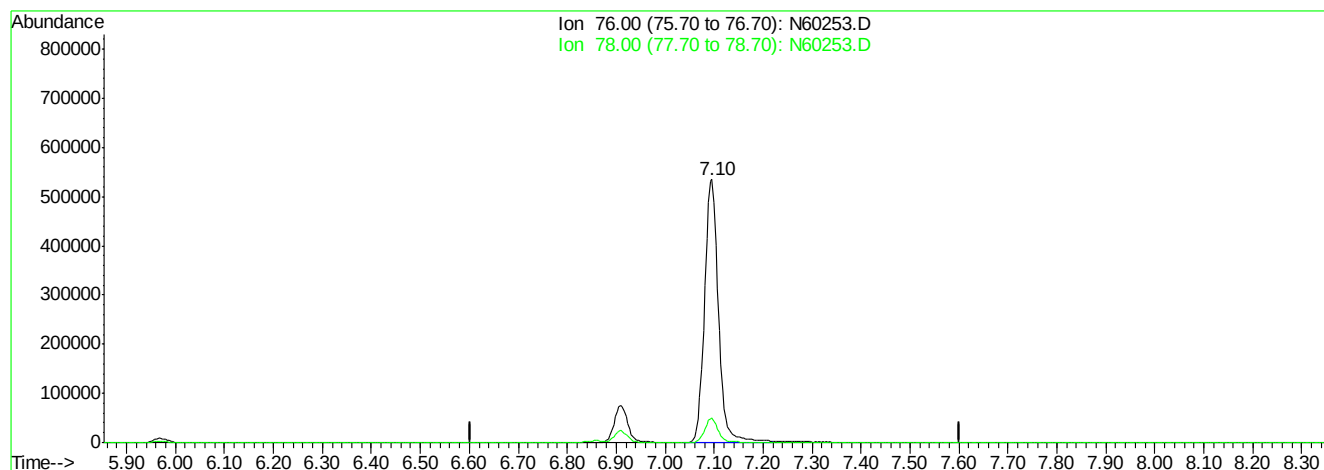
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60253.D
Acq On : 13 Feb 2012 3:52 pm
Sample : ic2251-100
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:31 2012

Vial: 27
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:29:45 2012
Response via : Multiple Level Calibration



(24) carbon disulfide (M)

7.10min 101.17ug/L m

response 1052097

Ion	Exp%	Act%
76.00	100	100
78.00	9.00	9.48
0.00	0.00	0.00
0.00	0.00	0.00

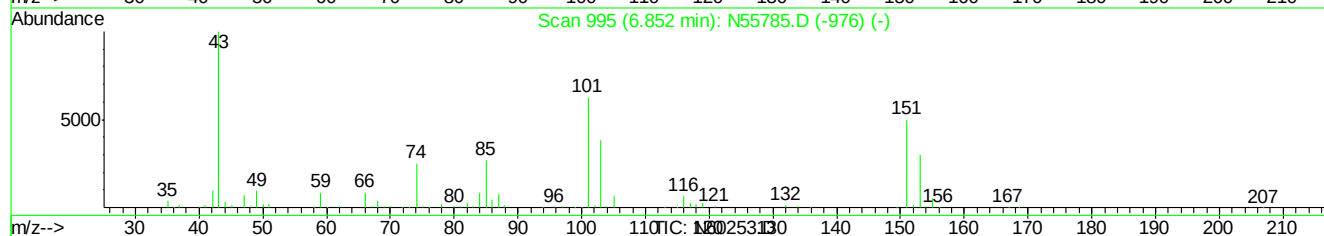
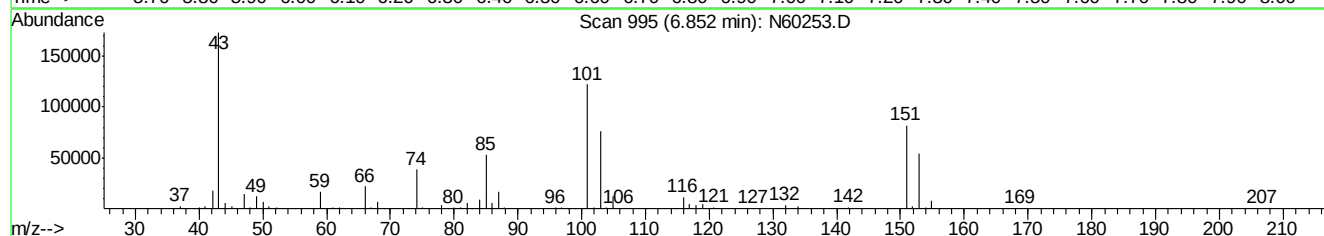
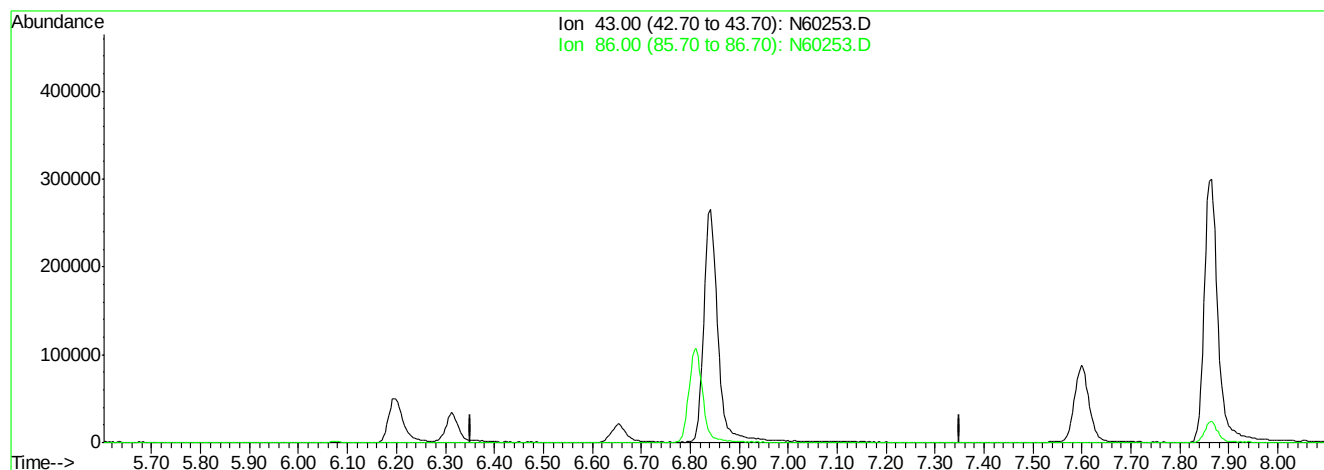
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60253.D
Acq On : 13 Feb 2012 3:52 pm
Sample : ic2251-100
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:31 2012

Vial: 27
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:29:45 2012
Response via : Multiple Level Calibration



(26) vinyl acetate (M)

6.85min 0.00ug/L

response 0

Ion	Exp%	Act%
43.00	100	0.00
86.00	5.70	0.00
0.00	0.00	0.00
0.00	0.00	0.00

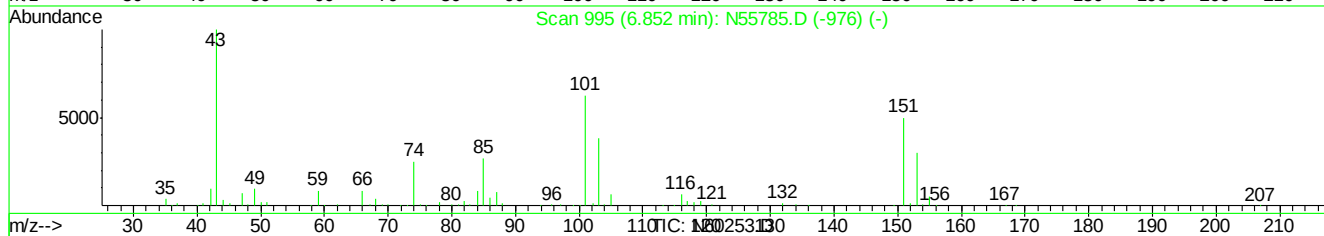
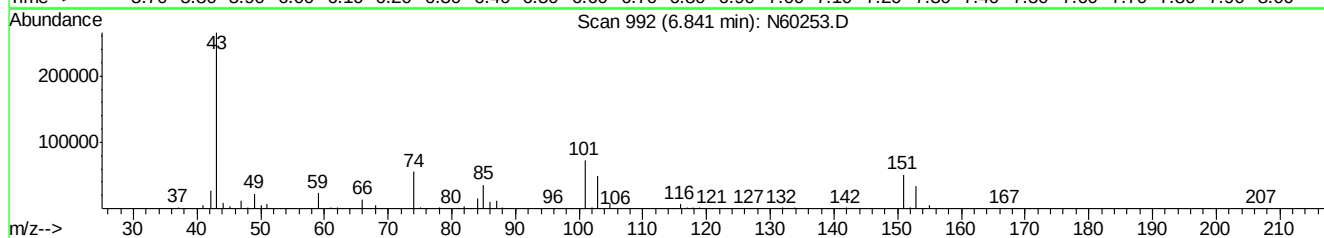
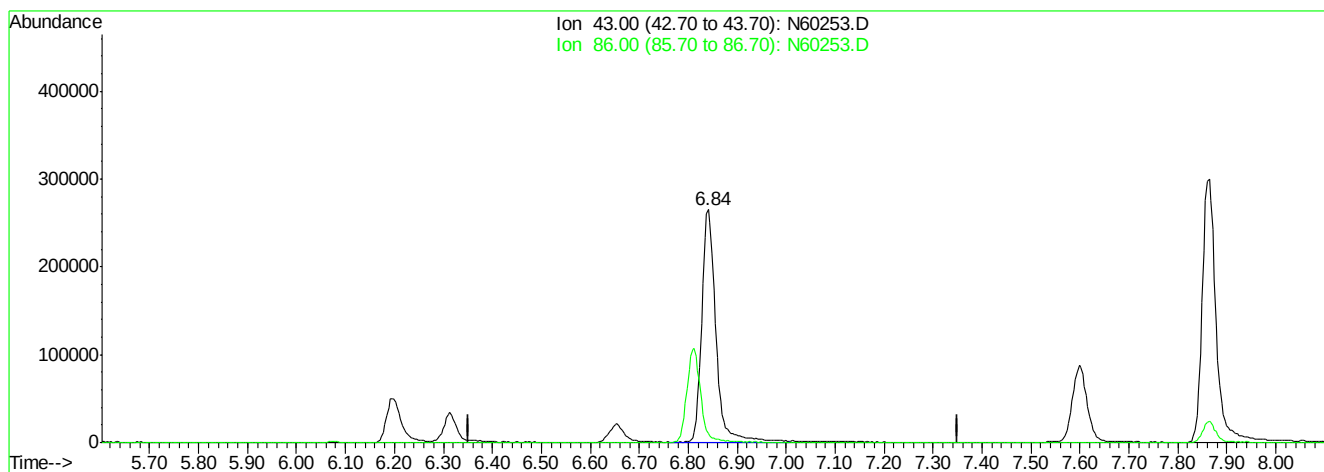
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60253.D
Acq On : 13 Feb 2012 3:52 pm
Sample : ic2251-100
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:32 2012

Vial: 27
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:29:45 2012
Response via : Multiple Level Calibration



(26) vinyl acetate (M)

6.84min 105.91ug/L m

response 538920

Ion	Exp%	Act%
43.00	100	100
86.00	5.70	3.86
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60254.D
 Acq On : 13 Feb 2012 4:20 pm
 Sample : ic2251-200
 Misc : MS25046,MSN2251,,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 14 09:20:37 2012

Vial: 28
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260
 Last Update : Tue Feb 14 09:17:46 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.56	65	151885	500.00	ug/L	-0.01
4) pentafluorobenzene	9.02	168	282413	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	501210	50.00	ug/L	-0.01
66) chlorobenzene-d5	13.15	82	294987	50.00	ug/L	-0.01
80) 1,4-dichlorobenzene-d4	15.71	152	231868	50.00	ug/L	-0.01

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	626126	186.26	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	372.52%#
60) toluene-d8 (s)	11.70	98	2525916	184.56	ug/L	-0.01
Spiked Amount	50.000	Range	70 - 130	Recovery	=	369.12%#
82) bromofluorobenzene (s)	14.38	95	1099368	189.78	ug/L	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	379.56%#

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.65	59	681600m	2064.58	ug/L	
3) Ethanol	5.42	45	1151081	21260.06	ug/L	100
5) dichlorodifluoromethane	4.24	85	395952	219.38	ug/L	99
6) chloromethane	4.49	50	561916	204.27	ug/L	99
7) vinyl chloride	4.73	62	575156	281.21	ug/L	96
8) bromomethane	5.25	96	453731	208.29	ug/L	98
9) chloroethane	5.42	64	456812	223.49	ug/L	95
10) ethyl ether	6.31	59	611853	209.01	ug/L	98
11) acetonitrile	5.97	41	79059	53.46	ug/L	98
12) trichlorofluoromethane	6.08	101	959199	209.05	ug/L	96
13) freon-113	6.86	101	565704	204.65	ug/L	84
14) acrolein	6.06	56	399315	1035.66	ug/L	99
15) 1,1-dichloroethene	6.67	96	571098	198.22	ug/L	# 76
16) acetone	6.19	43	234389	154.98	ug/L	95
17) Methyl Acetate	6.84	43	1064614m	208.75	ug/L	
18) methylene chloride	6.81	84	753196	200.95	ug/L	90
19) methyl tert butyl ether	7.60	73	1996299	222.66	ug/L	96
20) acrylonitrile	6.71	53	285765	988.48	ug/L	91
21) allyl chloride	6.91	41	870188	217.16	ug/L	90
22) trans-1,2-dichloroethene	7.51	96	681180	203.22	ug/L	88
23) iodomethane	6.72	142	341279m	260.38	ug/L	
24) carbon disulfide	7.09	76	2183072m	204.71	ug/L	
25) propionitrile	6.64	54	7391	282.99	ug/L	100
26) vinyl acetate	6.84	43	1089355m	213.08	ug/L	
27) chloroprene	8.13	53	1109660	229.21	ug/L	89
28) di-isopropyl ether	8.17	45	2459523	233.12	ug/L	95
29) methacrylonitrile	8.28	41	512814	208.62	ug/L	93
30) 2-butanone	8.17	72	96306	206.73	ug/L	# 85
31) Hexane	8.15	41	952225	235.29	ug/L	96
32) 1,1-dichloroethane	7.76	63	1310801	213.76	ug/L	97
33) tert-butyl ethyl ether	8.56	59	1986592	206.91	ug/L	91
34) isobutyl alcohol	8.17	43	1935906	1158.94	ug/L	97
35) 2,2-dichloropropane	8.62	77	880770	411.35	ug/L	93
36) cis-1,2-dichloroethene	8.33	96	756489	204.93	ug/L	86
37) ethyl acetate	8.17	43	1934116	231.10	ug/L	95

(#)=qualifier out of range (m)=manual integration

N60254.D N021312W.M

Tue Feb 14 09:29:27 2012

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60254.D

Vial: 28

Acq On : 13 Feb 2012 4:20 pm

Operator: JUGALP

Sample : ic2251-200

Inst : MAMSN

Misc : MS25046,MSN2251,,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Feb 14 09:20:37 2012

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 09:17:46 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	8.50	128	298795	196.53	ug/L	# 75
39) chloroform	8.54	83	1299757	212.76	ug/L	97
41) Tetrahydrofuran	8.87	42	241686	200.71	ug/L	92
42) 1,1,1-trichloroethane	9.30	97	1066656	232.86	ug/L	93
44) Cyclohexane	9.58	56	1254992	211.74	ug/L	97
45) carbon tetrachloride	9.66	117	787033	255.93	ug/L	97
46) 1,1-dichloropropene	9.47	75	1021036	208.15	ug/L	92
47) benzene	9.70	78	2966524	206.98	ug/L	100
48) 1,2-dichloroethane	9.19	62	1016291	215.39	ug/L	92
49) tert-amyl methyl ether	9.81	73	1688413	187.36	ug/L	92
50) heptane	10.17	43	740912	215.48	ug/L	93
51) trichloroethene	10.31	95	732822	205.06	ug/L	85
52) 1,2-dichloropropane	10.28	63	789776	212.38	ug/L	98
53) dibromomethane	10.25	93	421140	214.75	ug/L	88
54) bromodichloromethane	10.37	83	1010092	214.52	ug/L	96
55) Methylcyclohexane	10.83	83	1294532	204.69	ug/L	93
56) 2-chloroethyl vinyl ether	10.28	63	789776	212.38	ug/L	# 99
57) methyl methacrylate	10.46	69	535978	192.34	ug/L	87
58) 1,4-dioxane	10.46	88	47872	957.97	ug/L	84
59) cis-1,3-dichloropropene	10.98	75	1197355	202.49	ug/L	91
61) 4-methyl-2-pentanone	11.08	43	769586	198.43	ug/L	94
62) toluene	11.77	92	1844416	214.58	ug/L	97
63) trans-1,3-dichloropropene	11.40	75	1020581	196.44	ug/L	92
64) 1,1,2-trichloroethane	11.58	83	600206	199.92	ug/L	93
65) ethyl methacrylate	11.78	69	1044050	215.64	ug/L	95
67) tetrachloroethene	12.51	166	614054	190.27	ug/L	94
68) 1,3-dichloropropane	11.81	76	1233979	202.31	ug/L	98
69) dibromochloromethane	12.11	129	662944	186.75	ug/L	98
70) 1,2-dibromoethane	12.36	107	674551	190.20	ug/L	99
71) 2-hexanone	11.93	43	547401	194.28	ug/L	93
72) chlorobenzene	13.19	112	1886025	196.63	ug/L	92
73) 1,1,1,2-tetrachloroethane	13.10	131	604042	190.13	ug/L	98
74) ethylbenzene	13.36	91	3582707	202.03	ug/L	95
75) m,p-xylene	13.55	106	2667778	425.14	ug/L	91
76) o-xylene	13.96	106	1287158	208.55	ug/L	86
77) styrene	13.89	104	2161678	199.65	ug/L	87
78) bromoform	13.71	173	430501	180.52	ug/L	99
79) trans-1,4-dichloro-2-buten	14.10	53	201957	178.12	ug/L	# 1
81) isopropylbenzene	14.32	105	2923104	206.35	ug/L	97
83) bromobenzene	14.61	156	751002	199.03	ug/L	# 71
84) 1,1,2,2-tetrachloroethane	13.96	83	1014210	214.61	ug/L	97
85) 1,2,3-trichloropropane	14.10	75	1052040	195.04	ug/L	99
86) n-propylbenzene	14.76	91	4278733	212.75	ug/L	93
87) 2-chlorotoluene	14.89	91	2567526	210.11	ug/L	88
88) 4-chlorotoluene	14.96	91	2604513	211.01	ug/L	91
89) 1,3,5-trimethylbenzene	15.04	105	2972410	211.74	ug/L	93
90) tert-butylbenzene	15.35	91	1763972	217.23	ug/L	84
91) 1,2,4-trimethylbenzene	15.46	105	3004969	213.07	ug/L	94
92) sec-butylbenzene	15.57	105	3833566	213.08	ug/L	97

(#) = qualifier out of range (m) = manual integration

N60254.D N021312W.M

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RP1

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60254.D Vial: 28
Acq On : 13 Feb 2012 4:20 pm Operator: JUGALP
Sample : ic2251-200 Inst : MAMSN
Misc : MS25046,MSN2251,,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 14 09:20:37 2012 Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:17:46 2012
Response via : Initial Calibration
DataAcq Meth : N8260

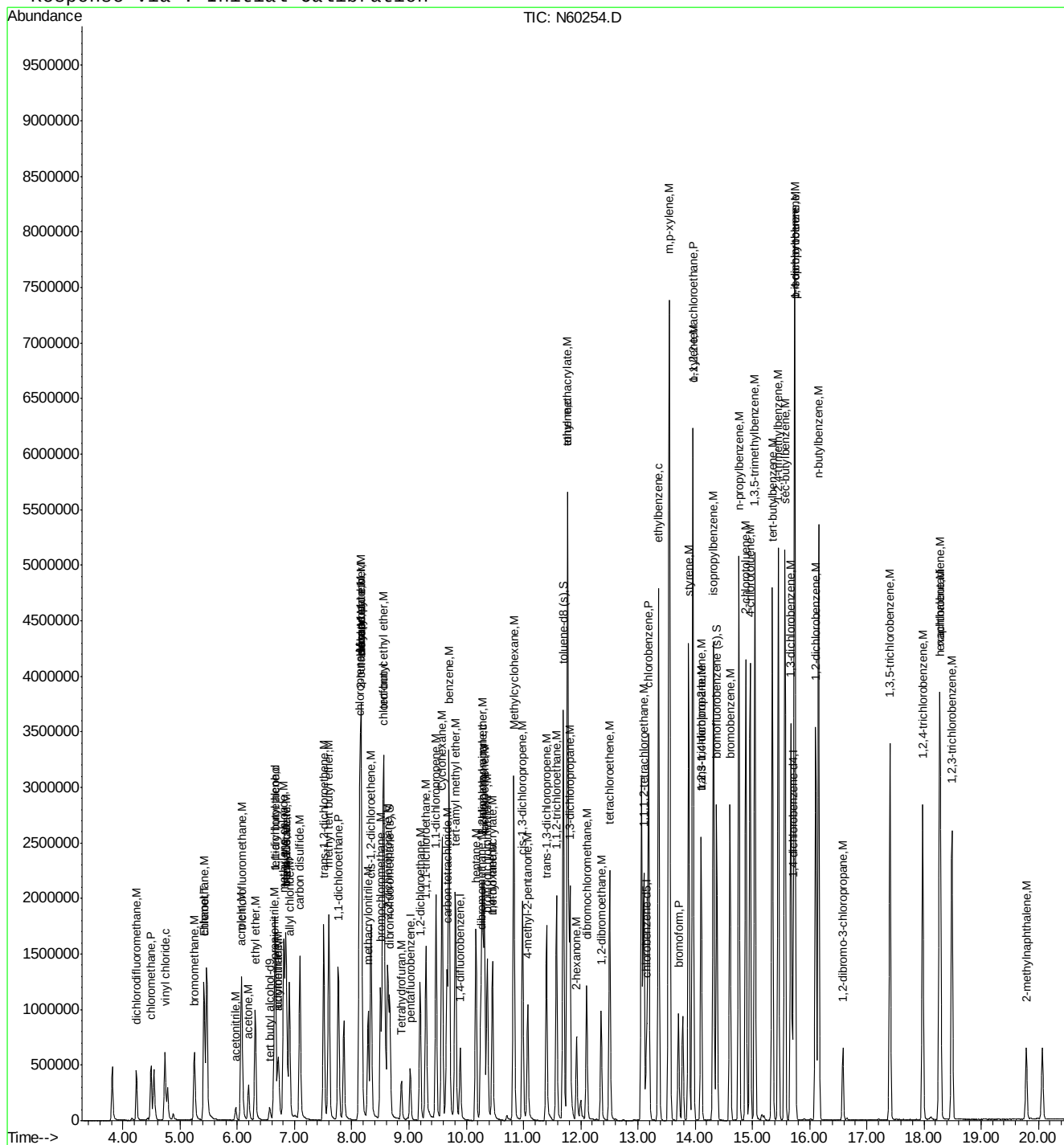
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
93) 1,3-dichlorobenzene	15.67	146	1450657	203.48	ug/L	93
94) p-isopropyltoluene	15.74	119	2795323	222.79	ug/L	97
95) 1,4-dichlorobenzene	15.74	146	1499539	219.84	ug/L	96
96) 1,2-dichlorobenzene	16.11	146	1386562	200.18	ug/L	96
97) n-butylbenzene	16.16	91	3175198	210.35	ug/L	90
98) 1,2-dibromo-3-chloropropan	16.58	75	190441	190.65	ug/L #	68
99) 1,2,4-trichlorobenzene	17.98	180	949485	194.23	ug/L	100
100) 1,3,5-trichlorobenzene	17.41	180	1066189	198.37	ug/L	99
101) hexachlorobutadiene	18.29	225	473179	200.19	ug/L	95
102) naphthalene	18.27	128	2359417	181.45	ug/L	100
103) 1,2,3-trichlorobenzene	18.49	180	886615	190.85	ug/L	99
104) 2-methylnaphthalene	19.79	142	379924	77.28	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
N60254.D N021312W.M Tue Feb 14 09:29:27 2012 RP1

(QT Reviewed)

Vial: 28
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:17:46 2012
Response via : Initial Calibration



6.6.8

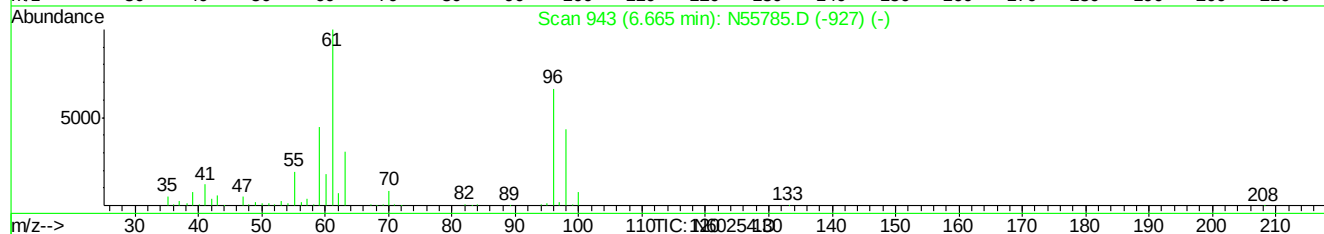
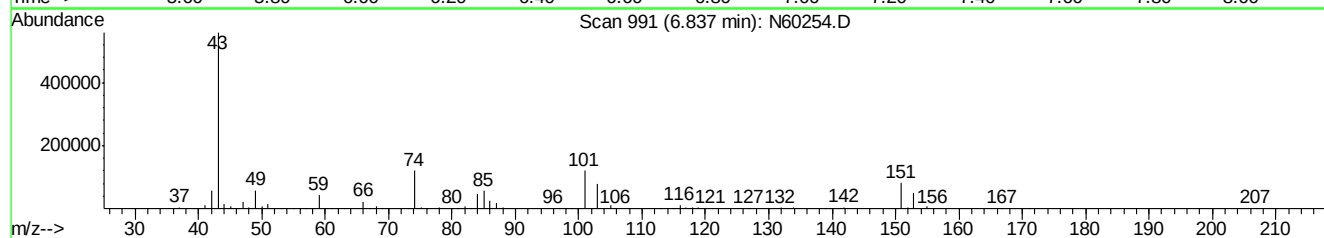
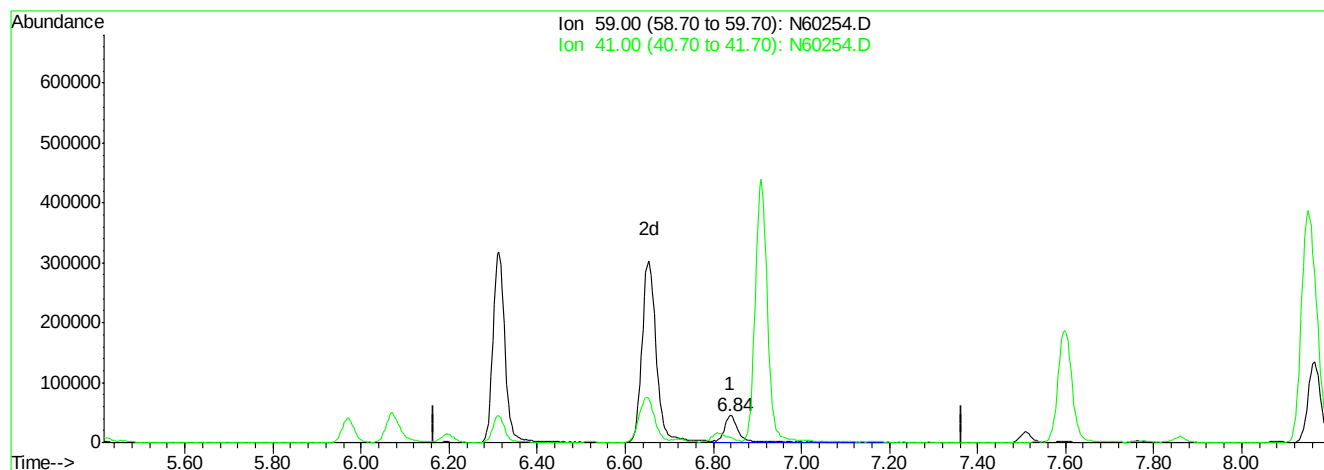
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60254.D
Acq On : 13 Feb 2012 4:20 pm
Sample : ic2251-200
Misc : MS25046,MSN2251,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:20 2012

Vial: 28
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:17:46 2012
Response via : Multiple Level Calibration



(2) tertiary butyl alcohol

6.84min 340.39ug/L

response 112377

Ion	Exp%	Act%
59.00	100	100
41.00	46.10	37.17
0.00	0.00	0.00
0.00	0.00	0.00

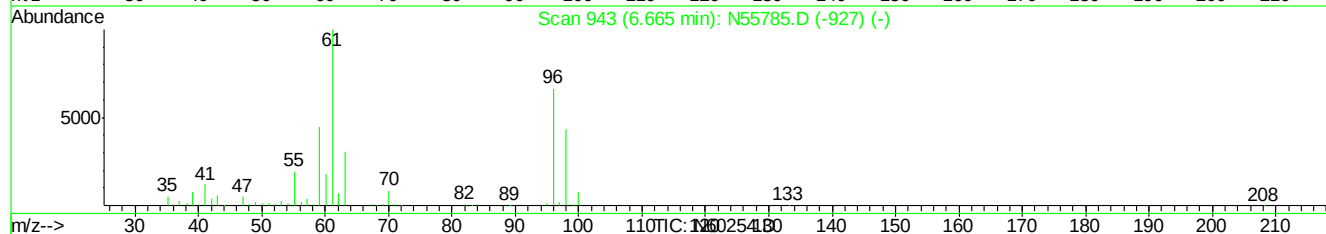
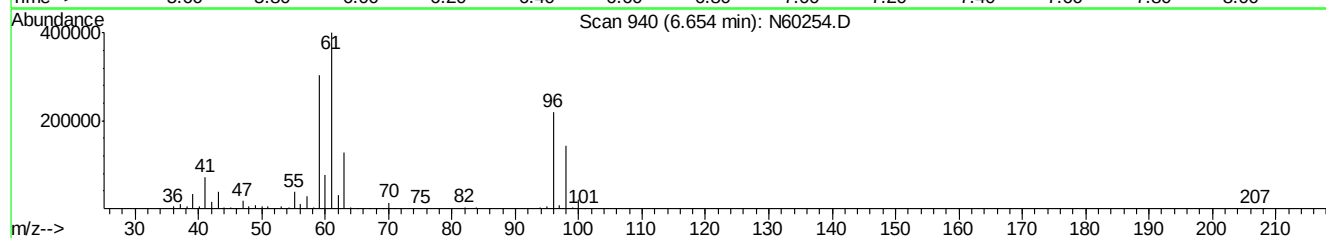
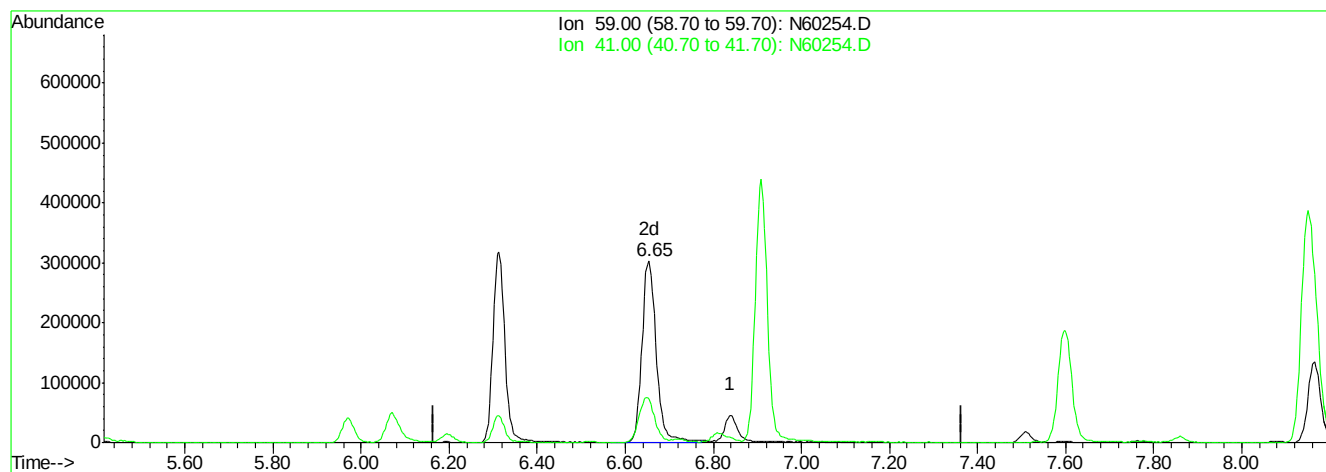
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60254.D
Acq On : 13 Feb 2012 4:20 pm
Sample : ic2251-200
Misc : MS25046,MSN2251,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:21 2012

Vial: 28
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:17:46 2012
Response via : Multiple Level Calibration



(2) tertiary butyl alcohol

6.65min 2064.58ug/L m

response 681600

Ion	Exp%	Act%
59.00	100	100
41.00	46.10	6.13#
0.00	0.00	0.00
0.00	0.00	0.00

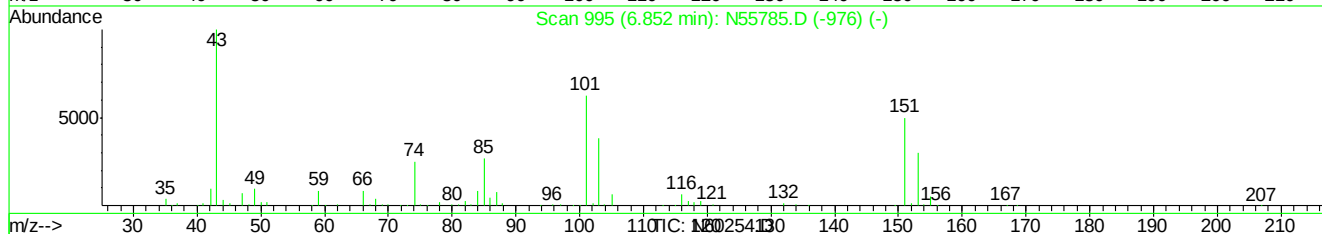
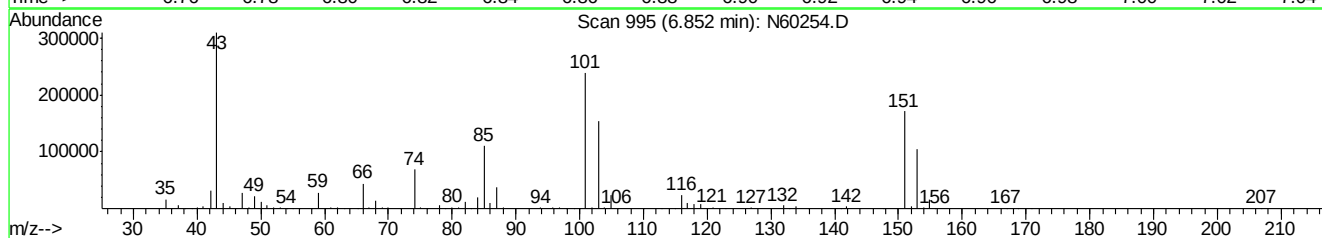
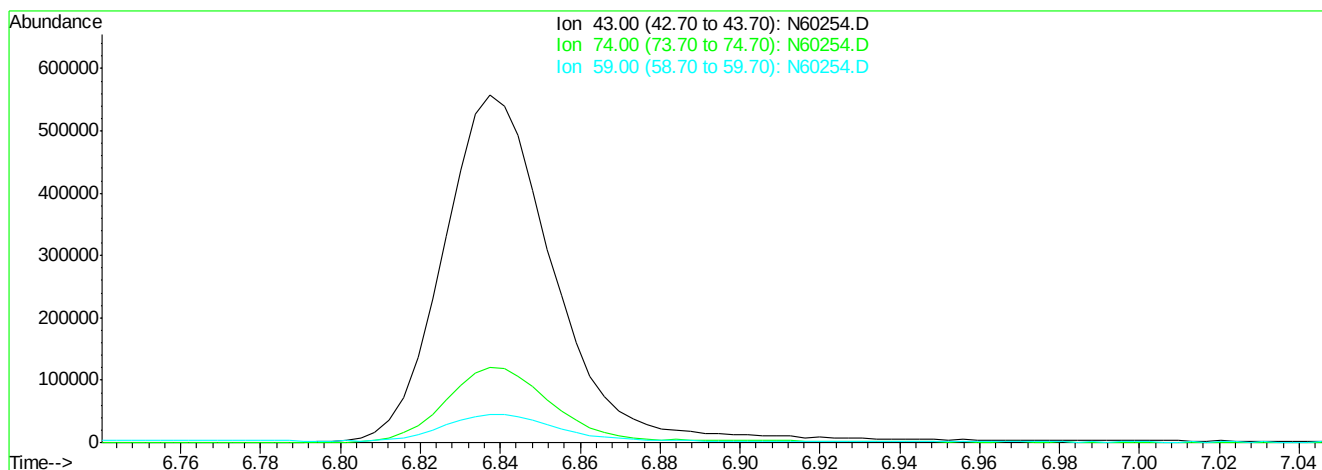
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60254.D
Acq On : 13 Feb 2012 4:20 pm
Sample : ic2251-200
Misc : MS25046,MSN2251,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:21 2012

Vial: 28
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:17:46 2012
Response via : Multiple Level Calibration



(17) Methyl Acetate (M)

6.85min 0.00ug/L

response 0

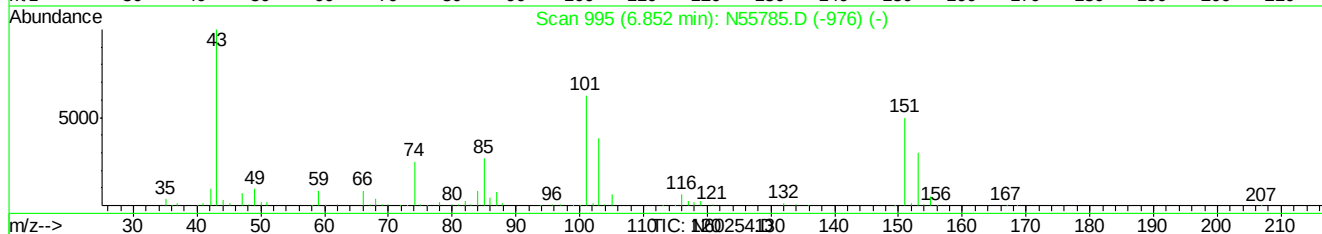
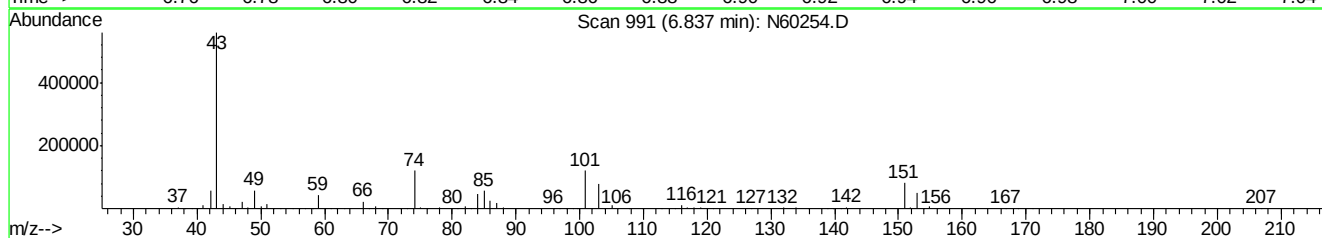
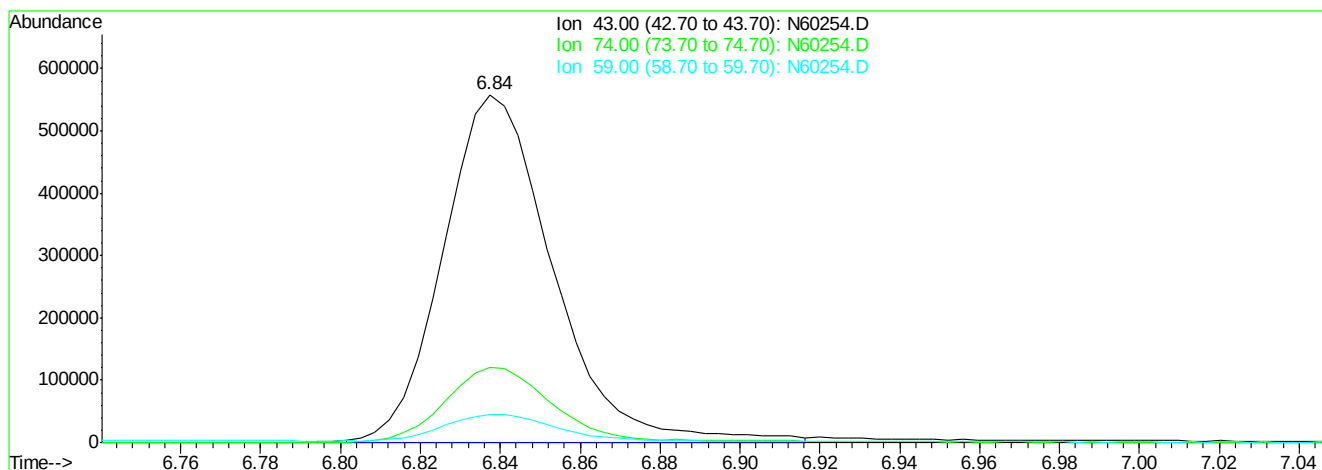
Ion	Exp%	Act%
43.00	100	0.00
74.00	25.00	0.00#
59.00	9.10	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60254.D
Acq On : 13 Feb 2012 4:20 pm
Sample : ic2251-200
Misc : MS25046,MSN2251,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:21 2012

Vial: 28
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:17:46 2012
Response via : Multiple Level Calibration



(17) Methyl Acetate (M)

6.84min 208.75ug/L m

response 1064614

Ion	Exp%	Act%
43.00	100	100
74.00	25.00	21.48
59.00	9.10	7.97
0.00	0.00	0.00

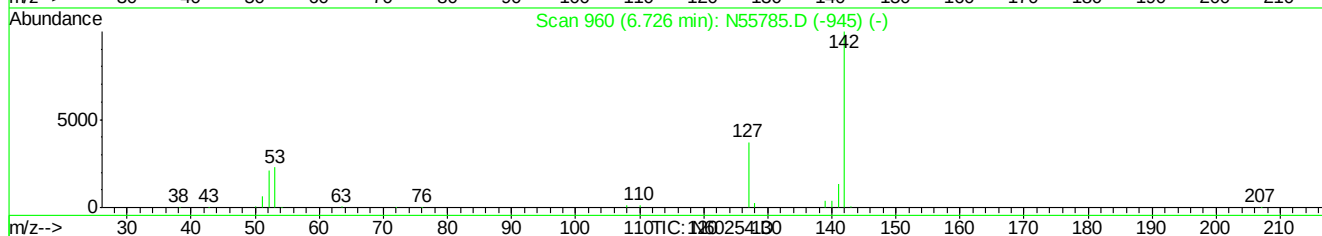
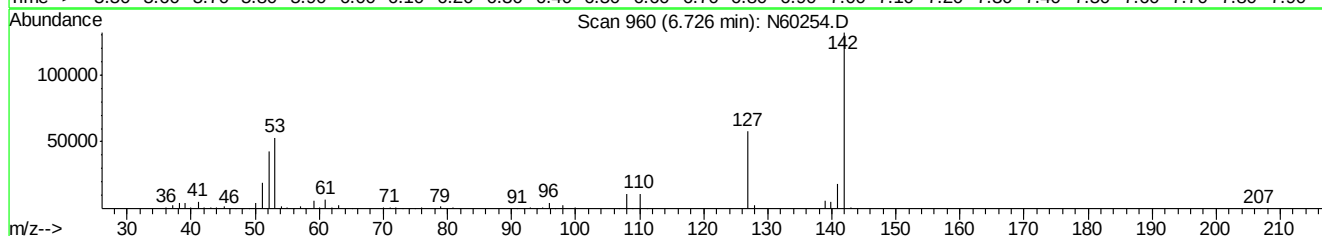
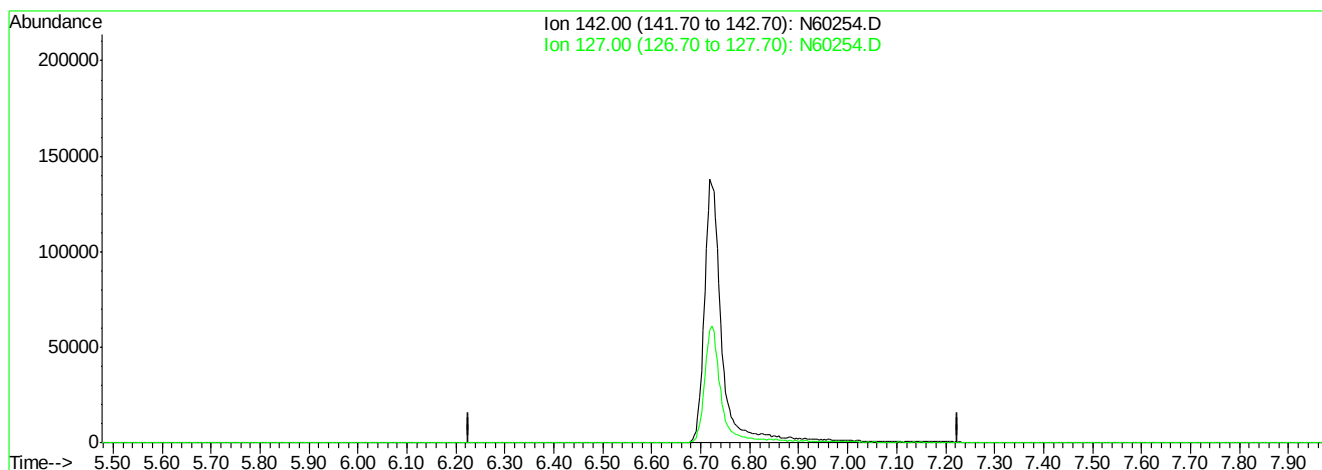
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60254.D
Acq On : 13 Feb 2012 4:20 pm
Sample : ic2251-200
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:21 2012

Vial: 28
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:17:46 2012
Response via : Multiple Level Calibration



(23) iodomethane (M)

6.73min 0.00ug/L

response 0

Ion	Exp%	Act%
142.00	100	0.00
127.00	37.20	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

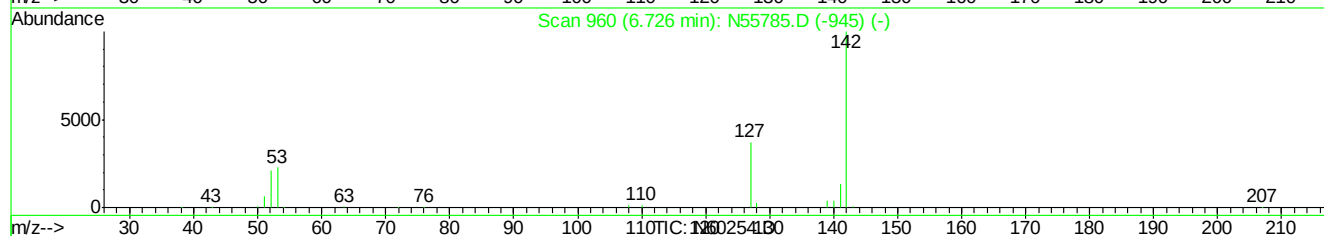
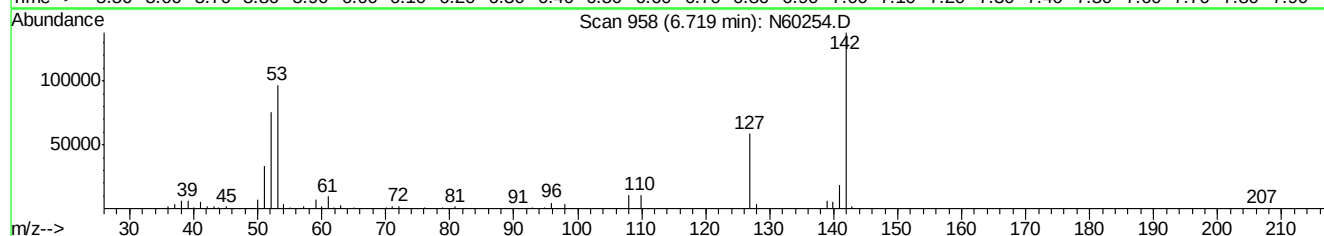
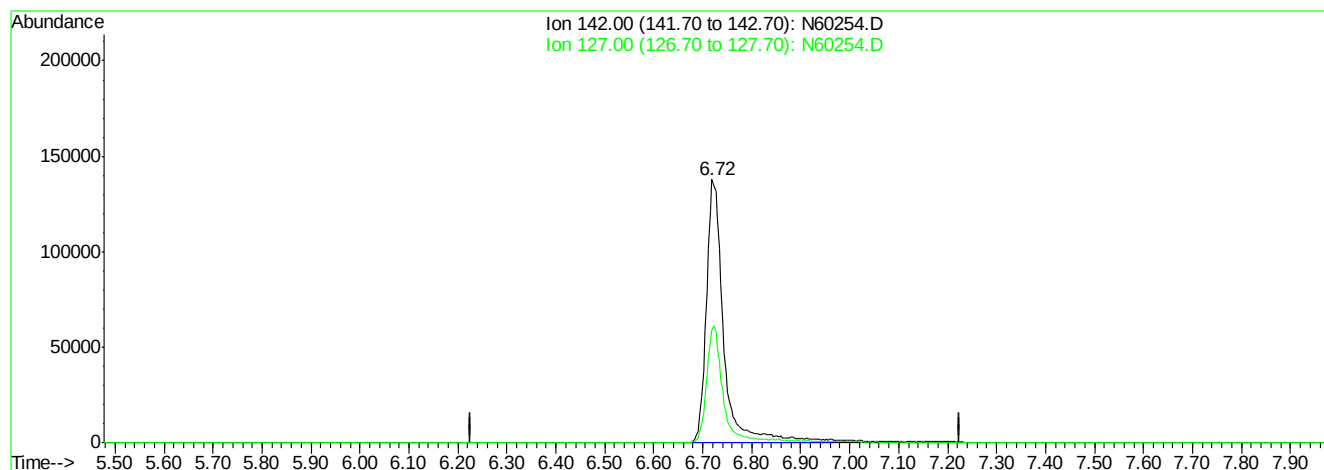
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60254.D
Acq On : 13 Feb 2012 4:20 pm
Sample : ic2251-200
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:22 2012

Vial: 28
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:17:46 2012
Response via : Multiple Level Calibration



(23) iodomethane (M)

6.72min 260.38ug/L m

response 341279

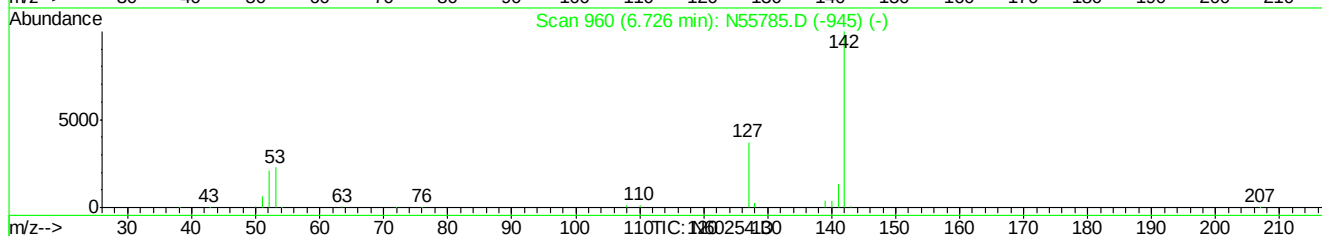
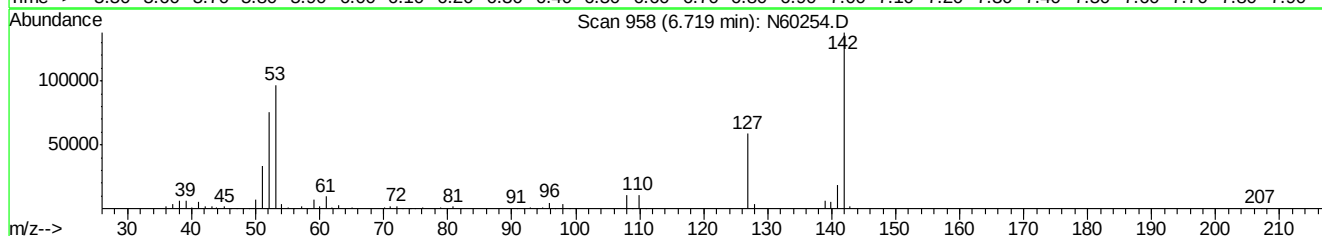
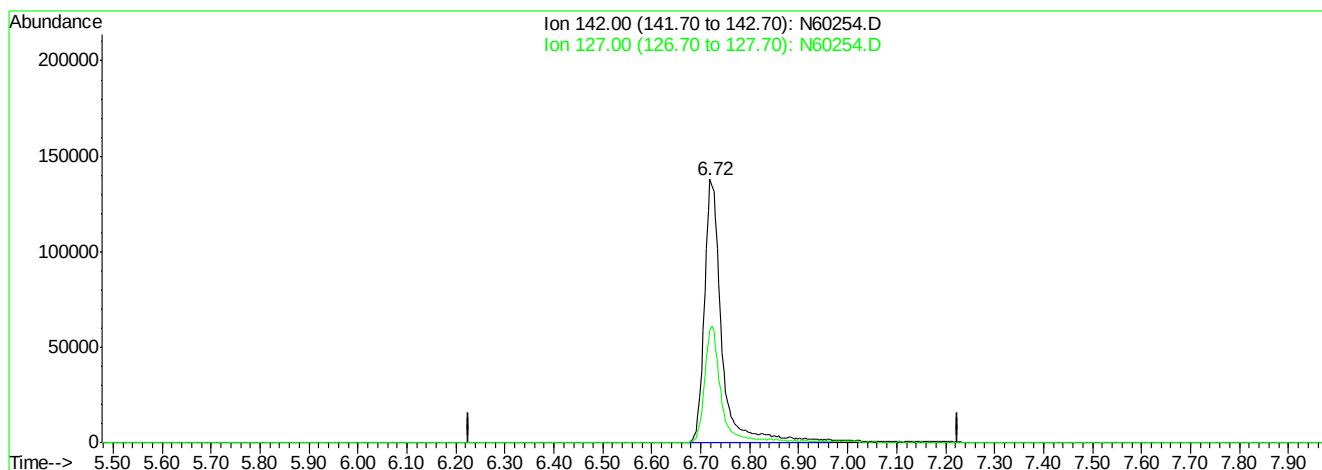
Ion	Exp%	Act%
142.00	100	100
127.00	37.20	42.52
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60254.D
Acq On : 13 Feb 2012 4:20 pm
Sample : ic2251-200
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:22 2012

Vial: 28
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:17:46 2012
Response via : Multiple Level Calibration



(23) iodomethane (M)

6.72min 260.38ug/L m

response 341279

Ion	Exp%	Act%
142.00	100	100
127.00	37.20	42.52
0.00	0.00	0.00
0.00	0.00	0.00

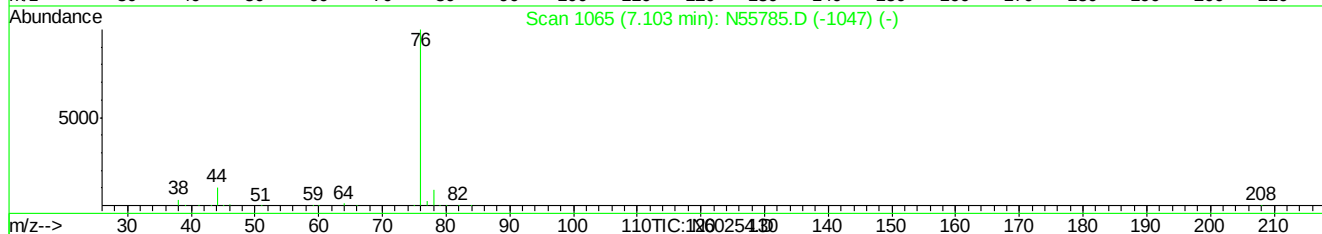
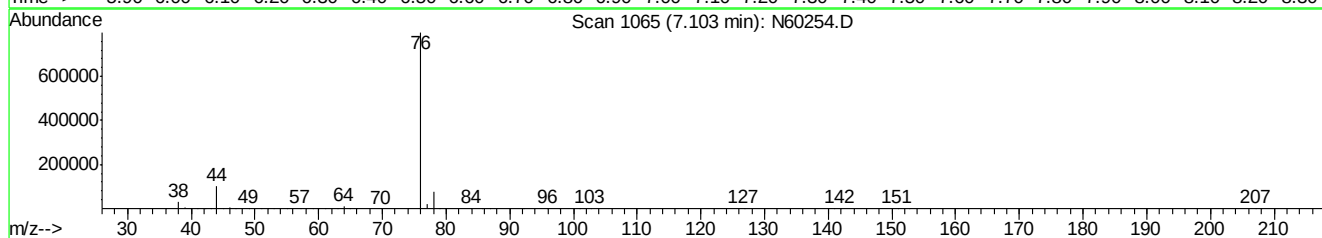
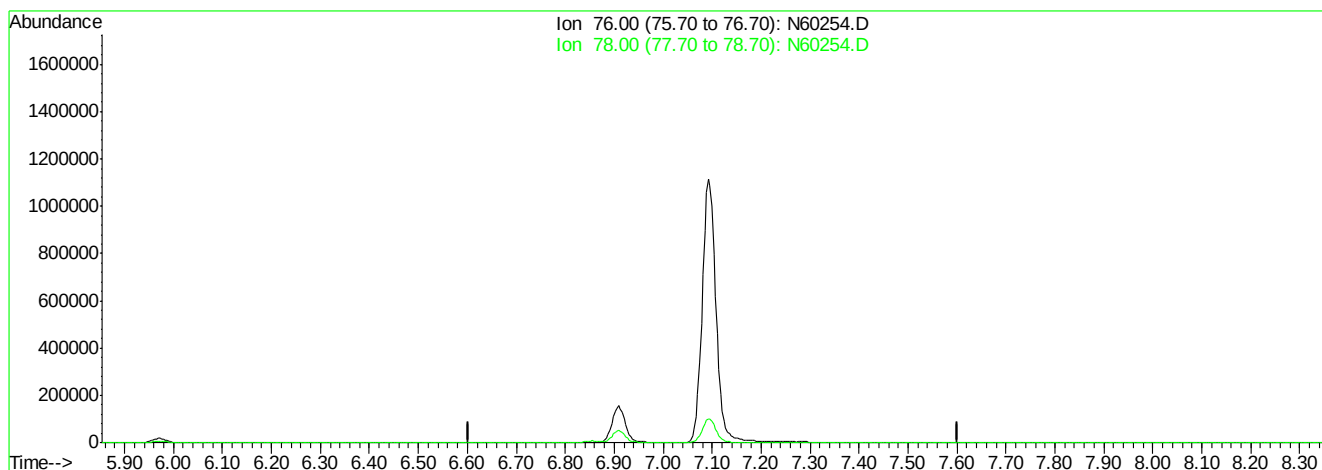
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60254.D
Acq On : 13 Feb 2012 4:20 pm
Sample : ic2251-200
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:22 2012

Vial: 28
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:17:46 2012
Response via : Multiple Level Calibration



(24) carbon disulfide (M)

7.10min 0.00ug/L

response 0

Ion	Exp%	Act%
76.00	100	0.00
78.00	9.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

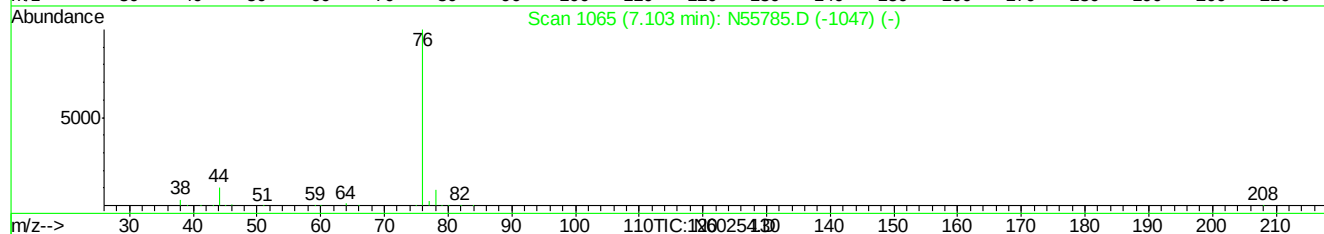
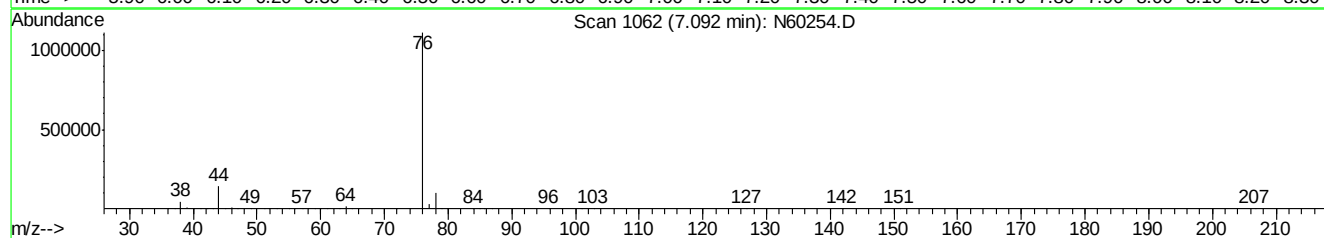
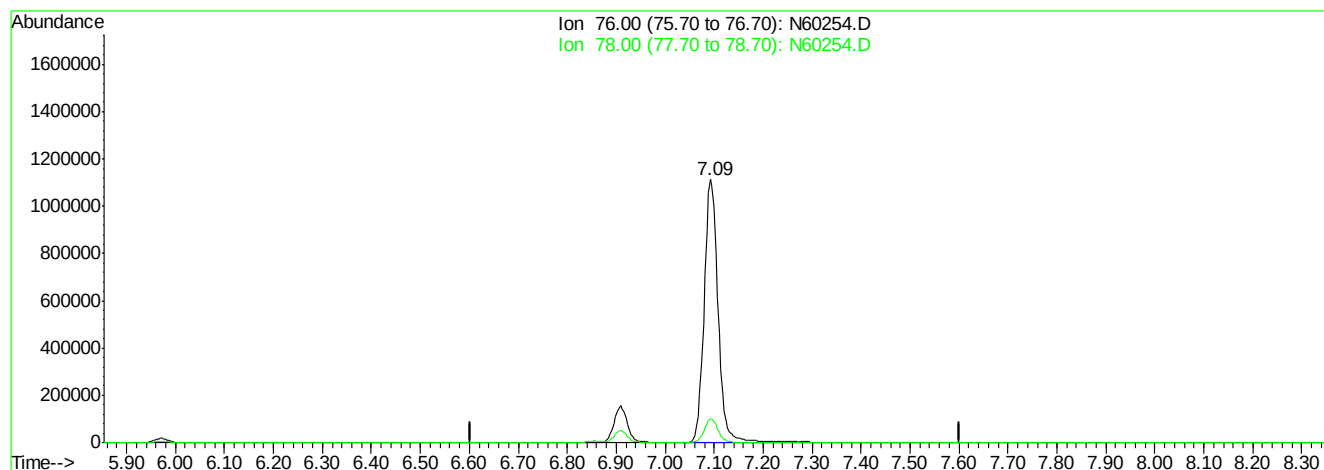
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60254.D
Acq On : 13 Feb 2012 4:20 pm
Sample : ic2251-200
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:22 2012

Vial: 28
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:17:46 2012
Response via : Multiple Level Calibration



(24) carbon disulfide (M)

7.09min 204.71ug/L m

response 2183072

Ion	Exp%	Act%
76.00	100	100
78.00	9.00	9.10
0.00	0.00	0.00
0.00	0.00	0.00

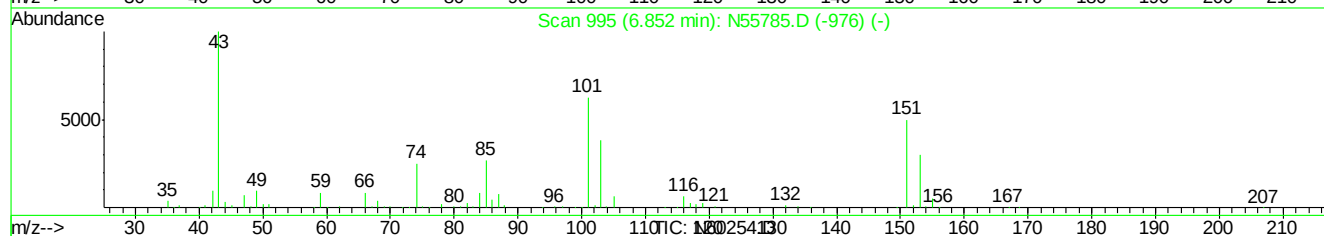
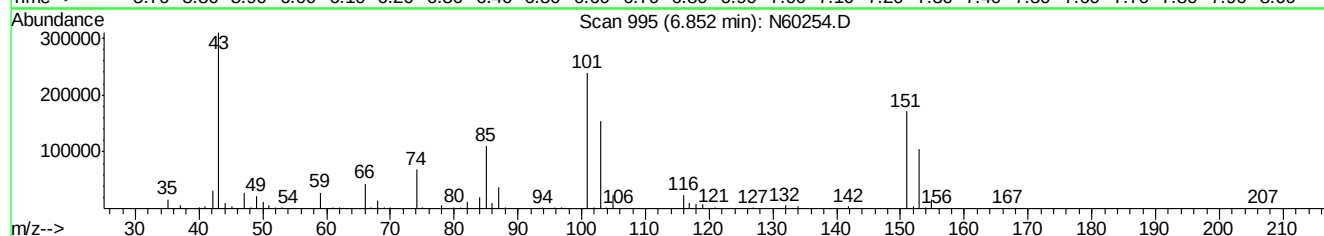
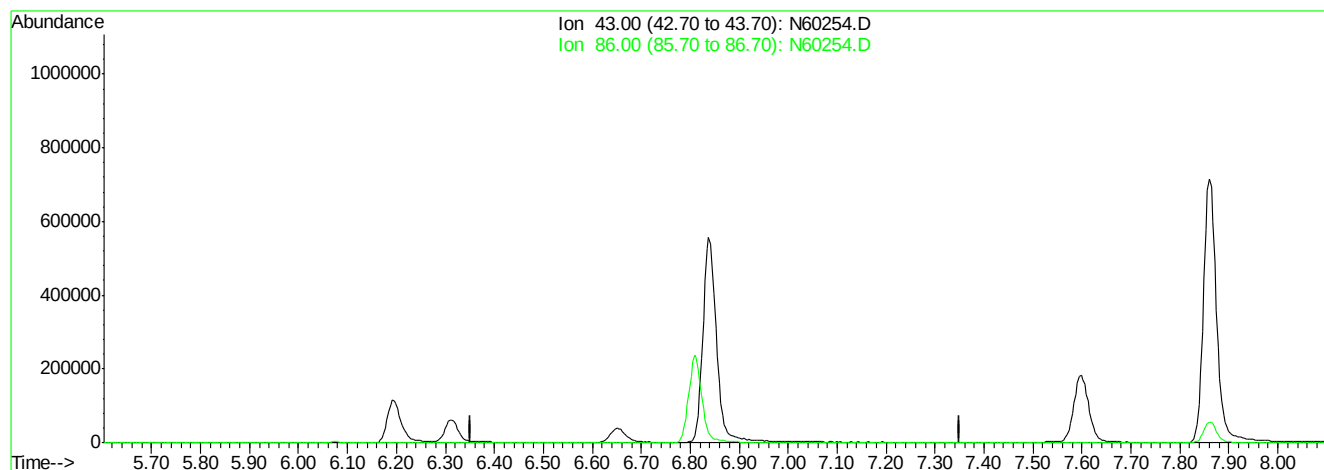
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60254.D
Acq On : 13 Feb 2012 4:20 pm
Sample : ic2251-200
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:22 2012

Vial: 28
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:17:46 2012
Response via : Multiple Level Calibration



(26) vinyl acetate (M)

6.85min 0.00ug/L

response 0

Ion	Exp%	Act%
43.00	100	0.00
86.00	5.70	0.00
0.00	0.00	0.00
0.00	0.00	0.00

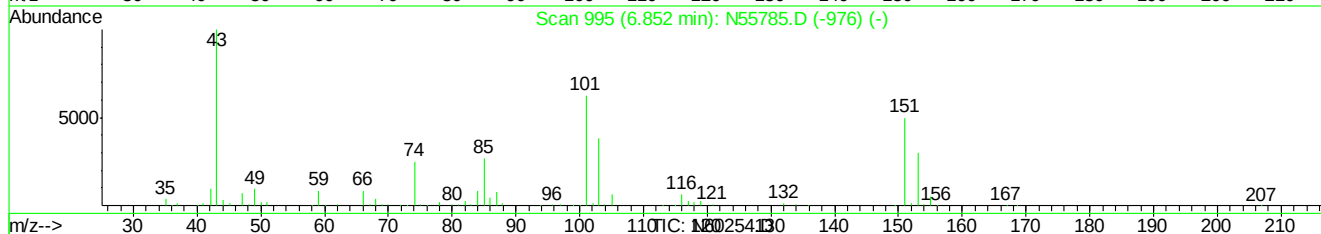
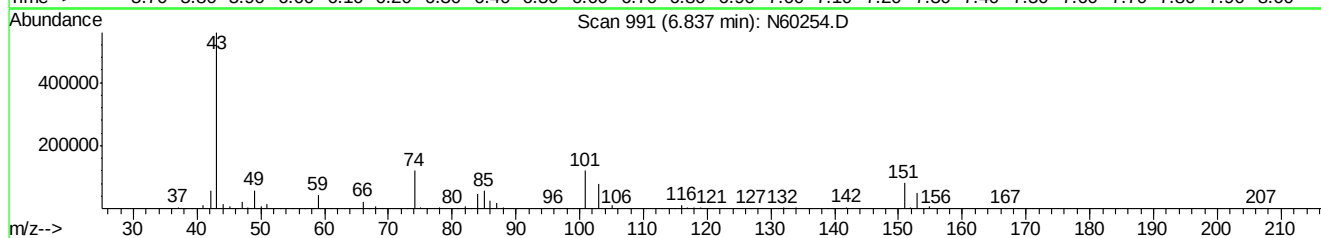
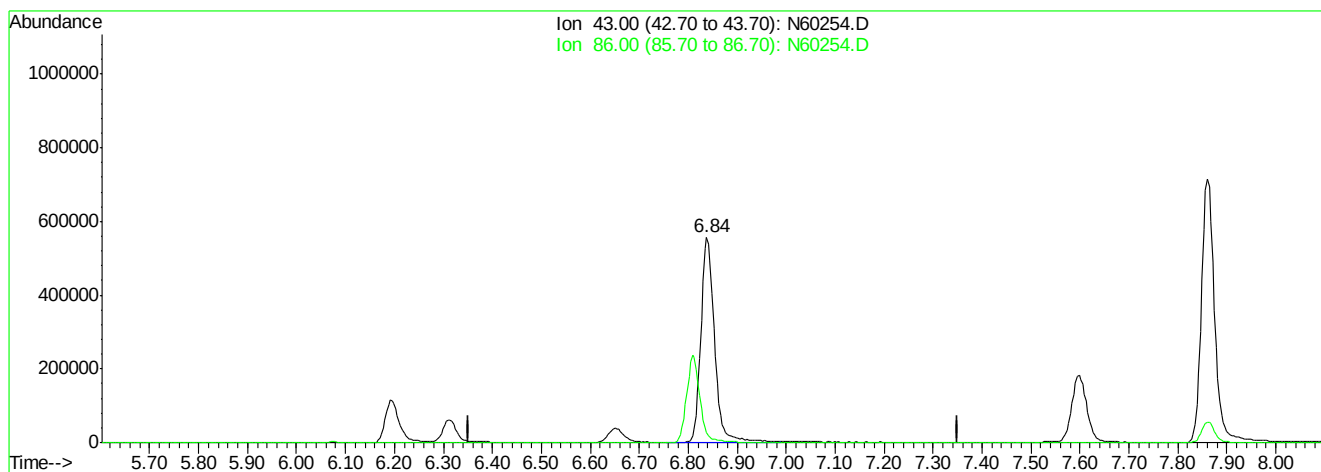
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60254.D
Acq On : 13 Feb 2012 4:20 pm
Sample : ic2251-200
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:22 2012

Vial: 28
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:17:46 2012
Response via : Multiple Level Calibration



(26) vinyl acetate (M)

6.84min 213.08ug/L m

response 1089355

Ion	Exp%	Act%
43.00	100	100
86.00	5.70	4.72
0.00	0.00	0.00
0.00	0.00	0.00

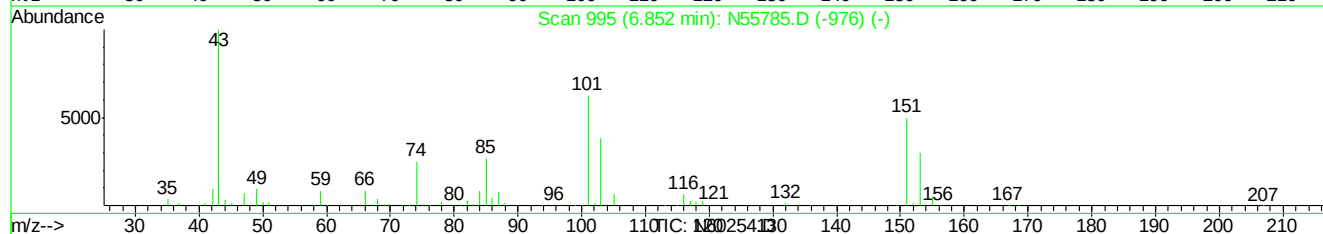
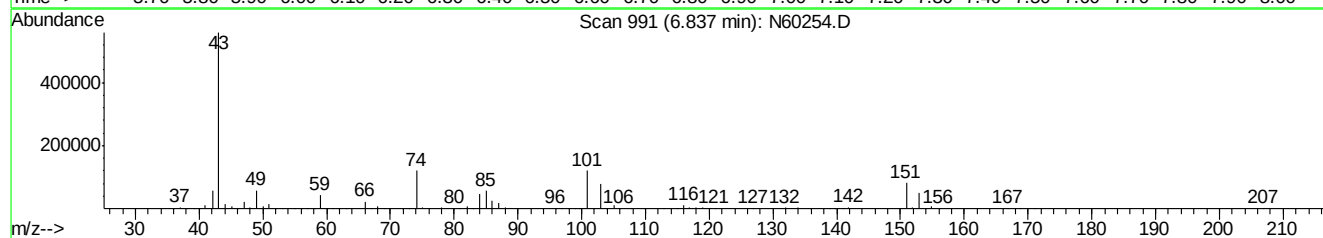
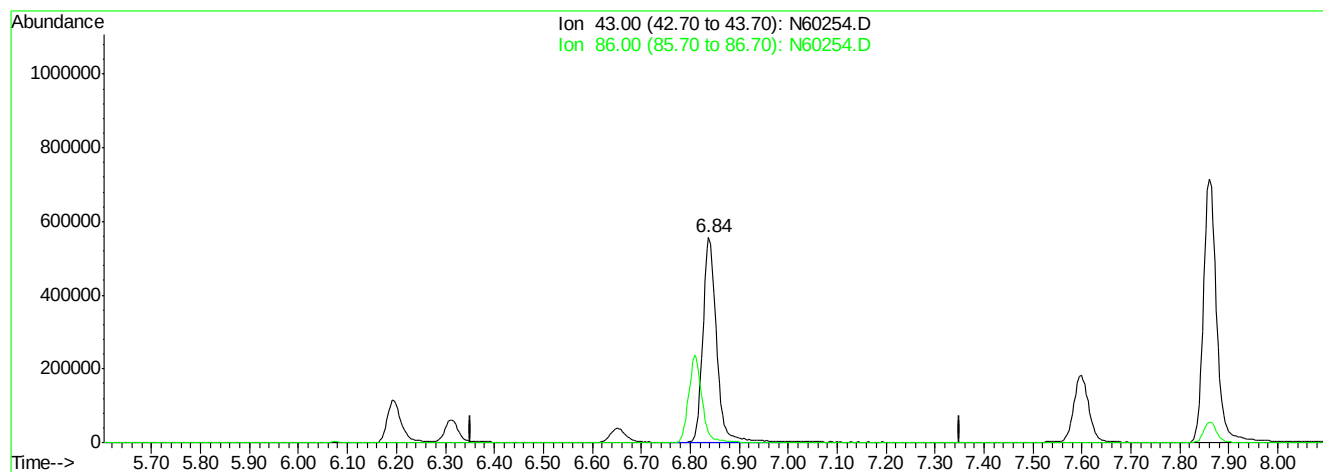
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60254.D
Acq On : 13 Feb 2012 4:20 pm
Sample : ic2251-200
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:22 2012

Vial: 28
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:17:46 2012
Response via : Multiple Level Calibration



(26) vinyl acetate (M)

6.84min 213.08ug/L m

response 1089355

Ion	Exp%	Act%
43.00	100	100
86.00	5.70	4.72
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60255.D
 Acq On : 13 Feb 2012 4:48 pm
 Sample : ic2251-400
 Misc : MS25046,MSN2251,,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 13 17:42:06 2012

Vial: 29
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260
 Last Update : Mon Feb 13 17:42:01 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.57	65	167228	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	310692	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	544558	50.00	ug/L	-0.01
66) chlorobenzene-d5	13.15	82	313824	50.00	ug/L	-0.01
80) 1,4-dichlorobenzene-d4	15.72	152	251625	50.00	ug/L	0.00

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	1331357	294.32	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	588.64%#		
60) toluene-d8 (s)	11.70	98	5353221	320.52	ug/L	-0.01
Spiked Amount 50.000	Range 70 - 130		Recovery =	641.04%#		
82) bromofluorobenzene (s)	14.38	95	2263163	322.66	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	645.32%#		

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.65	59	1453958m	3811.37	ug/L	
3) Ethanol	5.42	45	2384490	25686.32	ug/L	100
5) dichlorodifluoromethane	4.24	85	794246	166.00	ug/L	99
6) chloromethane	4.49	50	1210500	272.16	ug/L	97
7) vinyl chloride	4.73	62	900032	180.86	ug/L	94
8) bromomethane	5.25	96	958594	344.51	ug/L	97
9) chloroethane	5.42	64	899461	298.08	ug/L	94
10) ethyl ether	6.31	59	1288177	359.84	ug/L	96
11) acetonitrile	5.97	41	650716	431.51	ug/L	98
12) trichlorofluoromethane	6.07	101	2019159	316.18	ug/L	96
13) freon-113	6.86	101	1216437	326.74	ug/L	87
14) acrolein	6.06	56	848347m	1881.83	ug/L	
15) 1,1-dichloroethene	6.66	96	1267826m	331.30	ug/L	
16) acetone	6.19	43	665527	434.11	ug/L	99
17) Methyl Acetate	6.84	43	2244291m	387.73	ug/L	
18) methylene chloride	6.81	84	1649426	352.05	ug/L	94
19) methyl tert butyl ether	7.60	73	3945304	521.13	ug/L	98
20) acrylonitrile	6.71	53	636090	1917.61	ug/L	93
21) allyl chloride	6.91	41	1763360	363.19	ug/L	93
22) trans-1,2-dichloroethene	7.51	96	1475036	353.40	ug/L	93
23) iodomethane	6.72	142	576778m	431.67	ug/L	
24) carbon disulfide	7.09	76	4692765m	317.69	ug/L	
25) propionitrile	6.64	54	11493	212.64	ug/L	100
26) vinyl acetate	6.84	43	2249707m	388.67	ug/L	
27) chloroprene	8.13	53	2130430	335.71	ug/L	93
28) di-isopropyl ether	8.17	45	4642754	320.25	ug/L	96
29) methacrylonitrile	8.28	41	1081727	344.28	ug/L	96
30) 2-butanone	8.17	72	205005	399.37	ug/L #	82
31) Hexane	8.15	41	1780896	279.67	ug/L	92
32) 1,1-dichloroethane	7.76	63	2698456	352.03	ug/L	98
33) tert-butyl ethyl ether	8.56	59	4225013	716.35	ug/L	94
34) isobutyl alcohol	8.17	43	3675339	1524.55	ug/L	95
35) 2,2-dichloropropane	8.62	77	942236	496.57	ug/L	94
36) cis-1,2-dichloroethene	8.33	96	1624430	351.25	ug/L	89
37) ethyl acetate	8.17	43	3682930	305.78	ug/L	94

(#)=qualifier out of range (m)=manual integration

N60255.D N021312W.M

Tue Feb 14 09:17:38 2012

RP1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60255.D
 Acq On : 13 Feb 2012 4:48 pm
 Sample : ic2251-400
 Misc : MS25046,MSN2251,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 13 17:42:06 2012

Vial: 29
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260
 Last Update : Mon Feb 13 17:42:01 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	8.50	128	669053	378.08	ug/L	# 83
39) chloroform	8.54	83	2688269	341.65	ug/L	99
41) Tetrahydrofuran	8.86	42	529901	364.33	ug/L	98
42) 1,1,1-trichloroethane	9.30	97	2015753	424.23	ug/L	95
44) Cyclohexane	9.58	56	2575893	370.35	ug/L	97
45) carbon tetrachloride	9.66	117	1336466	428.94	ug/L	97
46) 1,1-dichloropropene	9.47	75	2131843	379.49	ug/L	92
47) benzene	9.70	78	6228916	379.35	ug/L	100
48) 1,2-dichloroethane	9.20	62	2050553	358.64	ug/L	95
49) tert-amyl methyl ether	9.81	73	3916368m	781.10	ug/L	
50) heptane	10.17	43	1494292	371.29	ug/L	98
51) trichloroethene	10.31	95	1553088	371.87	ug/L	87
52) 1,2-dichloropropane	10.28	63	1616088	382.96	ug/L	99
53) dibromomethane	10.25	93	852281	342.54	ug/L	89
54) bromodichloromethane	10.37	83	2046311	391.88	ug/L	96
55) Methylcyclohexane	10.83	83	2748573	401.55	ug/L	97
56) 2-chloroethyl vinyl ether	10.28	63	1616088	382.96	ug/L	# 99
57) methyl methacrylate	10.46	69	1211076	624.80	ug/L	94
58) 1,4-dioxane	10.46	88	108589	2414.95	ug/L	86
59) cis-1,3-dichloropropene	10.99	75	2569764	568.29	ug/L	93
61) 4-methyl-2-pentanone	11.08	43	1685529	468.55	ug/L	96
62) toluene	11.77	92	3735612	377.22	ug/L	98
63) trans-1,3-dichloropropene	11.40	75	2257920	746.29	ug/L	94
64) 1,1,2-trichloroethane	11.57	83	1304781	404.41	ug/L	92
65) ethyl methacrylate	11.78	69	2104141	692.07	ug/L	98
67) tetrachloroethene	12.51	166	1373368	391.96	ug/L	95
68) 1,3-dichloropropane	11.81	76	2595576	369.61	ug/L	98
69) dibromochloromethane	12.11	129	1510635	436.28	ug/L	100
70) 1,2-dibromoethane	12.36	107	1509211	413.03	ug/L	99
71) 2-hexanone	11.93	43	1198995	478.79	ug/L	94
72) chlorobenzene	13.19	112	4081702	381.47	ug/L	93
73) 1,1,1,2-tetrachloroethane	13.10	131	1351916	449.47	ug/L	98
74) ethylbenzene	13.36	91	7546314	384.84	ug/L	96
75) m,p-xylene	13.55	106	5340628	718.02	ug/L	90
76) o-xylene	13.96	106	2626384	378.00	ug/L	87
77) styrene	13.89	104	4607428	415.90	ug/L	90
78) bromoform	13.71	173	1014818	577.78	ug/L	99
79) trans-1,4-dichloro-2-buten	14.10	53	482503	837.35	ug/L	# 1
81) isopropylbenzene	14.32	105	6149093	354.87	ug/L	97
83) bromobenzene	14.61	156	1637938	370.16	ug/L	# 77
84) 1,1,2,2-tetrachloroethane	13.96	83	2051358	326.96	ug/L	97
85) 1,2,3-trichloropropane	14.10	75	2341462	435.74	ug/L	98
86) n-propylbenzene	14.77	91	8730092	343.21	ug/L	94
87) 2-chlorotoluene	14.89	91	5304390	343.81	ug/L	90
88) 4-chlorotoluene	14.96	91	5357901	349.05	ug/L	92
89) 1,3,5-trimethylbenzene	15.04	105	6093768	355.59	ug/L	94
90) tert-butylbenzene	15.35	91	3524938	340.29	ug/L	87
91) 1,2,4-trimethylbenzene	15.46	105	6122088	360.09	ug/L	94
92) sec-butylbenzene	15.57	105	7809787	355.34	ug/L	97

(#)=qualifier out of range (m)=manual integration

N60255.D N021312W.M

Tue Feb 14 09:17:38 2012

RP1

Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60255.D

Vial: 29

Acq On : 13 Feb 2012 4:48 pm

Operator: JUGALP

Sample : ic2251-400

Inst : MAMSN

Misc : MS25046,MSN2251,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Feb 13 17:42:06 2012

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Mon Feb 13 17:42:01 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
93) 1,3-dichlorobenzene	15.68	146	3094693	370.69	ug/L	96
94) p-isopropyltoluene	15.74	119	5446281	343.11	ug/L	96
95) 1,4-dichlorobenzene	15.74	146	2960919	339.83	ug/L	96
96) 1,2-dichlorobenzene	16.11	146	3006705	381.54	ug/L	97
97) n-butylbenzene	16.16	91	6552339	402.73	ug/L	92
98) 1,2-dibromo-3-chloropropan	16.58	75	433607	513.16	ug/L #	76
99) 1,2,4-trichlorobenzene	17.98	180	2122043	597.54	ug/L	97
100) 1,3,5-trichlorobenzene	17.41	180	2333102	464.38	ug/L	100
101) hexachlorobutadiene	18.29	225	1026027	481.60	ug/L	94
102) naphthalene	18.27	128	5644315	675.61	ug/L	100
103) 1,2,3-trichlorobenzene	18.49	180	2016549	631.60	ug/L	99
104) 2-methylnaphthalene	19.79	142	1067004	371.63	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 N60255.D N021312W.M Tue Feb 14 09:17:38 2012 RP1

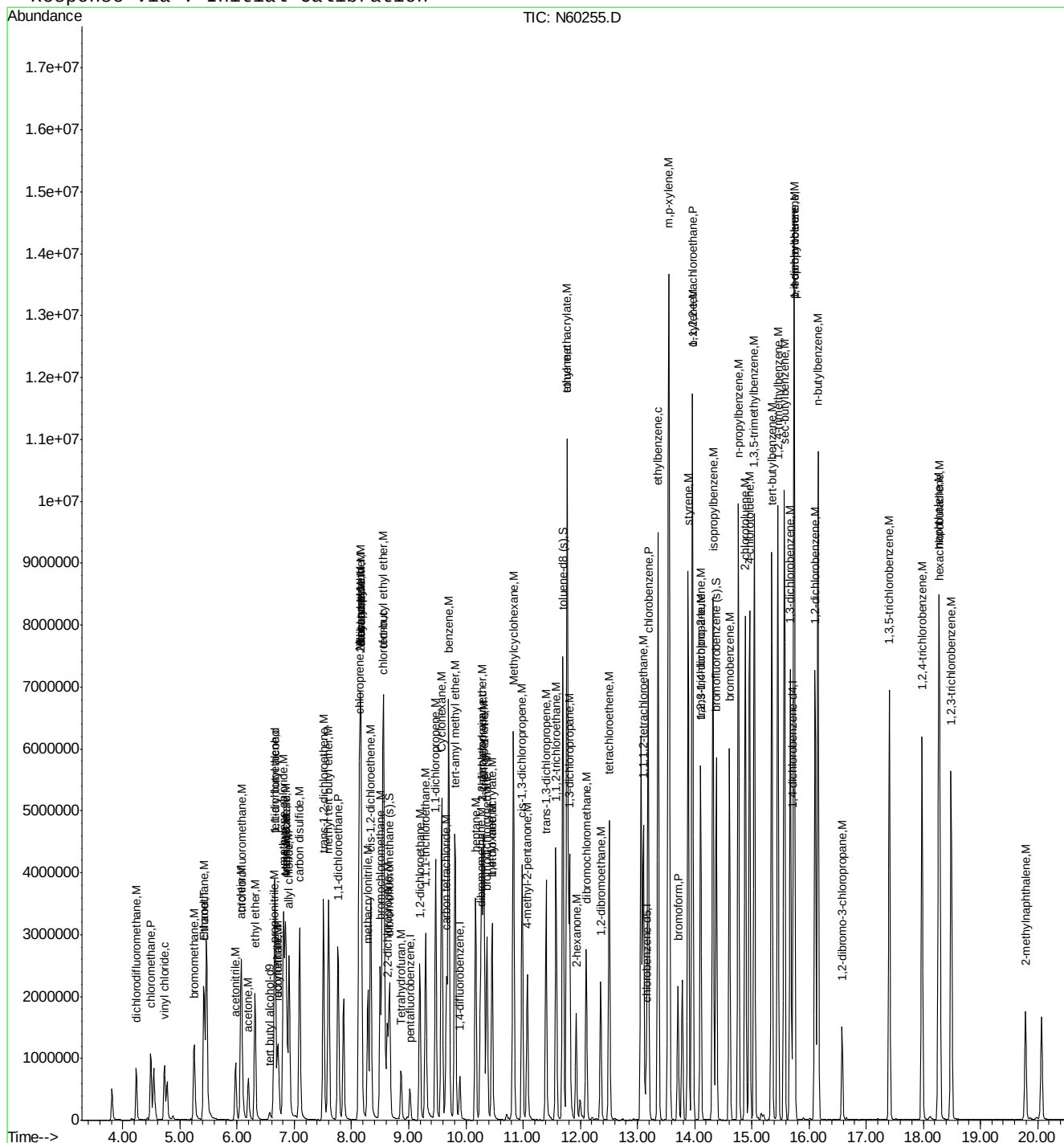
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:17 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:15:27 2012
Response via : Initial Calibration



N60255.D N021312W.M

Tue Feb 14 09:17:38 2012

RP1

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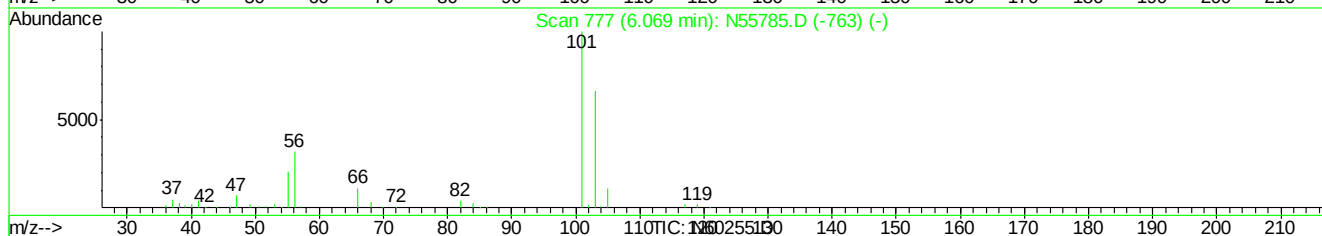
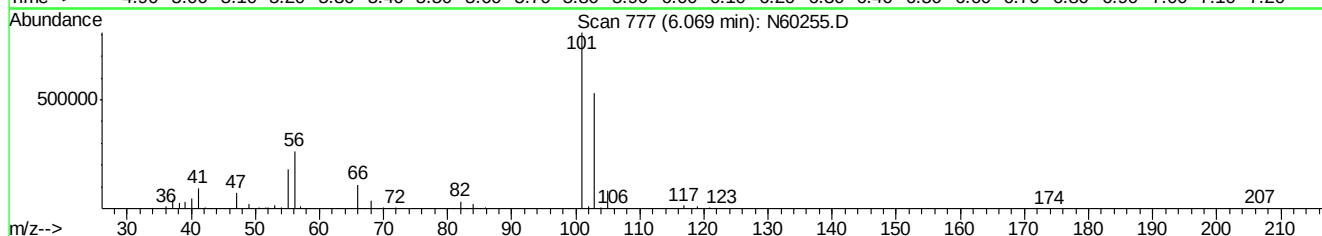
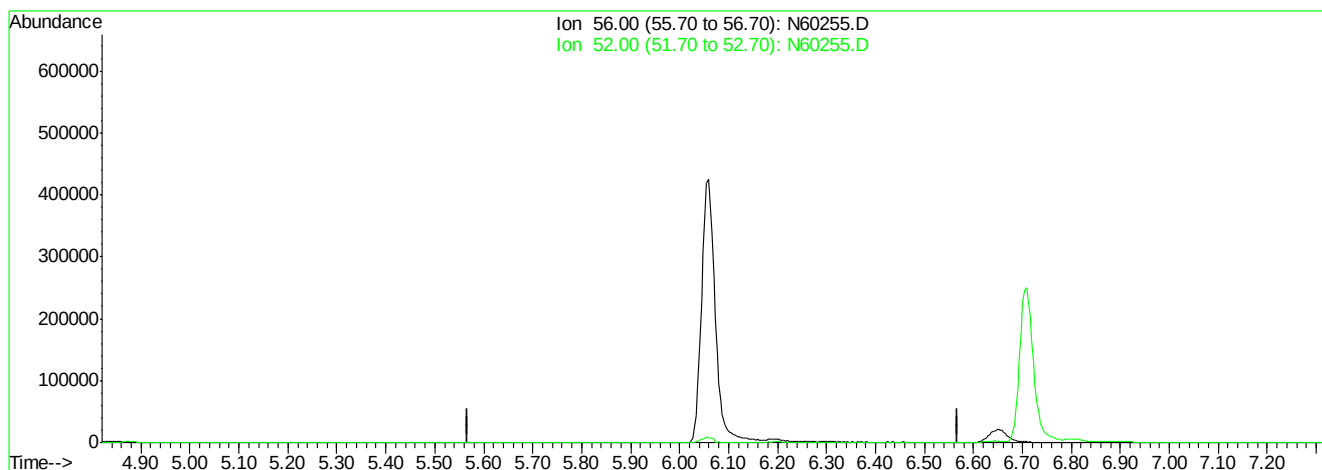
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 13 17:42 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Feb 13 17:42:01 2012
Response via : Multiple Level Calibration



(14) acrolein (M)

6.07min 0.00ug/L

response 0

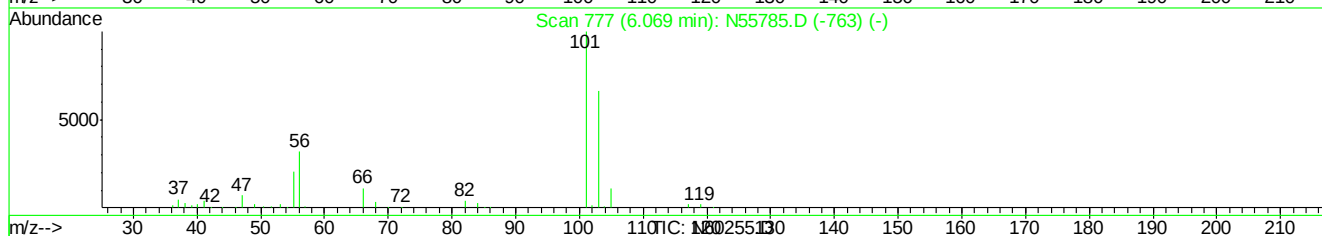
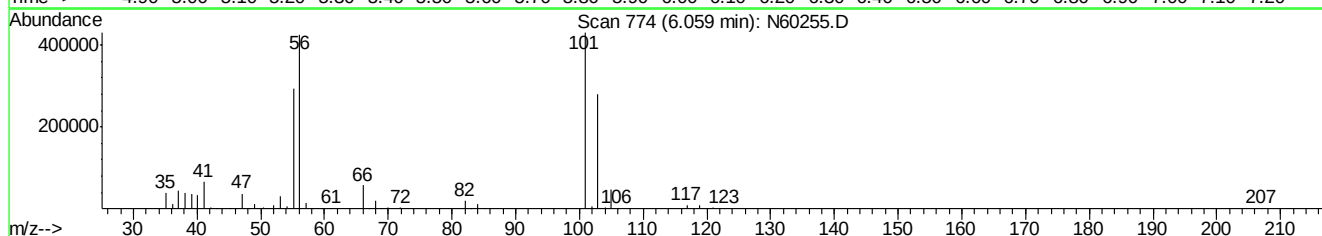
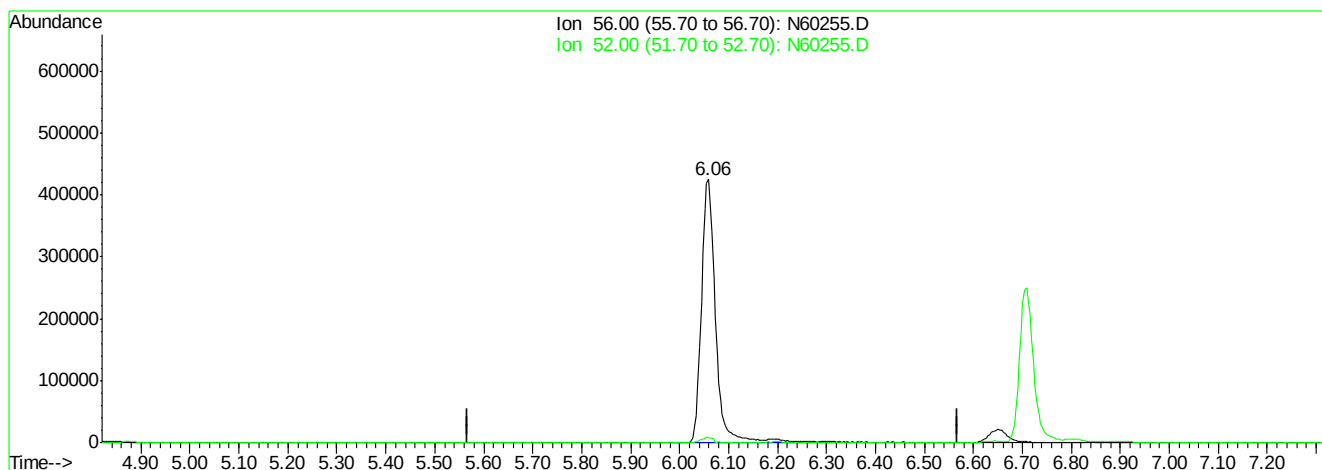
Ion	Exp%	Act%
56.00	100	0.00
52.00	2.20	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 13 17:43 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Feb 13 17:42:01 2012
Response via : Multiple Level Calibration



(14) acrolein (M)

6.06min 1881.83ug/L m

response 848347

Ion	Exp%	Act%
56.00	100	100
52.00	2.20	1.85
0.00	0.00	0.00
0.00	0.00	0.00

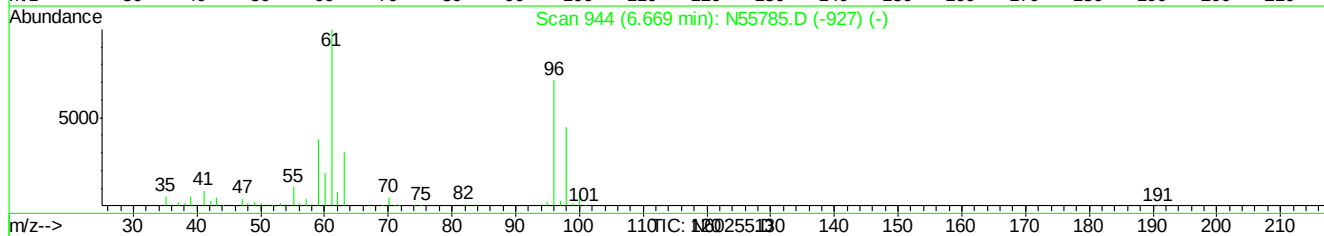
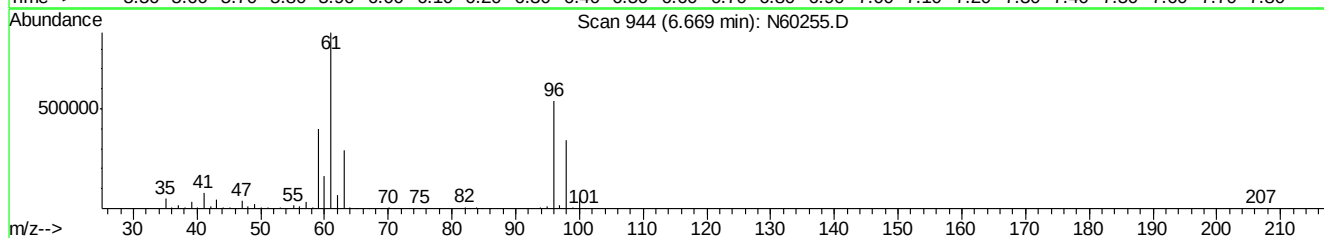
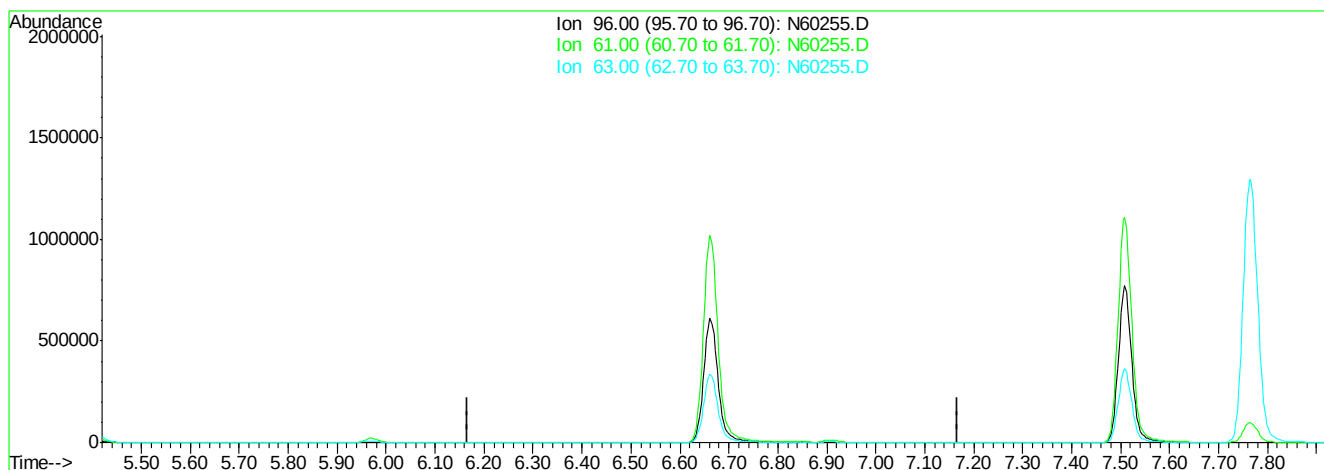
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 13 17:43 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Feb 13 17:42:01 2012
Response via : Multiple Level Calibration



(15) 1,1-dichloroethene (c)

6.67min 0.00ug/L

response 0

Ion	Exp%	Act%
96.00	100	0.00
61.00	140.10	0.00#
63.00	43.50	0.00#
0.00	0.00	0.00

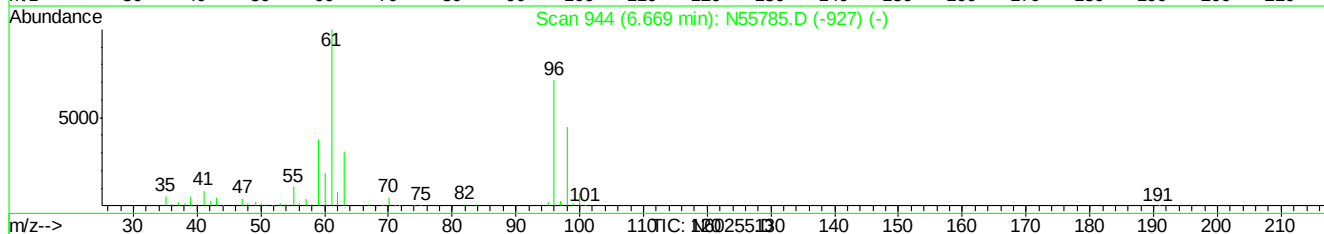
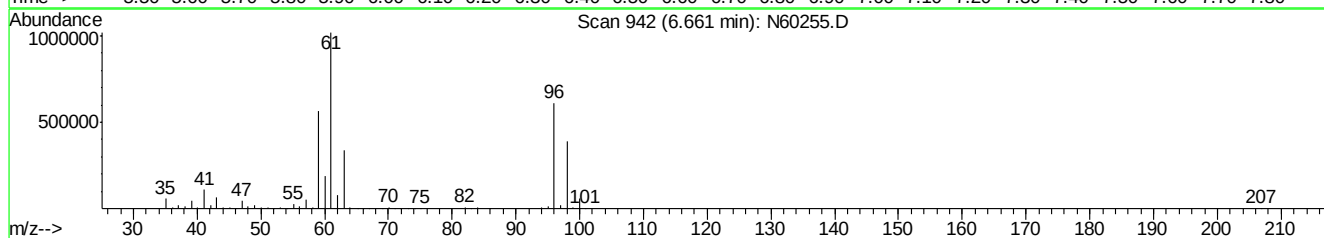
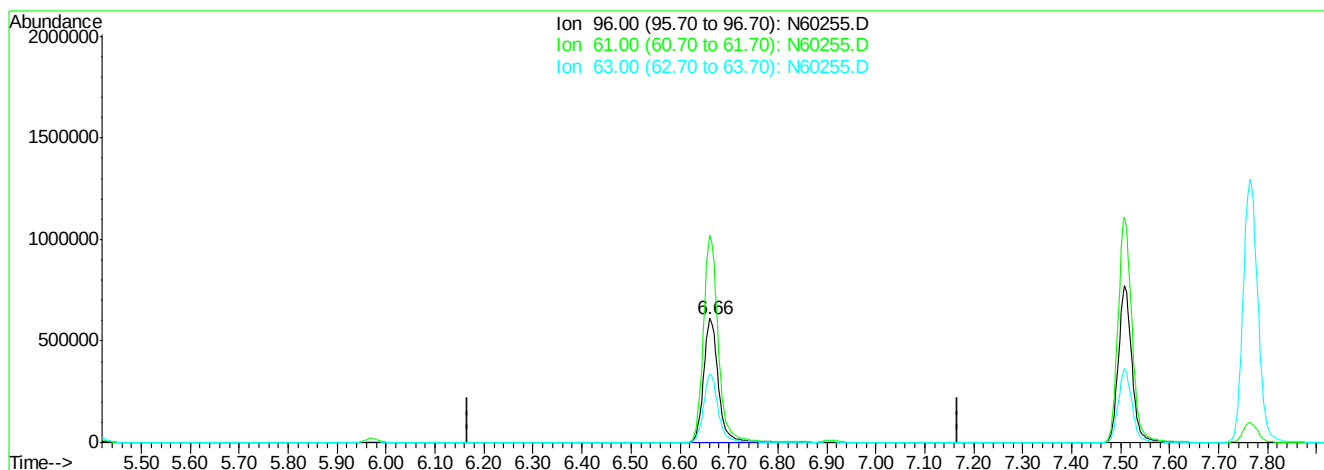
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 13 17:43 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Feb 13 17:42:01 2012
Response via : Multiple Level Calibration



(15) 1,1-dichloroethene (c)

6.66min 331.30ug/L m

response 1267826

Ion	Exp%	Act%
96.00	100	100
61.00	140.10	166.97
63.00	43.50	55.14
0.00	0.00	0.00

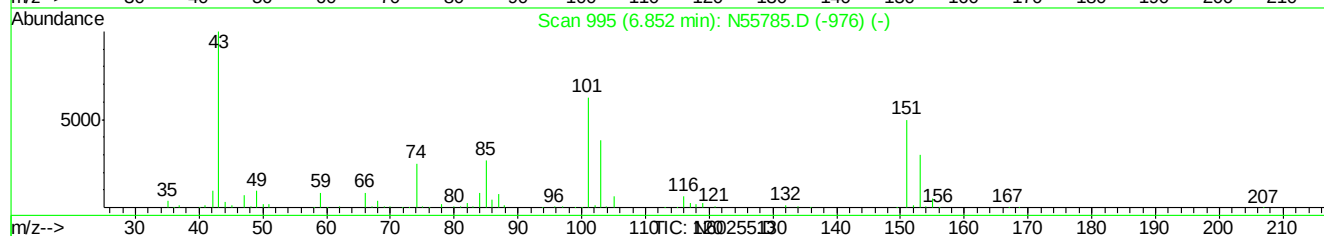
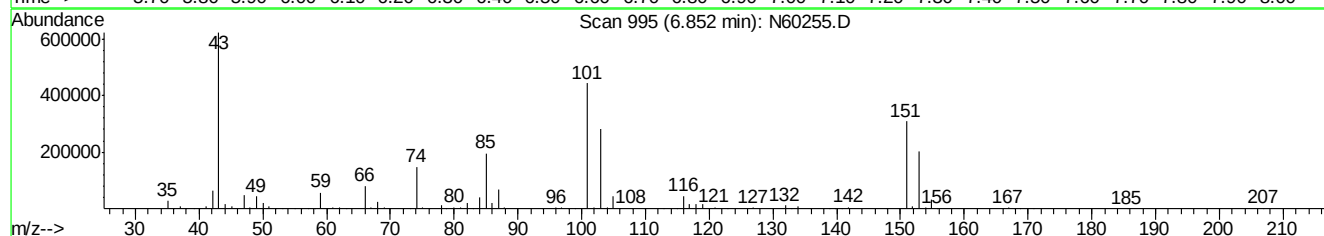
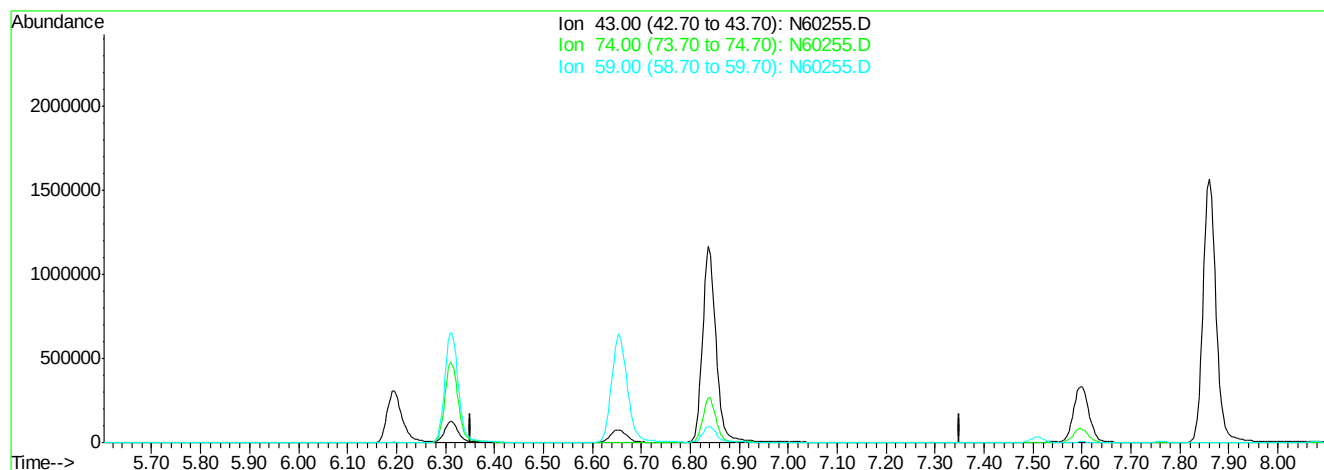
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 13 17:43 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Feb 13 17:42:01 2012
Response via : Multiple Level Calibration



(17) Methyl Acetate (M)

6.85min 0.00ug/L

response 0

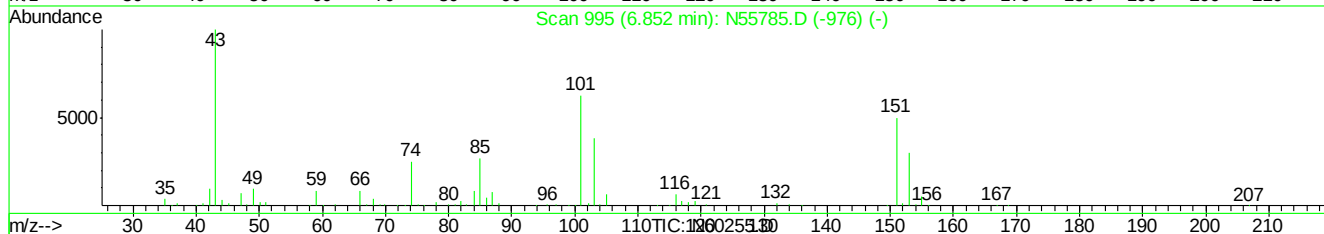
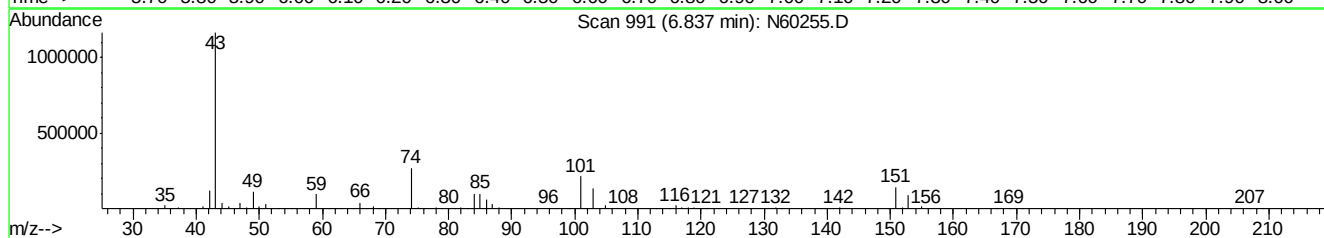
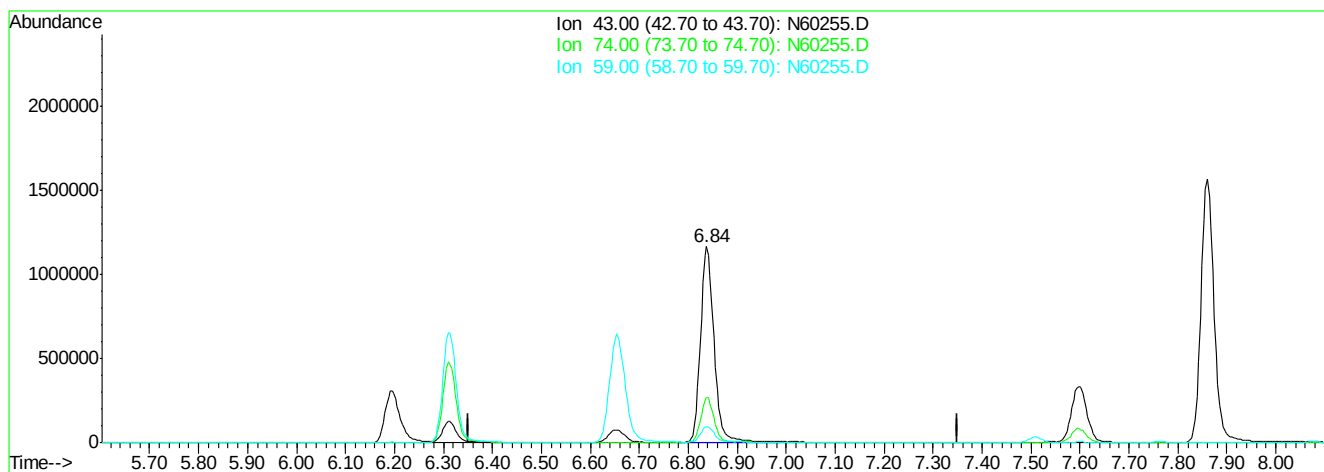
Ion	Exp%	Act%
43.00	100	0.00
74.00	25.00	0.00#
59.00	9.10	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 13 17:43 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Feb 13 17:42:01 2012
Response via : Multiple Level Calibration



(17) Methyl Acetate (M)

6.84min 387.73ug/L m

response 2244291

Ion	Exp%	Act%
43.00	100	100
74.00	25.00	23.13
59.00	9.10	8.26
0.00	0.00	0.00

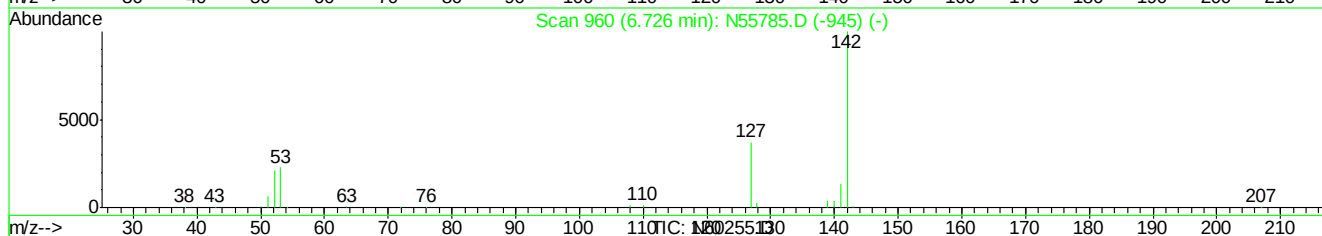
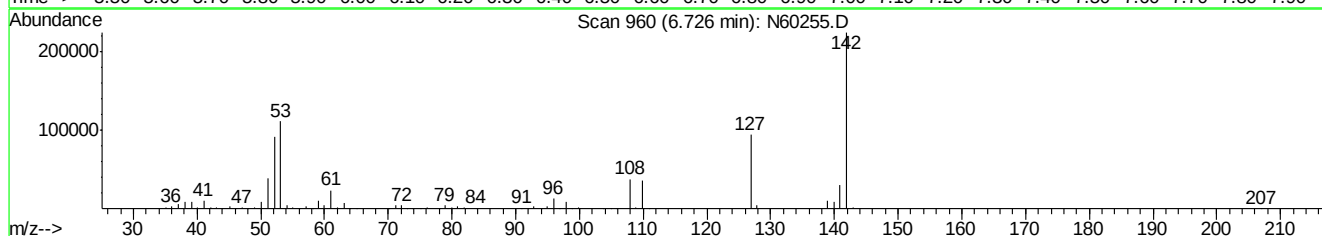
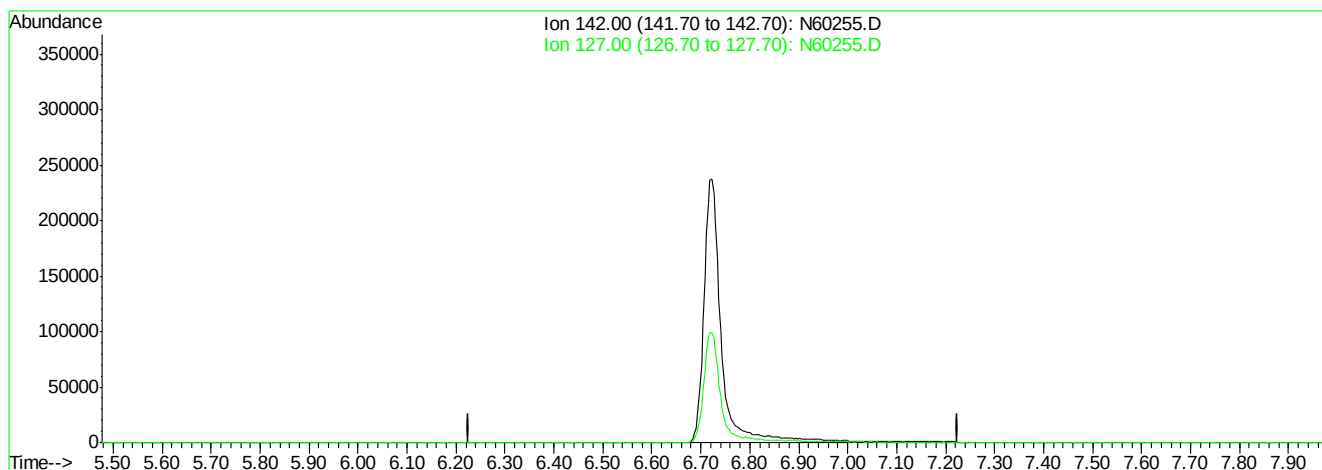
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 13 17:43 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Feb 13 17:42:01 2012
Response via : Multiple Level Calibration



(23) iodomethane (M)

6.73min 0.00ug/L

response 0

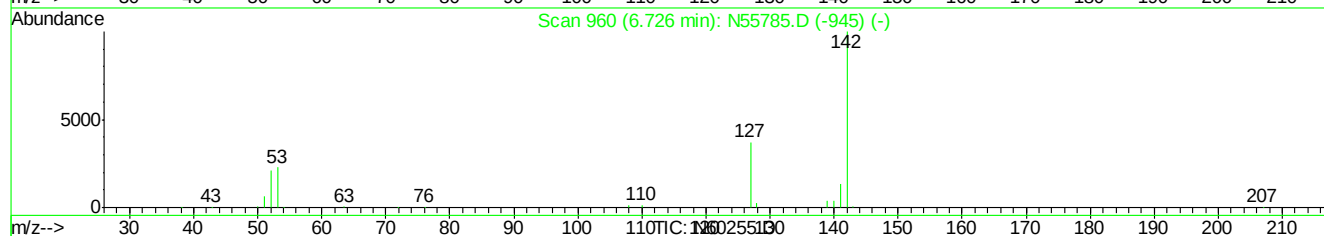
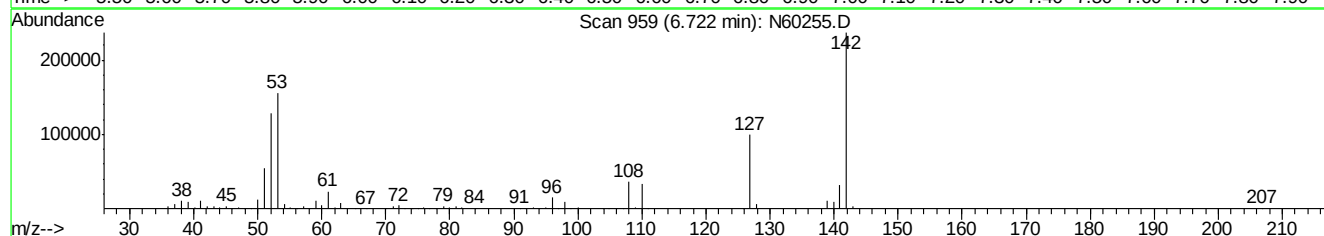
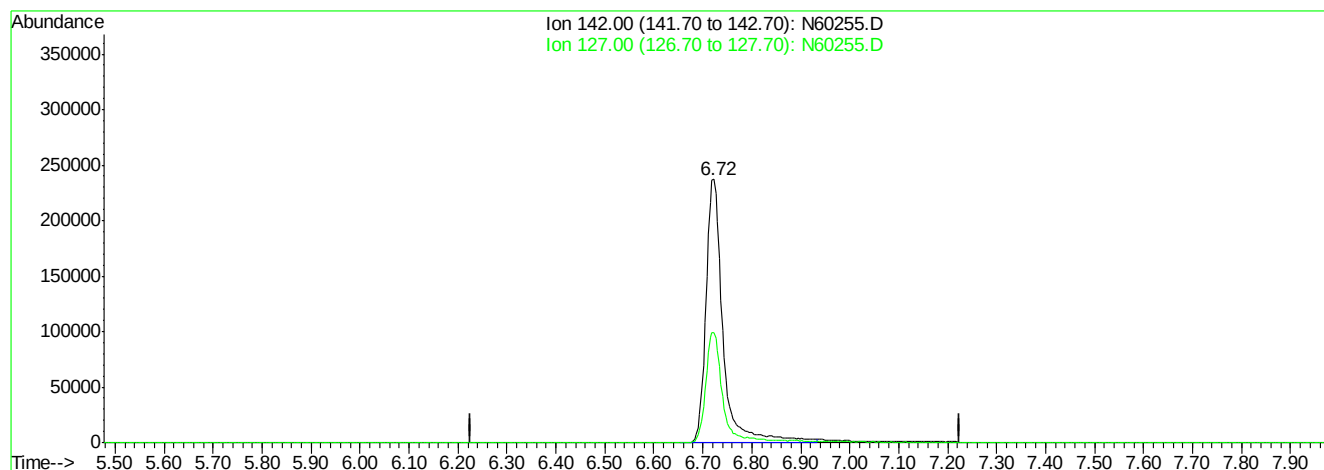
Ion	Exp%	Act%
142.00	100	0.00
127.00	37.20	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 13 17:43 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Feb 13 17:42:01 2012
Response via : Multiple Level Calibration



(23) iodomethane (M)

6.72min 431.67ug/L m

response 576778

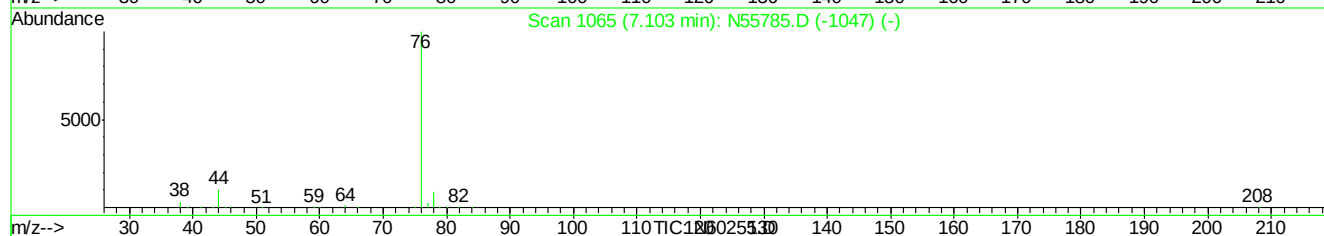
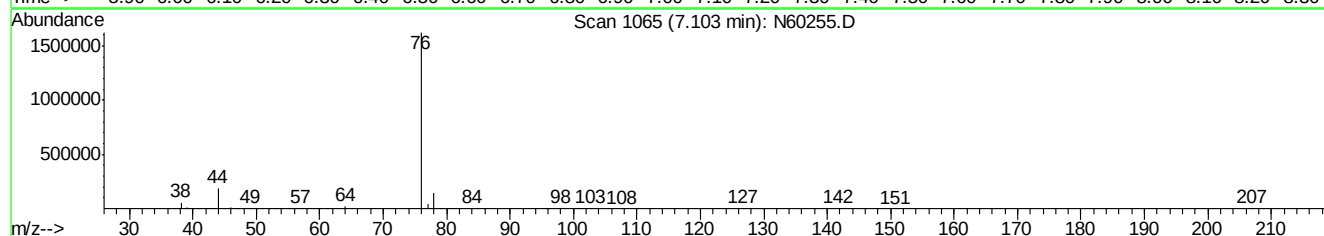
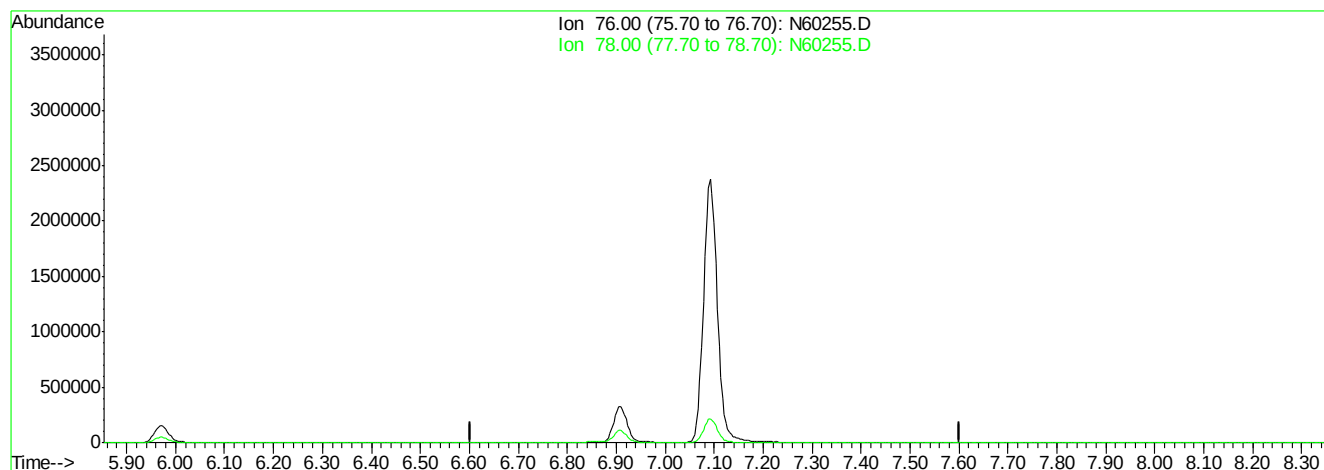
Ion	Exp%	Act%
142.00	100	100
127.00	37.20	41.82
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 13 17:43 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Feb 13 17:42:01 2012
Response via : Multiple Level Calibration



(24) carbon disulfide (M)

7.10min 0.00ug/L

response 0

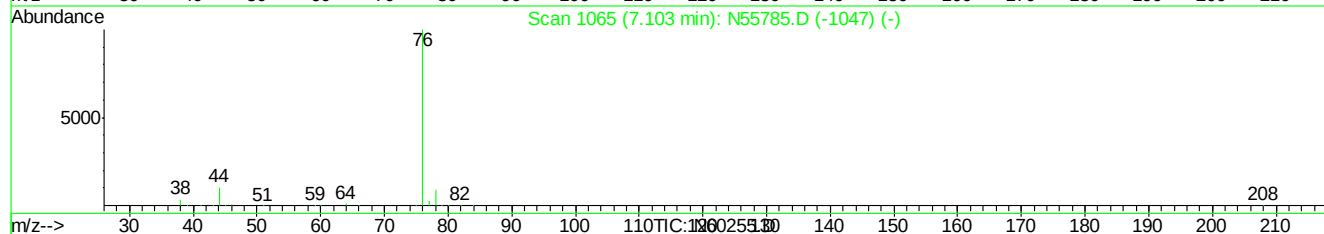
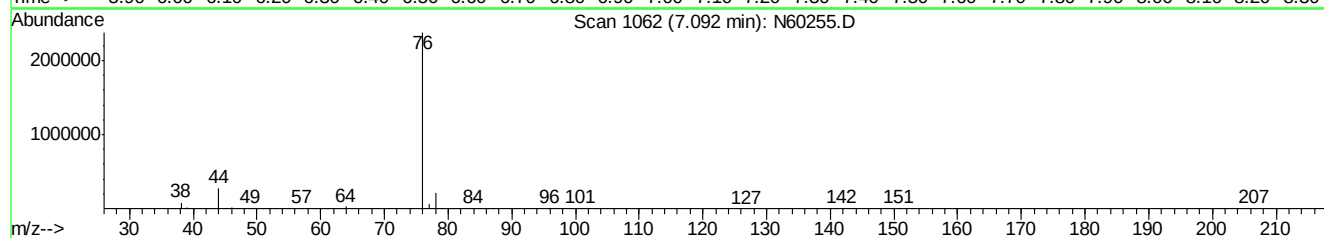
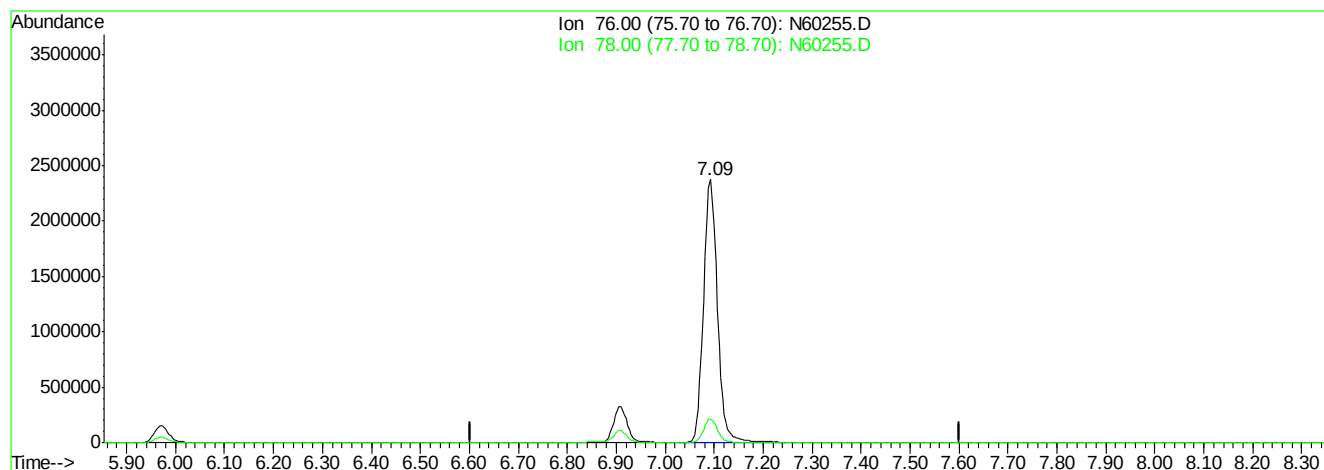
Ion	Exp%	Act%
76.00	100	0.00
78.00	9.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 13 17:43 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Feb 13 17:42:01 2012
Response via : Multiple Level Calibration



(24) carbon disulfide (M)

7.09min 317.69ug/L m

response 4692765

Ion	Exp%	Act%
76.00	100	100
78.00	9.00	9.09
0.00	0.00	0.00
0.00	0.00	0.00

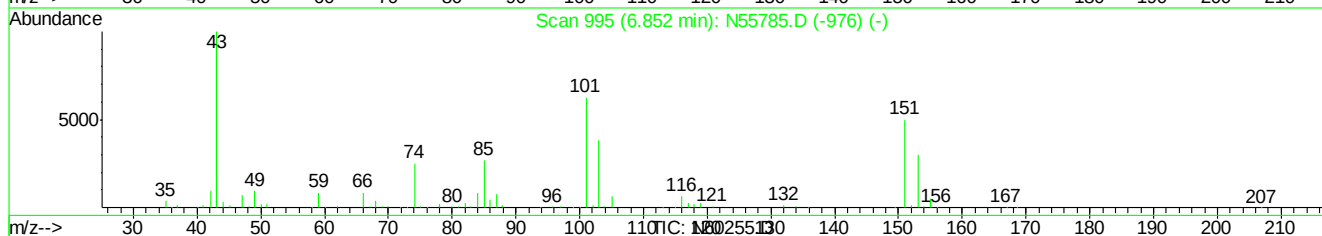
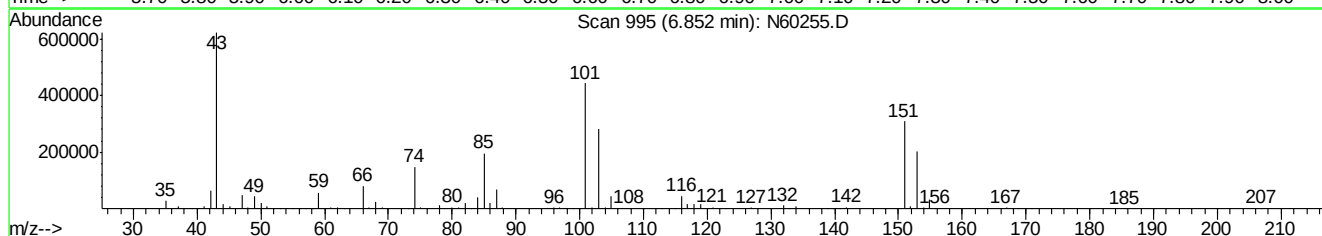
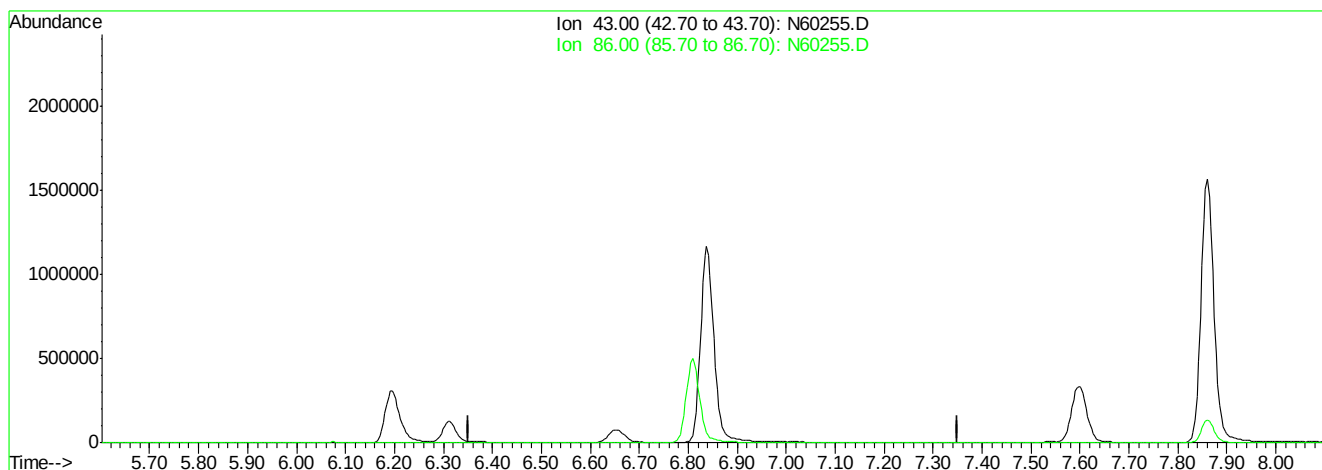
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 13 17:43 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Feb 13 17:42:01 2012
Response via : Multiple Level Calibration



(26) vinyl acetate (M)

6.85min 0.00ug/L

response 0

Ion	Exp%	Act%
43.00	100	0.00
86.00	5.70	0.00
0.00	0.00	0.00
0.00	0.00	0.00

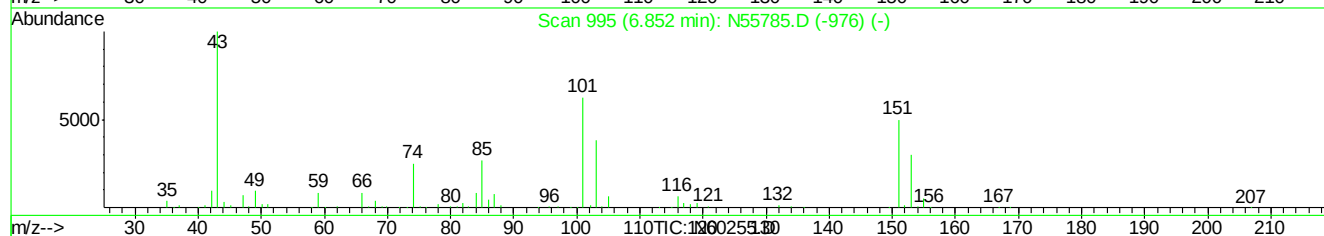
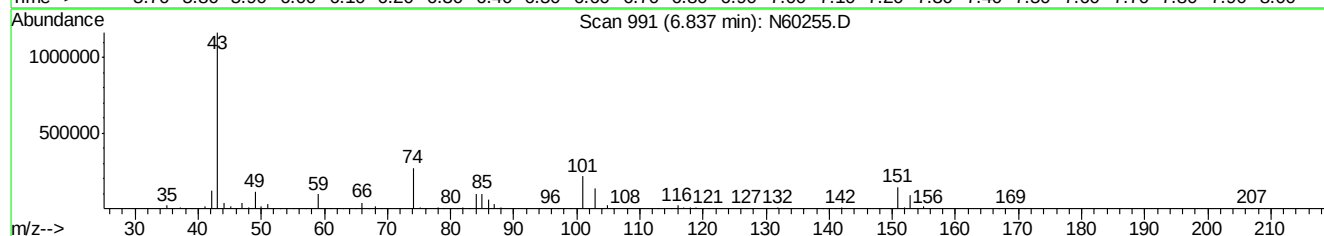
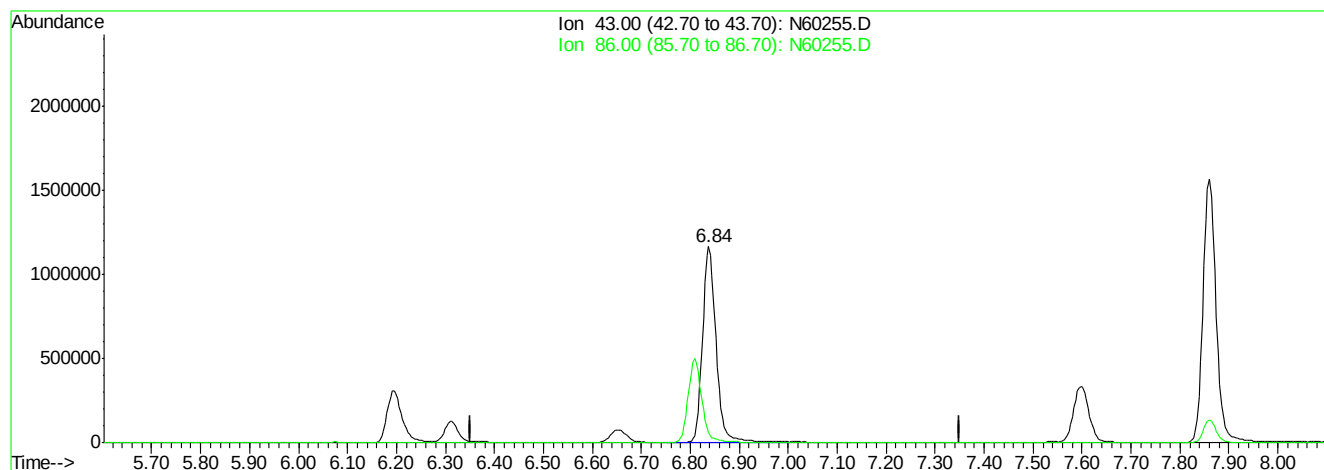
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 13 17:43 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Feb 13 17:42:01 2012
Response via : Multiple Level Calibration



(26) vinyl acetate (M)

6.84min 388.67ug/L m

response 2249707

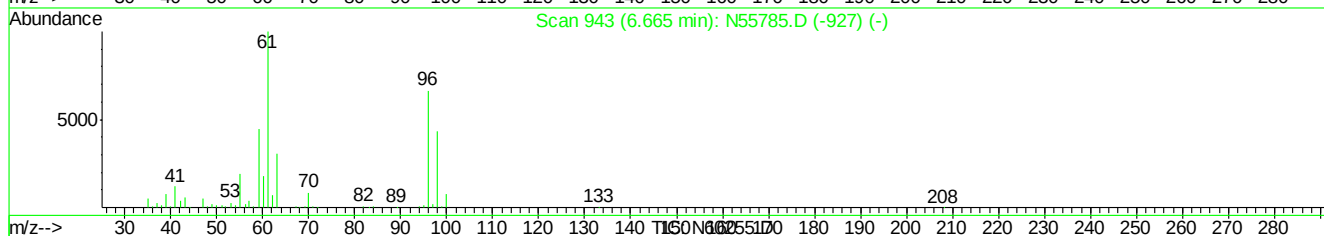
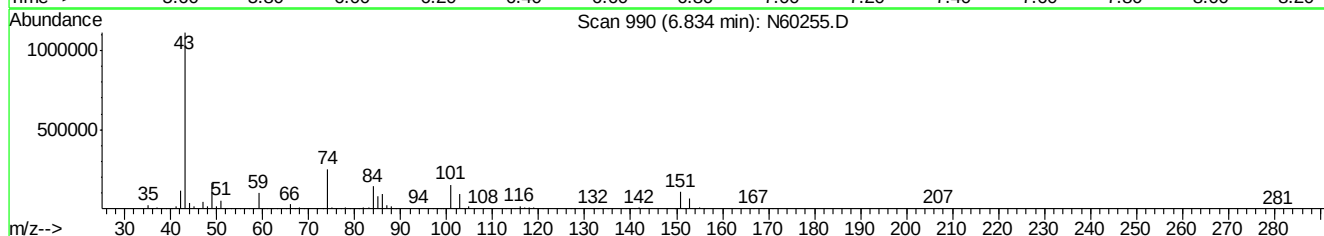
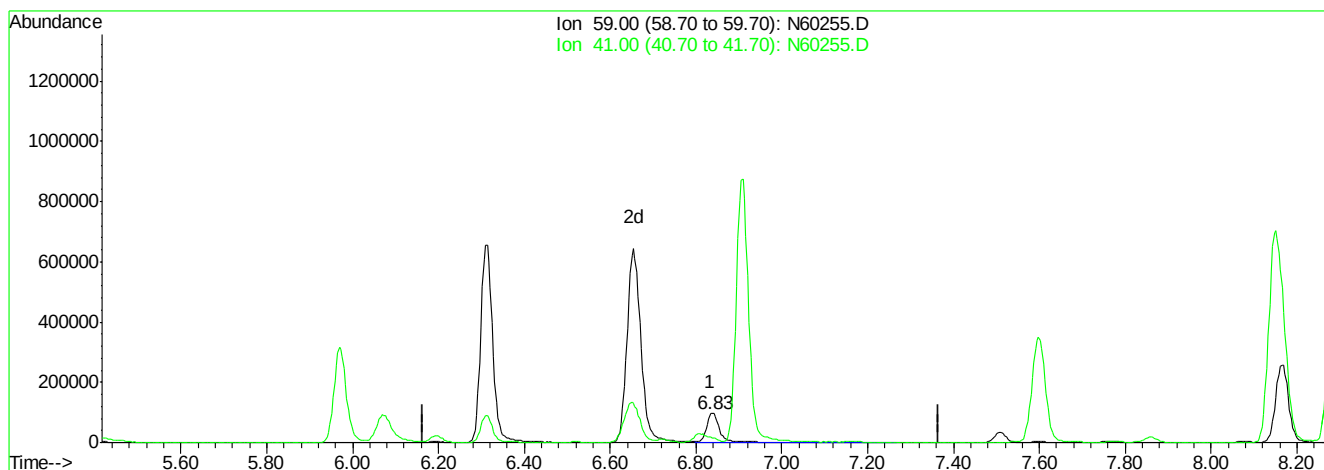
Ion	Exp%	Act%
43.00	100	100
86.00	5.70	4.98
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 13 17:43 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Feb 13 17:45:39 2012
Response via : Multiple Level Calibration



(2) tertiary butyl alcohol

6.83min 583.67ug/L

response 222657

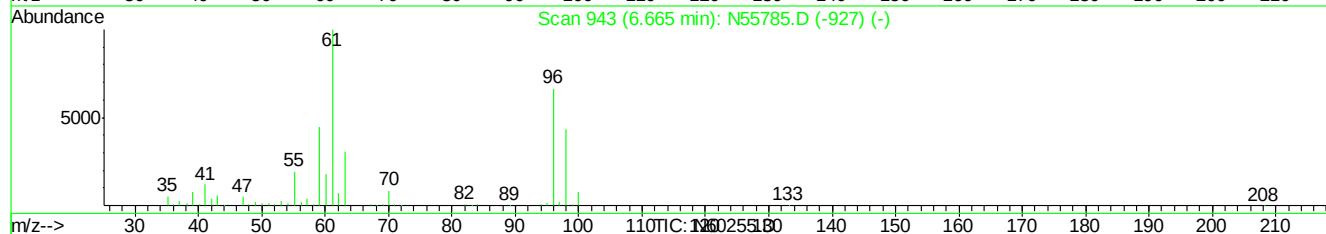
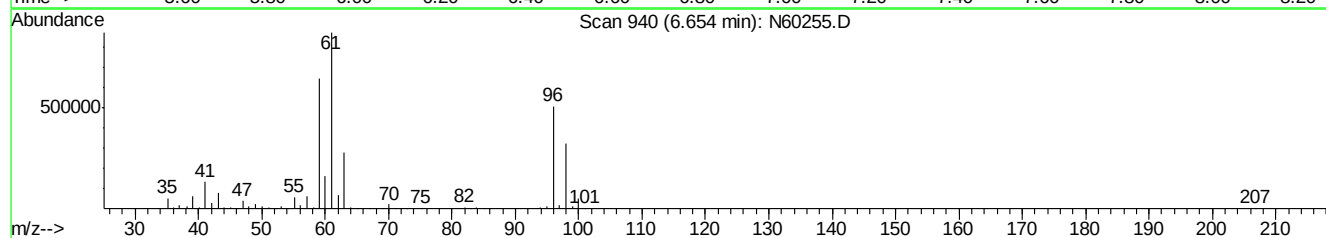
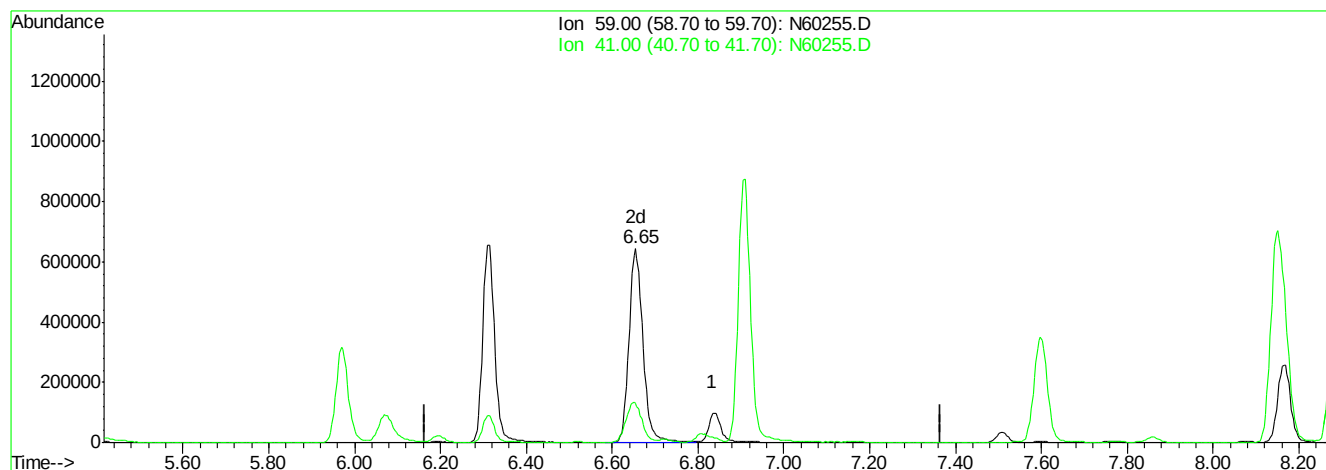
Ion	Exp%	Act%
59.00	100	100
41.00	46.10	36.46
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:09 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Mon Feb 13 17:45:39 2012
Response via : Multiple Level Calibration



(2) tertiary butyl alcohol

6.65min 3811.37ug/L m

response 1453958

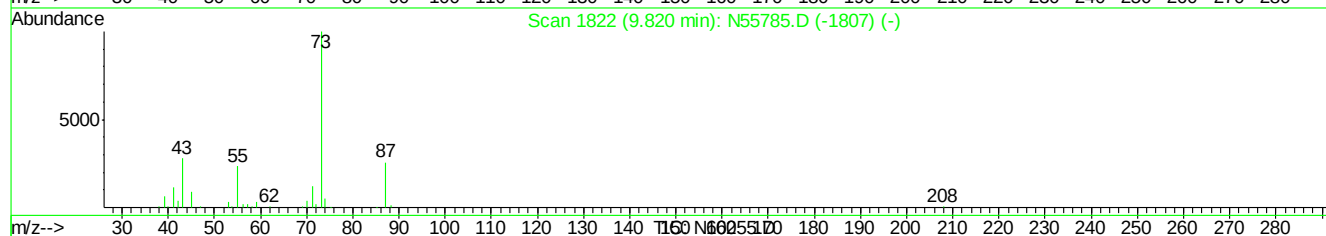
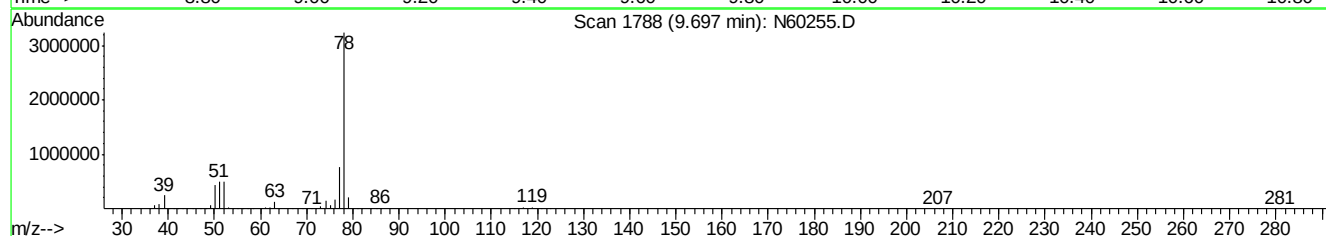
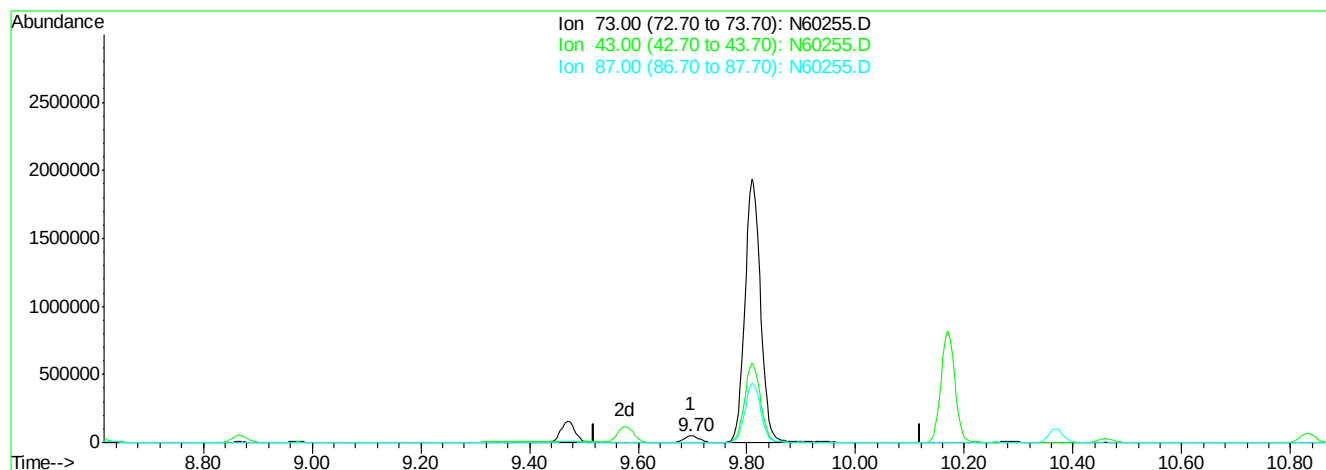
Ion	Exp%	Act%
59.00	100	100
41.00	46.10	5.58#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:09 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:15:27 2012
Response via : Multiple Level Calibration



(49) tert-amyl methyl ether (M)

9.70min 18.35ug/L

response 92021

Ion	Exp%	Act%
73.00	100	100
43.00	27.80	0.46
87.00	25.70	0.00
0.00	0.00	0.00

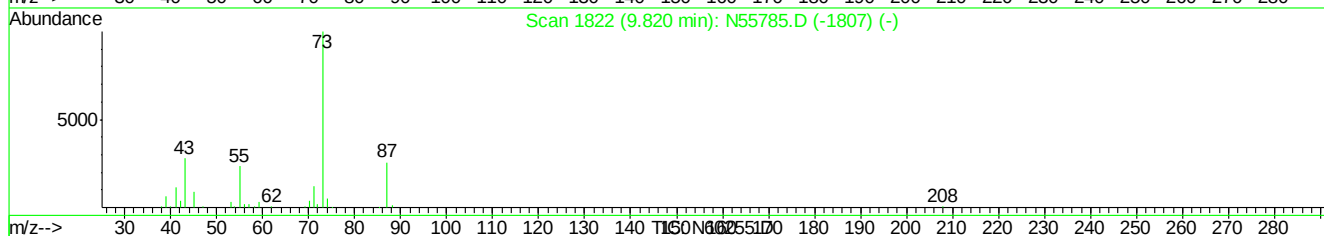
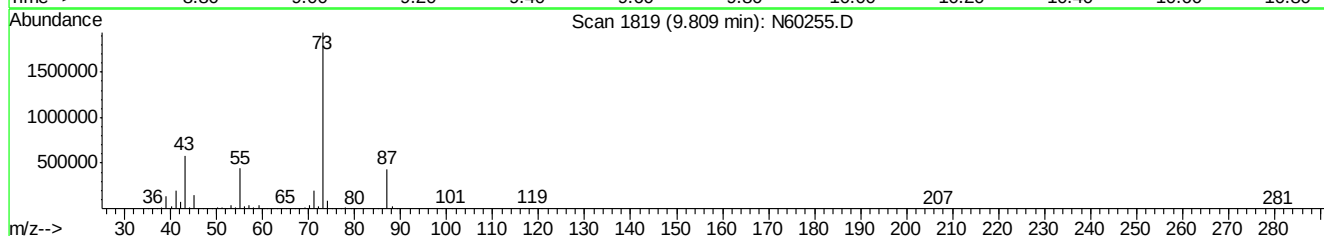
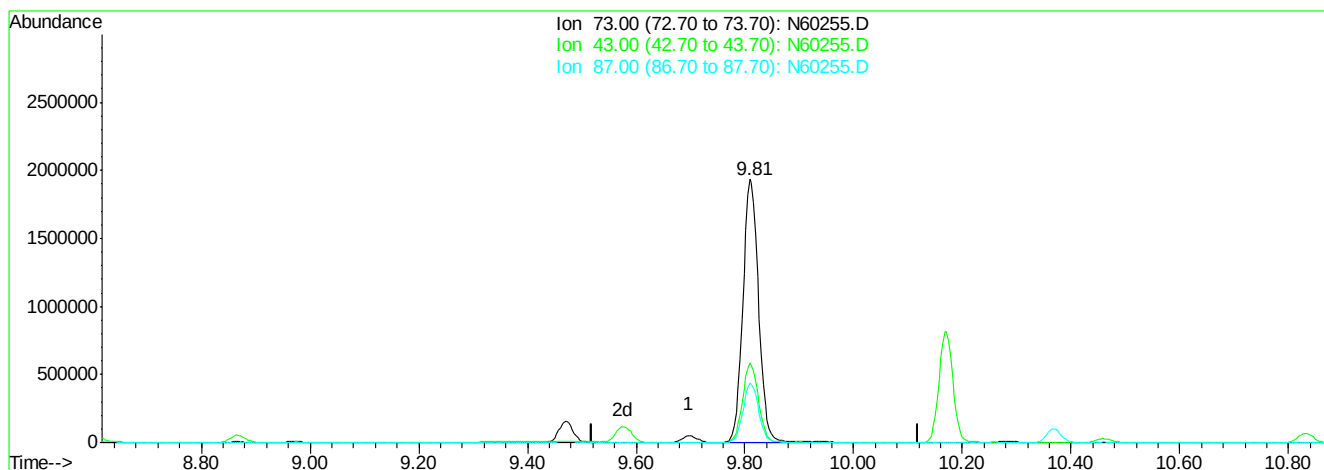
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60255.D
Acq On : 13 Feb 2012 4:48 pm
Sample : ic2251-400
Misc : MS25046,MSN2251,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 9:17 2012

Vial: 29
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 09:15:27 2012
Response via : Multiple Level Calibration



(49) tert-amyl methyl ether (M)

9.81min 781.10ug/L m

response 3916368

Ion	Exp%	Act%
73.00	100	100
43.00	27.80	30.18
87.00	25.70	22.63
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60257.D
 Acq On : 13 Feb 2012 5:45 pm
 Sample : icv2251-50
 Misc : MS25046,MSN2251,,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 14 10:58:17 2012

Vial: 31
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260
 Last Update : Tue Feb 14 10:54:28 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.57	65	165780	500.00	ug/L	0.00
4) pentafluorobenzene	9.02	168	309857	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	546627	50.00	ug/L	-0.01
66) chlorobenzene-d5	13.15	82	307494	50.00	ug/L	-0.01
80) 1,4-dichlorobenzene-d4	15.71	152	222574	50.00	ug/L	-0.01

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	162685	38.65	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	77.30%		
60) toluene-d8 (s)	11.70	98	644342	39.20	ug/L	-0.01
Spiked Amount 50.000	Range 70 - 130		Recovery =	78.40%		
82) bromofluorobenzene (s)	14.38	95	264828	43.17	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	86.34%		

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.65	59	188209	557.32	ug/L	79
3) Ethanol	5.42	45	274369	4772.18	ug/L	99
5) dichlorodifluoromethane	4.24	85	171112	71.74	ug/L	98
6) chloromethane	4.49	50	175890	57.55	ug/L	100
7) vinyl chloride	4.74	62	165764	46.38	ug/L	96
8) bromomethane	5.25	96	148367	56.91	ug/L	96
9) chloroethane	5.42	64	124246	46.65	ug/L	94
10) ethyl ether	6.31	59	166090	50.48	ug/L	99
11) acetonitrile	5.97	41	34780	Below Cal		95
12) trichlorofluoromethane	6.08	101	272072	50.15	ug/L	96
13) freon-113	6.86	101	163726	50.58	ug/L	87
14) acrolein	6.07	56	79742	192.67	ug/L	94
15) 1,1-dichloroethene	6.66	96	166581	50.26	ug/L #	72
16) acetone	6.20	43	59541	43.23	ug/L	96
17) Methyl Acetate	6.84	43	311753	50.78	ug/L	94
18) methylene chloride	6.81	84	207179	48.25	ug/L	91
19) methyl tert butyl ether	7.60	73	471213	51.27	ug/L	96
20) acrylonitrile	6.71	53	73018	235.45	ug/L	99
21) allyl chloride	6.91	41	222862	48.26	ug/L	90
22) trans-1,2-dichloroethene	7.51	96	181693	48.20	ug/L	88
23) iodomethane	6.73	142	44167	27.35	ug/L	94
24) carbon disulfide	7.10	76	610889m	49.65	ug/L	
25) propionitrile	6.64	54	2832	50.69	ug/L	100
26) vinyl acetate	6.84	43	311753	50.64	ug/L	95
27) chloroprene	8.13	53	290168	52.57	ug/L	87
28) di-isopropyl ether	8.17	45	658723	49.03	ug/L	93
29) methacrylonitrile	8.29	41	132795	48.71	ug/L	90
30) 2-butanone	8.17	72	24941	49.78	ug/L #	75
31) Hexane	8.15	41	268353	47.90	ug/L	95
32) 1,1-dichloroethane	7.76	63	352008	49.00	ug/L	97
33) tert-butyl ethyl ether	8.56	59	450475	44.22	ug/L	91
34) isobutyl alcohol	8.17	43	522175	239.14	ug/L	97
35) 2,2-dichloropropane	8.63	77	196751	44.17	ug/L	95
36) cis-1,2-dichloroethene	8.33	96	200425	48.76	ug/L	83
37) ethyl acetate	8.17	43	525625	48.06	ug/L	91

(#)=qualifier out of range (m)=manual integration

N60257.D N021312W.M

Tue Feb 14 13:59:06 2012

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60257.D

Acq On : 13 Feb 2012 5:45 pm

Sample : icv2251-50

Misc : MS25046,MSN2251,,,,5,1

MS Integration Params: RTEINT.P

Quant Time: Feb 14 10:58:17 2012

Vial: 31

Operator: JUGALP

Inst : MAMSN

Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 10:54:28 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	8.50	128	82682	51.98	ug/L #	76
39) chloroform	8.54	83	346068	48.85	ug/L	95
41) Tetrahydrofuran	8.87	42	60468	47.57	ug/L	89
42) 1,1,1-trichloroethane	9.30	97	274819	53.48	ug/L	94
44) Cyclohexane	9.58	56	343190	49.74	ug/L	95
45) carbon tetrachloride	9.66	117	189772	43.74	ug/L	97
46) 1,1-dichloropropene	9.47	75	275179	49.63	ug/L	91
47) benzene	9.70	78	787650	47.98	ug/L	100
48) 1,2-dichloroethane	9.19	62	267539	48.19	ug/L	93
49) tert-amyl methyl ether	9.81	73	389292	45.28	ug/L	95
50) heptane	10.17	43	191314	46.55	ug/L	94
51) trichloroethene	10.31	95	194930	48.09	ug/L	83
52) 1,2-dichloropropane	10.28	63	203422	48.34	ug/L	97
53) dibromomethane	10.25	93	117838	50.03	ug/L	84
54) bromodichloromethane	10.37	83	258526	52.26	ug/L	98
55) Methylcyclohexane	10.84	83	341544	49.38	ug/L	96
56) 2-chloroethyl vinyl ether	10.28	63	203422	48.34	ug/L #	100
57) methyl methacrylate	10.46	69	132994	48.30	ug/L	90
58) 1,4-dioxane	10.47	88	12279	246.23	ug/L	87
59) cis-1,3-dichloropropene	10.99	75	285241	45.92	ug/L	91
61) 4-methyl-2-pentanone	11.08	43	182217	46.60	ug/L	94
62) toluene	11.77	92	478325	49.56	ug/L	99
63) trans-1,3-dichloropropene	11.40	75	248656	47.40	ug/L	90
64) 1,1,2-trichloroethane	11.58	83	151586	47.98	ug/L	92
65) ethyl methacrylate	11.78	69	239105	48.45	ug/L	90
67) tetrachloroethene	12.51	166	160029	48.71	ug/L	93
68) 1,3-dichloropropane	11.81	76	310186	47.85	ug/L	96
69) dibromochloromethane	12.11	129	159309	47.66	ug/L	99
70) 1,2-dibromoethane	12.36	107	168010	48.89	ug/L	98
71) 2-hexanone	11.93	43	119840	45.34	ug/L	94
72) chlorobenzene	13.19	112	480449	48.91	ug/L	91
73) 1,1,1,2-tetrachloroethane	13.10	131	148584	51.97	ug/L	97
74) ethylbenzene	13.36	91	881510	48.22	ug/L	95
75) m,p-xylene	13.55	106	665500	98.47	ug/L	93
76) o-xylene	13.96	106	323402	50.97	ug/L	82
77) styrene	13.89	104	513740	52.11	ug/L	86
78) bromoform	13.71	173	90627	44.48	ug/L	100
79) trans-1,4-dichloro-2-buten	14.10	53	32794	39.11	ug/L #	1
81) isopropylbenzene	14.32	105	816293	57.37	ug/L	98
83) bromobenzene	14.61	156	177944	48.19	ug/L #	71
84) 1,1,2,2-tetrachloroethane	13.96	83	235921	47.34	ug/L	96
85) 1,2,3-trichloropropane	14.10	75	225184	47.73	ug/L	97
86) n-propylbenzene	14.76	91	1026801	49.30	ug/L	92
87) 2-chlorotoluene	14.89	91	613191	47.96	ug/L	88
88) 4-chlorotoluene	14.96	91	640969	49.96	ug/L	91
89) 1,3,5-trimethylbenzene	15.05	105	695133	49.26	ug/L	94
90) tert-butylbenzene	15.35	91	427061	49.16	ug/L	84
91) 1,2,4-trimethylbenzene	15.45	105	686917	48.53	ug/L	95
92) sec-butylbenzene	15.57	105	915077	49.78	ug/L	96

(#) = qualifier out of range (m) = manual integration

N60257.D N021312W.M

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60257.D

Vial: 31

Acq On : 13 Feb 2012 5:45 pm

Operator: JUGALP

Sample : icv2251-50

Inst : MAMSN

Misc : MS25046,MSN2251,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Feb 14 10:58:17 2012

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Tue Feb 14 10:54:28 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
93) 1,3-dichlorobenzene	15.68	146	341281	48.12	ug/L	94
94) p-isopropyltoluene	15.74	119	676676	50.87	ug/L	95
95) 1,4-dichlorobenzene	15.74	146	355952	48.27	ug/L	95
96) 1,2-dichlorobenzene	16.11	146	326561	49.22	ug/L	96
97) n-butylbenzene	16.16	91	705330	49.46	ug/L	88
98) 1,2-dibromo-3-chloropropan	16.58	75	38736	47.49	ug/L #	70
99) 1,2,4-trichlorobenzene	17.98	180	201079	47.55	ug/L	94
100) 1,3,5-trichlorobenzene	17.41	180	242261	50.68	ug/L	100
101) hexachlorobutadiene	18.29	225	108684	48.26	ug/L	96
102) naphthalene	18.27	128	479944	46.55	ug/L	100
103) 1,2,3-trichlorobenzene	18.49	180	186219	47.32	ug/L	98
104) 2-methylnaphthalene	19.79	142	111057	42.13	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 N60257.D N021312W.M Tue Feb 14 13:59:06 2012 RP1

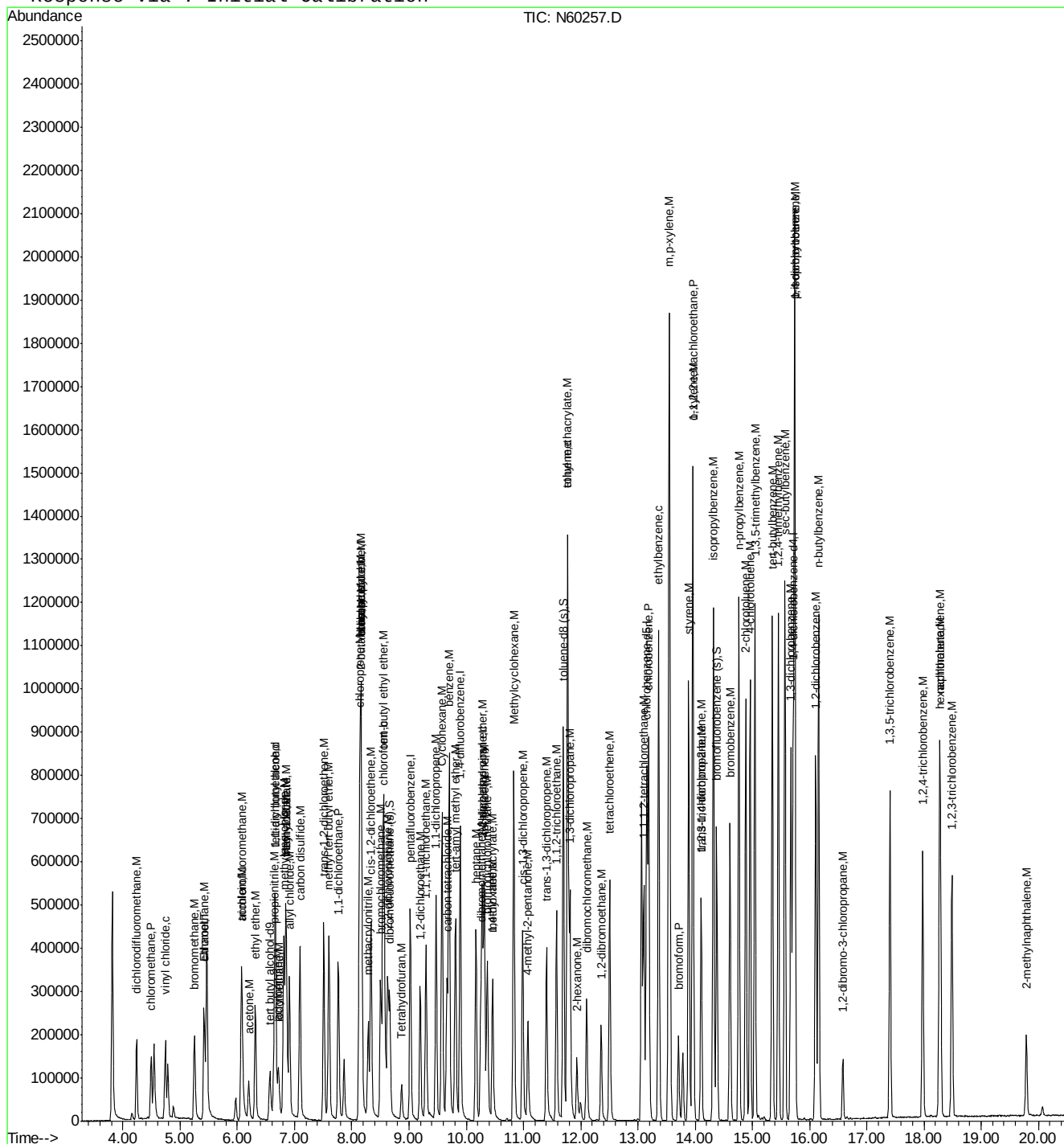
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60257.D
Acq On : 13 Feb 2012 5:45 pm
Sample : icv2251-50
Misc : MS25046,MSN2251,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 13:56 2012

Vial: 31
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

```
Method       : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title        : SW-846 Method 8260
Last Update   : Tue Feb 14 10:54:28 2012
Response via  : Initial Calibration
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N60257.D N021312W.M

Tue Feb 14 13:59:07 2012

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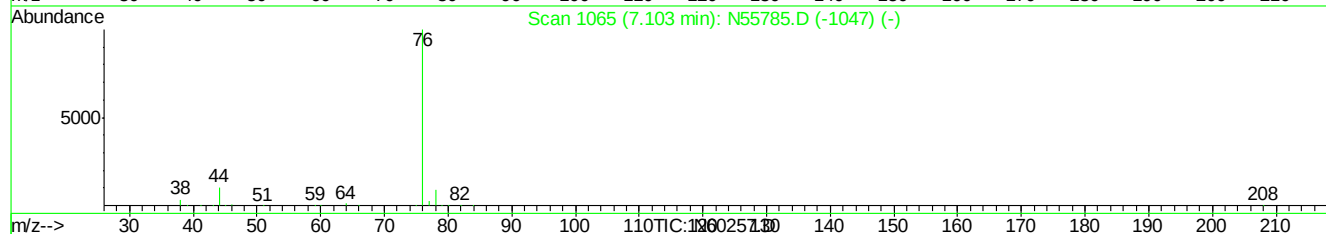
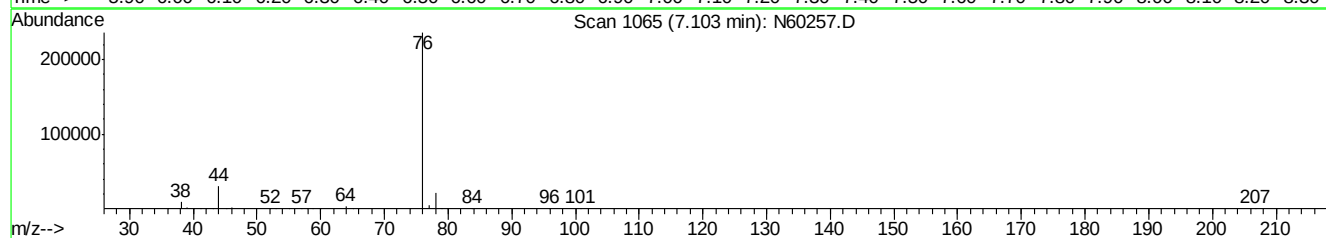
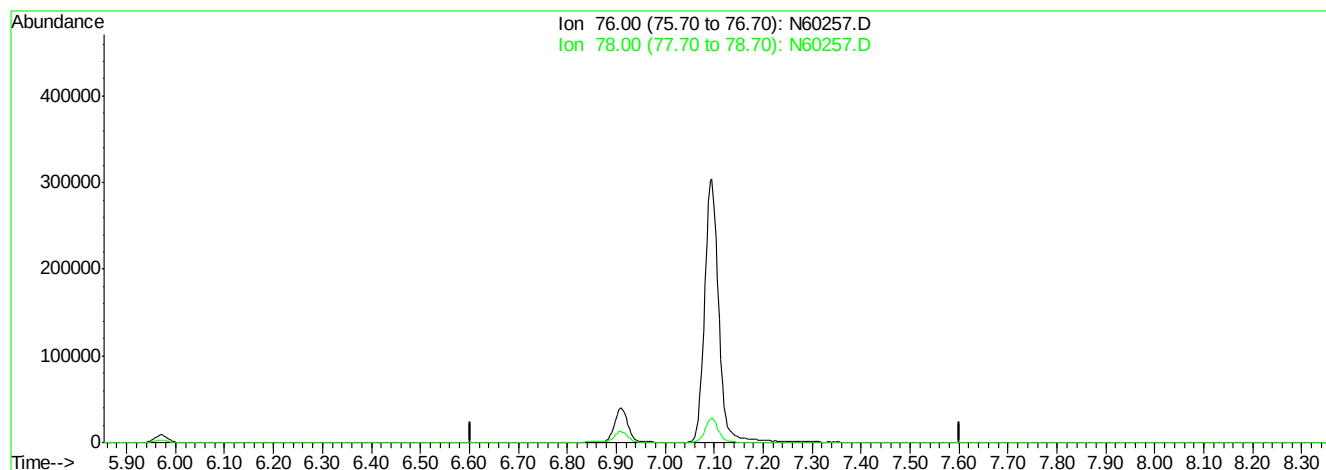
6.6.10

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60257.D
Acq On : 13 Feb 2012 5:45 pm
Sample : icv2251-50
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 10:58 2012

Vial: 31
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 10:54:28 2012
Response via : Multiple Level Calibration



(24) carbon disulfide (M)

7.10min 0.00ug/L

response 0

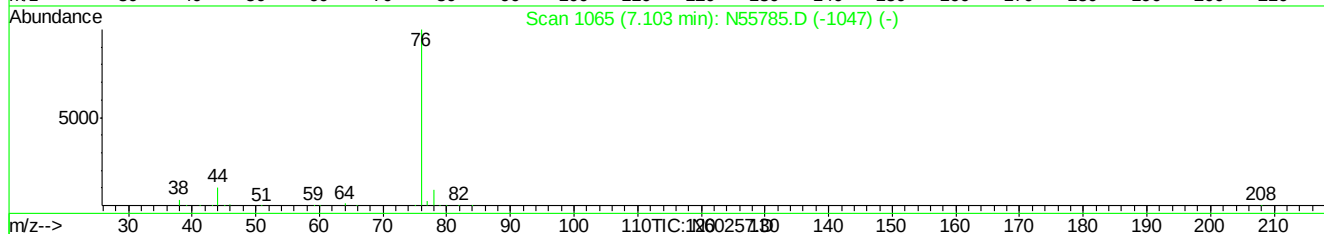
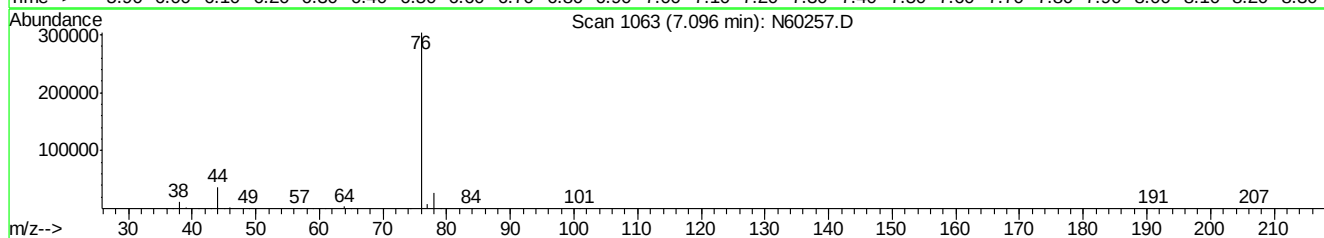
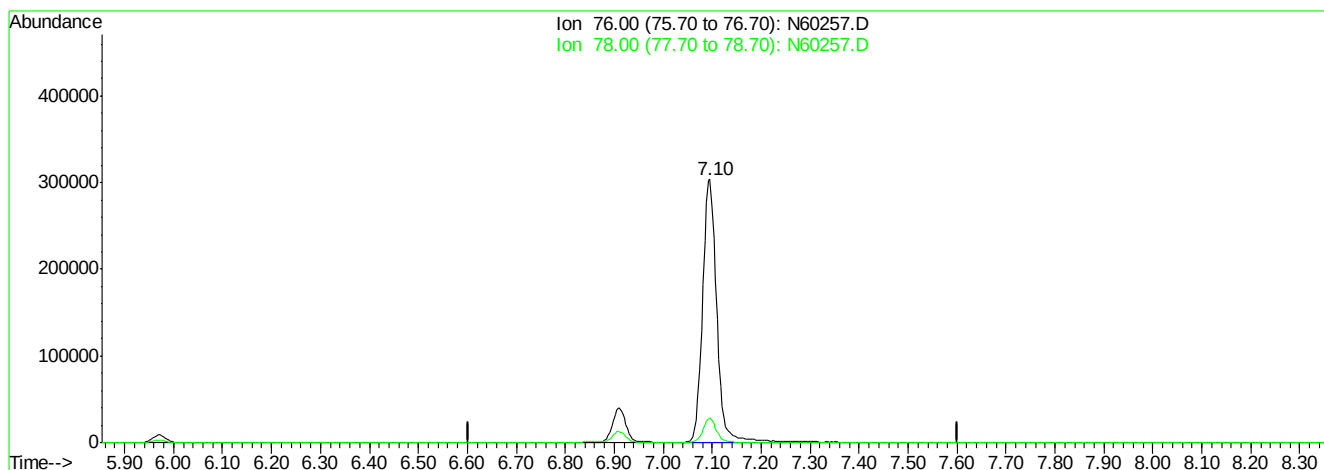
Ion	Exp%	Act%
76.00	100	0.00
78.00	9.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\N60257.D
Acq On : 13 Feb 2012 5:45 pm
Sample : icv2251-50
Misc : MS25046,MSN2251,,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 14 13:56 2012

Vial: 31
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Feb 14 10:54:28 2012
Response via : Multiple Level Calibration



(24) carbon disulfide (M)

7.10min 49.65ug/L m

response 610889

Ion	Exp%	Act%
76.00	100	100
78.00	9.00	9.19
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60736.D
 Acq On : 29 Feb 2012 2:08 pm
 Sample : BS
 Misc : MS25169,MSN2270,,,,,5,1
 MS Integration Params: RTEINT.P
 Quant Time: Feb 29 14:34:11 2012

Vial: 17
 Operator: JUGALP
 Inst : MAMSN
 Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260
 Last Update : Wed Feb 15 16:23:00 2012
 Response via : Initial Calibration
 DataAcq Meth : N8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.56	65	148756	500.00	ug/L	-0.01
4) pentafluorobenzene	9.02	168	258726	50.00	ug/L	0.00
43) 1,4-difluorobenzene	9.89	114	469979	50.00	ug/L	-0.01
66) chlorobenzene-d5	13.15	82	267330	50.00	ug/L	-0.01
80) 1,4-dichlorobenzene-d4	15.71	152	194950	50.00	ug/L	-0.01

System Monitoring Compounds

40) dibromofluoromethane (s)	8.66	113	152245	43.32	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	86.64%		
60) toluene-d8 (s)	11.70	98	616082	43.59	ug/L	-0.01
Spiked Amount 50.000	Range 70 - 130		Recovery =	87.18%		
82) bromofluorobenzene (s)	14.38	95	229847	42.78	ug/L	-0.01
Spiked Amount 50.000	Range 70 - 130		Recovery =	85.56%		

Target Compounds

						Qvalue
2) tertiary butyl alcohol	6.65	59	171989	567.57	ug/L	88
3) Ethanol	5.42	45	273218	5296.01	ug/L	100
5) dichlorodifluoromethane	4.24	85	156229	78.44	ug/L	100
6) chloromethane	4.49	50	171899	67.36	ug/L	94
7) vinyl chloride	4.74	62	159011	50.59	ug/L	93
8) bromomethane	5.25	96	98071	45.05	ug/L	97
9) chloroethane	5.42	64	103610	46.59	ug/L	96
10) ethyl ether	6.31	59	132683	48.30	ug/L	100
11) acetonitrile	5.97	41	58853	167.55	ug/L	96
12) trichlorofluoromethane	6.08	101	230005	50.78	ug/L	100
13) freon-113	6.85	101	144814	53.58	ug/L	87
14) acrolein	6.07	56	73660	213.15	ug/L	98
15) 1,1-dichloroethene	6.66	96	137585	49.71	ug/L #	67
16) acetone	6.20	43	114288	99.37	ug/L	96
17) Methyl Acetate	6.84	43	267123	52.11	ug/L	93
18) methylene chloride	6.81	84	169939	47.40	ug/L	88
19) methyl tert butyl ether	7.60	73	357329	46.56	ug/L	95
20) acrylonitrile	6.72	53	64629	249.59	ug/L	94
21) allyl chloride	6.91	41	204096	52.93	ug/L	87
22) trans-1,2-dichloroethene	7.51	96	150441	47.79	ug/L	88
23) iodomethane	6.72	142	68760	44.94	ug/L	94
24) carbon disulfide	7.09	76	470924	45.84	ug/L	100
25) propionitrile	6.64	54	3603	87.19	ug/L	100
26) vinyl acetate	6.84	43	267123	51.96	ug/L	94
27) chloroprene	8.13	53	237499	51.53	ug/L	87
28) di-isopropyl ether	8.16	45	587580	52.38	ug/L	94
29) methacrylonitrile	8.28	41	121582	53.42	ug/L	88
30) 2-butanone	8.18	72	31402	75.07	ug/L #	49
31) Hexane	8.15	41	249768	53.39	ug/L #	91
32) 1,1-dichloroethane	7.76	63	301774	50.31	ug/L	99
33) tert-butyl ethyl ether	8.56	59	295623	35.17	ug/L	92
34) isobutyl alcohol	8.17	43	528615	289.94	ug/L	92
35) 2,2-dichloropropane	8.62	77	153467	41.56	ug/L	92
36) cis-1,2-dichloroethene	8.33	96	169389	49.36	ug/L #	78
37) ethyl acetate	8.17	43	525368	57.53	ug/L	95

(#)=qualifier out of range (m)=manual integration

N60736.D N021312W.M

Wed Feb 29 14:35:54 2012

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Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60736.D

Acq On : 29 Feb 2012 2:08 pm

Sample : BS

Misc : MS25169,MSN2270,,,,,5,1

MS Integration Params: RTEINT.P

Quant Time: Feb 29 14:34:11 2012

Vial: 17

Operator: JUGALP

Inst : MAMSN

Multiplr: 1.00

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Wed Feb 15 16:23:00 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) bromochloromethane	8.50	128	66615	50.15	ug/L #	68
39) chloroform	8.54	83	306519	51.82	ug/L	99
41) Tetrahydrofuran	8.87	42	52826	49.77	ug/L	91
42) 1,1,1-trichloroethane	9.29	97	231822	54.03	ug/L	93
44) Cyclohexane	9.58	56	304874	51.39	ug/L	92
45) carbon tetrachloride	9.66	117	166451	44.57	ug/L	94
46) 1,1-dichloropropene	9.47	75	236386	49.59	ug/L	88
47) benzene	9.70	78	672613	47.65	ug/L	98
48) 1,2-dichloroethane	9.19	62	230258	48.24	ug/L	94
49) tert-amyl methyl ether	9.81	73	260087	36.45	ug/L	94
50) heptane	10.17	43	184890	52.32	ug/L	93
51) trichloroethene	10.31	95	173051	49.66	ug/L	84
52) 1,2-dichloropropane	10.28	63	184938	51.11	ug/L	98
53) dibromomethane	10.25	93	100304	49.53	ug/L	85
54) bromodichloromethane	10.37	83	230244	54.13	ug/L	99
55) Methylcyclohexane	10.83	83	307438	51.70	ug/L	91
56) 2-chloroethyl vinyl ether	10.28	63	184938	51.11	ug/L #	99
57) methyl methacrylate	10.46	69	113348	47.88	ug/L	83
58) 1,4-dioxane	10.46	88	10984	256.18	ug/L	90
59) cis-1,3-dichloropropene	10.99	75	243401	45.59	ug/L	94
61) 4-methyl-2-pentanone	11.08	43	174974	52.04	ug/L	93
62) toluene	11.77	92	417620	50.33	ug/L	99
63) trans-1,3-dichloropropene	11.40	75	215865	47.82	ug/L	92
64) 1,1,2-trichloroethane	11.58	83	136051	50.08	ug/L	90
65) ethyl methacrylate	11.78	69	212173	50.00	ug/L	88
67) tetrachloroethene	12.51	166	144184	50.48	ug/L	90
68) 1,3-dichloropropane	11.81	76	285037	50.57	ug/L	98
69) dibromochloromethane	12.10	129	148979	50.93	ug/L	96
70) 1,2-dibromoethane	12.36	107	148073	49.57	ug/L	95
71) 2-hexanone	11.93	43	161347	70.21	ug/L	92
72) chlorobenzene	13.19	112	433482	50.76	ug/L	89
73) 1,1,1,2-tetrachloroethane	13.10	131	136719	55.01	ug/L	98
74) ethylbenzene	13.36	91	795692	50.06	ug/L	95
75) m,p-xylene	13.55	106	597023	101.61	ug/L	85
76) o-xylene	13.96	106	293288	53.17	ug/L	90
77) styrene	13.89	104	448729	52.35	ug/L	87
78) bromoform	13.71	173	87076	48.32	ug/L	100
79) trans-1,4-dichloro-2-buten	14.10	53	26254	36.92	ug/L #	1
81) isopropylbenzene	14.32	105	751521	60.30	ug/L	96
83) bromobenzene	14.61	156	163663	50.60	ug/L #	76
84) 1,1,2,2-tetrachloroethane	13.95	83	227301	52.08	ug/L	93
85) 1,2,3-trichloropropane	14.10	75	206482	49.97	ug/L	98
86) n-propylbenzene	14.76	91	947234	51.92	ug/L	91
87) 2-chlorotoluene	14.89	91	561665	50.15	ug/L	91
88) 4-chlorotoluene	14.96	91	584416	52.00	ug/L	91
89) 1,3,5-trimethylbenzene	15.04	105	635734	51.43	ug/L	95
90) tert-butylbenzene	15.35	91	394717	51.88	ug/L	80
91) 1,2,4-trimethylbenzene	15.45	105	633665	51.11	ug/L	93
92) sec-butylbenzene	15.57	105	870951	54.10	ug/L	95

(#)=qualifier out of range (m)=manual integration

N60736.D N021312W.M

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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60736.D

Vial: 17

Acq On : 29 Feb 2012 2:08 pm

Operator: JUGALP

Sample : BS

Inst : MAMSN

Misc : MS25169,MSN2270,,,,,5,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Feb 29 14:34:11 2012

Quant Results File: N021312W.RES

Quant Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)

Title : SW-846 Method 8260

Last Update : Wed Feb 15 16:23:00 2012

Response via : Initial Calibration

DataAcq Meth : N8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
93) 1,3-dichlorobenzene	15.67	146	315604	50.80	ug/L	94
94) p-isopropyltoluene	15.74	119	646452	55.48	ug/L	93
95) 1,4-dichlorobenzene	15.74	146	334725	51.82	ug/L	96
96) 1,2-dichlorobenzene	16.11	146	304783	52.44	ug/L	96
97) n-butylbenzene	16.16	91	682590	54.64	ug/L	89
98) 1,2-dibromo-3-chloropropan	16.58	75	36657	51.31	ug/L #	69
99) 1,2,4-trichlorobenzene	17.98	180	180528	48.62	ug/L	99
100) 1,3,5-trichlorobenzene	17.41	180	218568	52.21	ug/L	100
101) hexachlorobutadiene	18.28	225	106219	53.84	ug/L	97
102) naphthalene	18.27	128	406264	45.26	ug/L	100
103) 1,2,3-trichlorobenzene	18.49	180	162547	47.18	ug/L	95
104) 2-methylnaphthalene	19.79	142	79729	35.95	ug/L #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 N60736.D N021312W.M Wed Feb 29 14:35:54 2012 RP1

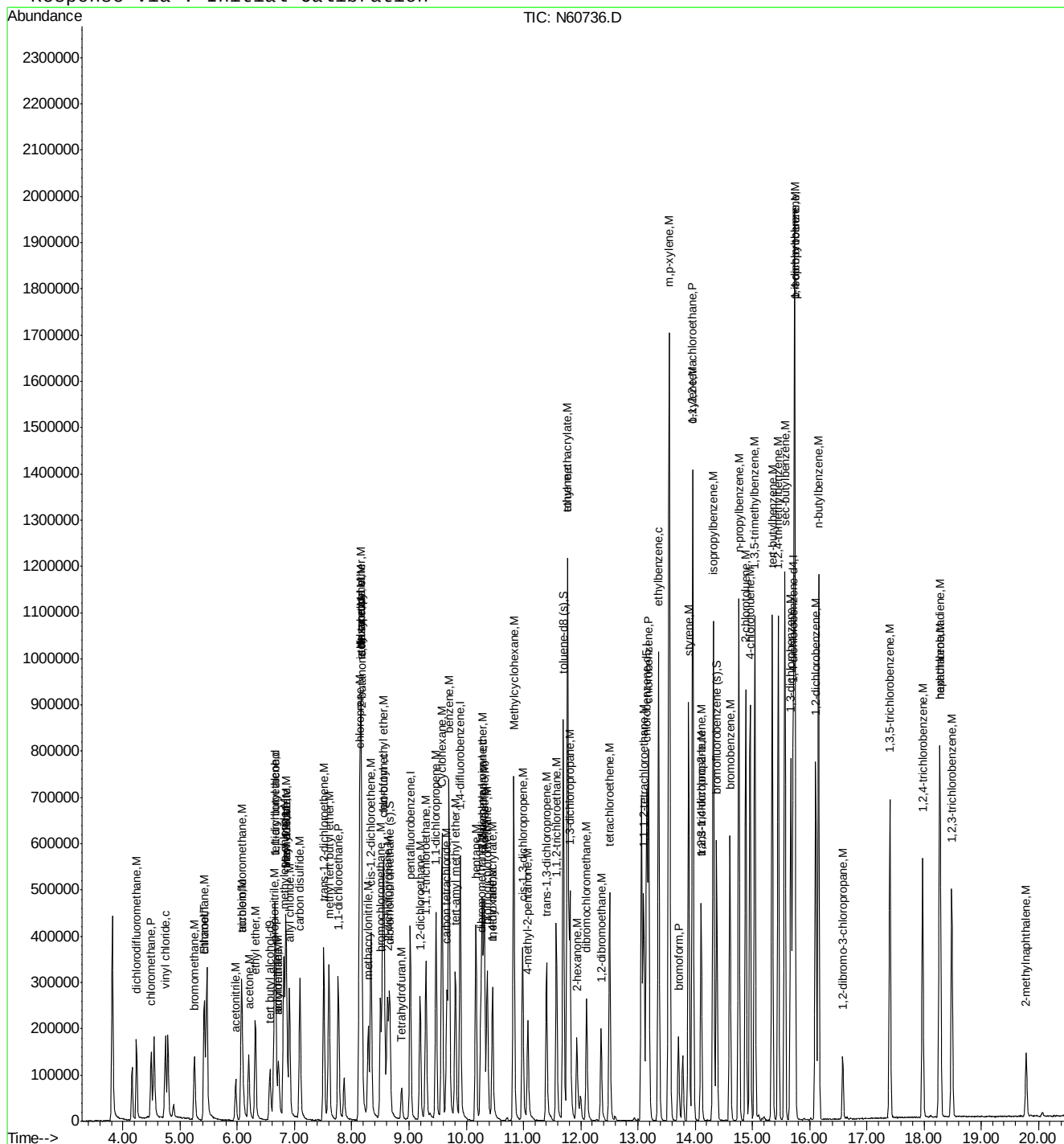
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\N60736.D
Acq On : 29 Feb 2012 2:08 pm
Sample : BS
Misc : MS25169,MSN2270,,,,5,1
MS Integration Params: RTEINT.P
Quant Time: Feb 29 14:34 2012

Vial: 17
Operator: JUGALP
Inst : MAMSN
Multiplr: 1.00

Quant Results File: N021312W.RES

Method : C:\MSDCHEM\1\METHODS\N021312W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Wed Feb 15 16:23:00 2012
Response via : Initial Calibration



N60736.D N021312W.M

Wed Feb 29 14:35:54 2012

RP1

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6.6.11

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
M38562	V8260 Cal. Std	200 ug/ml
M38571	" BSC ² Std	" "
M38573	" 28 2 SS	125 ppm
M38574	" Sample std	200 ug/ml
M38560	" Int. Std.	125 ppm

Daily Saved File

Tune file 1:	N80246
Tune file 2:	N/A
Initial Cal:	02/06/12-02/13/12
ID File:	N020612-02/13/12
ICAL Verified:	N60257
Sequence verified:	THP

Date: 02/13/12

Batch ID: MSN2251

N021312W.M

Analysts

Signature: THP

*Note: If sample matrix is soil - method SW846 5035 used for preparation. SW846 5030 is purge and trap method for soil and water.

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	Res Cl.	Dil. Fact.	pH	Comments
N80241	Blank	N/A	N/A	N/A	15	N/A	5ml	N/A	1/1	N/A	
42	Blank				16						
43	Blank				17						
44	Blank				18						
45	BFB	5	M38514		19						
46	BFB	5	M38514		20						
47	IC2251-25	5/1	M38514		21						
48	-5				22						
49	-2				23						
50	-1				24						
51	-0.5				25						
52	IC2251-50				26						
53	IC2251-100				27						
54	-200				28						
55	-400				29						
56	Blank	N/A	N/A		30						
57	ICV2251-50	5/1	M38514		31						
58	ICV2251-100	5/1			32						
59	Blank	N/A	N/A		33						

THP
02/14/12

MTX = Matrix: Designate W for water, S for soil, O for oil.

Sample amount is reported in grams (wet) for soil and oil, ml's for water.

MS001-04 Date: 12/02/08

Review: Adam Taylor 2/15/12

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VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data		
Lot #	Description	Conc
m38562	V8760 Cal. Std	200 ug/l
m38571	" B5(195) Std	" "
m38588	" B2 2K ₂	125 ppb

Daily Saved File	
Tune file 1:	N60736
Tune file 2:	N/A
Initial Cal:	0211312
ID File:	N020312W.m
ICAL Verified:	N60257
Sequence verified:	FFFF

Date: 02/29/12

Batch ID: MSN2270

Analysts

Signature:

*Note: If sample matrix is soil – method SW846 5035 used for preparation. SW846 5030 is purge and trap method for soil and water.

[illegible]

MTX = Matrix: Designate **W** for water, **S** for soil, **O** for oil.

Sample amount is reported in grams (wet) for soil and oil, mls/ for water.

MS001-04 Date: 12/02/08

Review: William Lynch 3/1/12

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APPENDIX

D SOIL BORING LOGS



Boring Log: SB-01**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 1, 2011**Surface Elevation (feet AMSL*):****Total Depth (feet):** 20**Borehole Diameter (inches):** 3

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
	1	0.2		50		CONCRETE
	2	0.6		50		FILL Brown (7.5YR 4/4) sand, trace clay and gravel; medium-grained; well sorted; dry.
5	3	1.2		65		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace gravel; medium-grained; loose; moist.
	4	1.6		80		
10	5	2.5		80		Lean Clay (CL) Brown (7.5YR 5/6) clay, trace sand; low to medium plasticity; medium-stiff; moist.
	6	1.1		80		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace medium-gravel; medium-grained; soft to medium-stiff; moist.
	7	0.3		80		
15	8	0.0		90		Well-Graded Sand (SW) Yellow micaceous sand; fine- to coarse-grained; poorly sorted; loose; moist.
	9	0.0		100		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace medium-gravel; medium-grained; soft to medium-stiff; moist.
	10	0.0		100		
20						Bottom of Boring at 20 feet
25						

Geologist(s): David A. Carstens
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Luke Zaballero
Method: Direct Push

WSP Environment & Energy
 5 Sullivan Street
 Cazenovia, NY 13035
 (315) 655-3900

Boring Log: SB-02**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 1, 2011**Surface Elevation (feet AMSL*):****Total Depth (feet):** 20**Borehole Diameter (inches):** 3

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
	1	10.5		50		CONCRETE
	2	2.9		50		FILL Brown (7.5YR 4/4) sand, trace clay and gravel; medium-grained; well sorted; dry.
5	3	1.4		65		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace gravel; medium-grained; loose; moist. -red-orange stains at 7 feet bgs.
	4	1.4		80		
10	5	1.1		80		Lean Clay (CL) Brown (7.5YR 5/6) clay, trace sand; low to medium plasticity; medium-stiff; moist.
	6	1.8		100		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace medium-gravel; medium-grained; soft to medium-stiff; moist.
	7	2.7		100		-very moist from 18 to 20 feet bgs.
15	8	3.1		100		
	9	2.7		100		
	10	0.1		100		
20						Bottom of Boring at 20 feet
25						

Geologist(s): David A. Carstens**Subcontractor:** Zebra Environmental Corporation**Driller/Operator:** Luke Zaballero**Method:** Direct Push**WSP Environment & Energy**

5 Sullivan Street

Cazenovia, NY 13035

(315) 655-3900

Boring Log: SB-03**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 1, 2011**Surface Elevation (feet AMSL*):****Total Depth (feet):** 20**Borehole Diameter (inches):** 3

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
	1	0.0		60		CONCRETE
	2	0.0		60		FILL Brown (7.5YR 4/4) sand, trace clay and gravel; medium-grained; well sorted; dry.
	3	0.0		60		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace gravel; medium-grained; loose; moist.
5	4	0.8		70		
	5	0.5		70		
10	6	0.2		70		Lean Clay (CL) Pinkish-gray (7.5YR 7/2) clay, trace sand, low to medium plasticity; medium-stiff; moist.
	7	0.0		100		
	8	0.0		100		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace medium-gravel; medium-grained; soft to medium-stiff; moist.
15	9	0.0		100		
	10	0.0		100		
	11	0.0		100		
20						Bottom of Boring at 20 feet
25						

Geologist(s): David A. Carstens
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Luke Zaballero
Method: Direct Push

WSP Environment & Energy
 5 Sullivan Street
 Cazenovia, NY 13035
 (315) 655-3900

Boring Log: SB-04**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 1, 2011**Surface Elevation (feet AMSL*):****Total Depth (feet):** 20**Borehole Diameter (inches):** 3

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
	1	1.1		50		CONCRETE
	2	0.7		50		FILL Brown (7.5YR 4/4) sand, trace clay and gravel; medium-grained; well sorted; dry.
5	3	0.0		65		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace gravel; medium-grained; loose; moist.
	4	0.5		80		
	5	0.4		80		Lean Clay (CL) Brown (7.5YR 5/6) clay, trace sand; low to medium plasticity; medium-stiff; moist.
10	6	0.2		100		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace medium-gravel; medium-grained; soft to medium-stiff; moist.
	7	0.1		100		-gravel content increasing from 17 to 20 feet bgs.
15	8	0.0		100		
	9	0.2		100		
	10	0.0		100		
20						Bottom of Boring at 20 feet
25						

Geologist(s): David A. Carstens
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Luke Zaballero
Method: Direct Push

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Boring Log: SB-05**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 1, 2011**Surface Elevation (feet AMSL*):****Total Depth (feet):** 20**Borehole Diameter (inches):** 3

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
	1	8.2		60		CONCRETE
	2	4.8		60		FILL Brown (7.5YR 4/4) sand, trace clay and gravel; medium-grained; well sorted; dry.
5	3	1.3		70		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace gravel; medium-grained; loose; moist.
	4	2.6		80		
10	5	3.1		80		Lean Clay (CL) Brown (7.5YR 5/6) clay, trace sand; low to medium plasticity; medium-stiff; moist.
	6	4.2		90		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace medium-gravel; medium-grained; soft to medium-stiff; moist.
	7	3.6		90		
15	8	1.8		95		
	9	1.6		100		
	10	0.2		100		
20						Bottom of Boring at 20 feet
25						

Geologist(s): David A. Carstens
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Luke Zaballero
Method: Direct Push

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Boring Log: SB-06**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 17, 2011**Surface Elevation (feet AMSL*):****Total Depth (feet):** 20**Borehole Diameter (inches):** 3

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
1	1	0.0		50		CONCRETE
2	2	0.0		50		FILL Brown (7.5YR 4/4) sand, trace clay and gravel; medium-grained; well sorted; dry.
5	3	0.1		65		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace gravel; medium-grained; loose; moist. -very wet from 11 to 12 feet bgs.
	4	1.2		80		
	5	0.9		80		
10	6	0.0		100		
	7	0.0		100		
15	8	0.0		100		
	9	0.0		100		
	10	0.0		100		
20						Bottom of Boring at 20 feet
25						

Geologist(s): David A. Carstens**Subcontractor:** Zebra Environmental Corporation**Driller/Operator:** Jose Garcia**Method:** Direct Push**WSP Environment & Energy**

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Boring Log: SB-07**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 17, 2011**Surface Elevation (feet AMSL*):****Total Depth (feet):** 20**Borehole Diameter (inches):** 3

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
	1	0.8		60		CONCRETE
	2	1.8		60		FILL Brown (7.5YR 4/4) sand, trace clay and gravel; medium-grained; well sorted; dry.
5	3	2.2		55		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace gravel; medium-grained; loose; moist.
	4	0.3		50		
	5	0.1		50		
10	6	0.4		100		
	7	0.5		100		
15	8	0.0		100		
	9	0.0		100		
	10	0.0		100		
20						Bottom of Boring at 20 feet
25						

Geologist(s): David A. Carstens**Subcontractor:** Zebra Environmental Corporation**Driller/Operator:** Jose Garcia**Method:** Direct Push**WSP Environment & Energy**

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Boring Log: SB-08**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 17, 2011**Surface Elevation (feet AMSL*):****Total Depth (feet):** 20**Borehole Diameter (inches):** 3

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
	1	0.0		70		CONCRETE
	2	0.0		70		FILL Brown (7.5YR 4/4) sand, trace clay and gravel; medium-grained; well sorted; dry.
5	3	0.0		75		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace gravel; medium-grained; loose; moist. -moist, very soft from 6 to 8 feet bgs.
	4	0.0		80		
	5	0.0		80		Lean Clay (CL) Brown (7.5YR 5/4) clay, trace sand; low to medium plasticity; medium-stiff; slight mottling; moist.
10	6	0.0		100		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace medium-gravel; medium-grained; soft to medium-stiff; moist.
	7	0.0		100		
15	8	0.0		100		
	9	0.0		100		
	10	0.0		100		
20						Bottom of Boring at 20 feet
25						

Geologist(s): David A. Carstens**Subcontractor:** Zebra Environmental Corporation**Driller/Operator:** Jose Garcia**Method:** Direct Push**WSP Environment & Energy**

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Boring Log: SB-09**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 17, 2011**Surface Elevation (feet AMSL*):****Total Depth (feet):** 20**Borehole Diameter (inches):** 3

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
	1	0.0		60		CONCRETE
	2	0.0		60		FILL Brown (7.5YR 4/4) sand, trace clay and gravel; medium-grained; well sorted; dry.
5	3	0.0		60		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace fine-gravel; medium-grained; loose; moist.
	4	0.0		60		
	5	0.0		60		
10	6	0.0		100		Lean Clay (CL) Brown (7.5YR 5/4) clay, trace sand; low to medium plasticity; medium-stiff; slight mottling; moist.
	7	0.0		100		Lean Clay with Sand (CL) Brown (7.5YR 4/4) sandy clay, trace medium-gravel; medium-grained; soft to medium-stiff; moist.
15	8	0.0		100		
	9	0.0		100		
	10	0.0		100		
20						Bottom of Boring at 20 feet
25						

Geologist(s): David A. Carstens**Subcontractor:** Zebra Environmental Corporation**Driller/Operator:** Jose Garcia**Method:** Direct Push**WSP Environment & Energy**

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Boring Log: SB-15**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 28, 2012**Surface Elevation (feet AMSL*):****Total Depth (feet):** 15**Borehole Diameter (inches):** 2

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
		0.8		80		Asphalt and fill.
5		0.5				Well-Graded Sand with Gravel (SW) Yellowish-brown (10YR 5/4) sand with gravel, trace fine; fine- to coarse-grained; moderate sorting; medium dense to loose; 0.5"-1" diameter sub-angular and sub-rounded gravel; dry to moist. - Black stain at 12 ft. bgs. - Sand coarsening with depth.
		0.6		90		
10		1.2				
		0.6		100		
15		0.6				
						Bottom of Boring at 15 feet
20						
25						

Geologist(s): Nathaniel S. Goodhue
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Jose Garcia
Method: Direct Push

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Boring Log: SB-16**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 28, 2012**Surface Elevation (feet AMSL*):****Total Depth (feet):** 15**Borehole Diameter (inches):** 2

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
	0.3			90		Asphalt and fill
5	0.5					Well-Graded Sand with Gravel (SW) Brown (10YR 5/4) sand with some gravel; fine-grained; well sorted sand; 0.25" to 0.75" diameter sub-angular gravel; dry to moist.
	0.2			90		Silty Sand with Gravel (SM) Yellowish-brown (10YR 5/4) silty sand and some gravel; fine- to very fine-grained; moderate sorting; 0.5" to 0.75" diameter sub-angular gravel; moist. - Stiff film of silty clay (20%) found 5 ft. bgs.
10	0.5					
	1.2			90		Poorly-Graded Sand with Gravel (SP) Yellowish-brown (10YR 5/4) sand with some gravel; coarse-grained; moderate sorting; loose; 0.5"- 1" diameter subangular and subrounded gravel; moist.
15	1.2					Well-Graded Sand with Gravel (SW) Yellowish-brown (10YR 5/4) sand with some gravel, trace fines; fine- to medium-grained; moderate sorting; medium stiff to loose; 0.5"- 1" diameter sub-angular and angular gravel; dry to moist.
						Bottom of Boring at 15 feet
20						
25						

Geologist(s): Nathaniel S. Goodhue
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Jose Garcia
Method: Direct Push

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Boring Log: SB-17**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 28, 2012**Surface Elevation (feet AMSL*):****Total Depth (feet):** 15**Borehole Diameter (inches):** 2

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
		0.6		80		Asphalt and fill.
5		0.6				Well-Graded Sand with Gravel (SW) Brown (10YR 5/3) sand with some gravel; fine- to medium-grained; moderate sorting; medium dense; 0.5"-1" diameter sub-angular to angular gravel; dry to moist. - Black stain at 6 ft. and 11 ft. bgs. - Reddish-brown stains 15 ft. bgs.
		0.5		100		
		0.5				
10		0.9		100		
		0.7				
15						Bottom of Boring at 15 feet
20						
25						

Geologist(s): Nathaniel S. Goodhue
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Jose Garcia
Method: Direct Push

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Boring Log: SB-18**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 28, 2012**Surface Elevation (feet AMSL*):****Total Depth (feet):** 15**Borehole Diameter (inches):** 2

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
		0.3		50		Asphalt and fill
5		0.6				Well-Graded Sand with Gravel (SW) Yellowish-brown (10YR 5/4) sand with some gravel, trace fines; fine- to medium-grained; moderate sorting; stiff; 0.5" to 1.5" diameter sub-angular to angular gravel; dry to wet. - 9 ft. bgs wet. - Silt and clay content increases at 9 ft. bgs.
		0.4		90		
10		0.5				Well-Graded Sand with Gravel (SW) Yellowish-brown (10YR 5/4) sand with some gravel; medium- to coarse-grained; moderate sorting; loose; 0.5"-1" diameter sub-angular gravel; wet to dry. - Red stains observed 10.5 ft. bgs.
		0.4		90		
15		0.5				Bottom of Boring at 15 feet
20						
25						

Geologist(s): Nathaniel S. Goodhue
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Jose Garcia
Method: Direct Push

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Boring Log: SB-19**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 28, 2012**Surface Elevation (feet AMSL*):****Total Depth (feet):** 15**Borehole Diameter (inches):** 2

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
		0.0		90		Asphalt and fill.
		0.2				Well-Graded Sand with Gravel (SW) Brown (10YR 5/3) sand with some gravel; fine- to medium-grained; moderate sorting; dense; 0.5" diameter sub-angular gravel; dry to moist. -Silt content increases at 3.5 ft. bgs.
5		0.4		95		Well-Graded Sand with Gravel (SW) Brown (10YR 5/3) sand with some gravel; medium- to coarse-grained; moderate to poor sorting; loose to very loose; 0.5"-0.75" diameter sub-angular gravel; dry to moist. - Color change to yellowish-brown (10YR 5/4) at 9ft. and 14 ft. bgs.
		1.2				
10		0.1		100		
		0.4				
15						Bottom of Boring at 15 feet
20						
25						

Geologist(s): Nathaniel S. Goodhue
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Jose Garcia
Method: Direct Push

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Boring Log: SB-20**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 27, 2012**Surface Elevation (feet AMSL*):****Total Depth (feet):** 15**Borehole Diameter (inches):** 2

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
		0.0		75		Asphalt and fill.
5		0.0				Well-Graded Sand with Gravel (SW) Yellowish-brown (10YR 5/4) sand with some gravel, trace fines; fine- to coarse-grained; poor sorting; loose to medium dense; 0.5"-1.25" diameter sub-angular and sub-rounded gravel; dry.
		0.0		90		Well-Graded Sand with Gravel (SW) Gray (2.5Y 6/1) sand with some gravel; medium-grained; moderate sorting; loose; 0.5"-1.5" diameter sub-rounded and sub-angular gravel; dry.
10		0.0				Well-Graded Sand with Gravel (SW) Yellowish-brown (10YR 5/4) sand with trace gravel; fine- to medium-grained; moderate sorting; 0.5"-1.5" diameter gravel; moist - Coarse-grained sand films present.
		0.0		100		Well-Graded Sand with Gravel (SW) Yellowish-brown (10YR 5/4) sand with some gravel, trace fines; moderate sorting; loose; 0.5"-1" diameter; dry to moist. - Silt and clay <10% 10 ft. bgs.
15		0.0				Bottom of Boring at 15 feet
20						
25						

Geologist(s): Nathaniel S. Goodhue
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Jose Garcia
Method: Direct Push

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Boring Log: SB-21**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 27, 2012**Surface Elevation (feet AMSL*):****Total Depth (feet):** 15**Borehole Diameter (inches):** 2

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
		0.0		95		Asphalt and fill.
5		0.0		95		Well-Graded Sand with Gravel (SW) Yellowish-brown (10YR 5/4) sand with some gravel; fine- to medium-grained; stiff; 0.5" diameter sub-angular gravel; dry to moist. - Organic roots 3.5 ft. bgs. - Silt and clay percentage increases down borehole (10%) - Gravel increases in size downwards (0.5" to 1.5" diameter). - Dark gray stain 6 ft. bgs with 0.5" diameter angular gravel.
10		0.0		100		Well-Graded Sand with Gravel (SW) Brownish-yellow (10YR 6/8) sand with some gravel; coarse-grained; 0.5" diameter sub-angular gravel; dry.
15		0.0				Well-Graded Sand with Gravel (SW) Brownish-yellow (10YR 6/8) sand with some gravel, trace fines; fine- to coarse-grained; poorly sorted; medium dense; 0.5"-1.5" diameter sub-angular gravel; dry. - Silt and clay decreases downwards 10% to 5%.
						Bottom of Boring at 15 feet
20						
25						

Geologist(s): Nathaniel S. Goodhue
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Jose Garcia
Method: Direct Push

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Boring Log: SB-22**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 27, 2012**Surface Elevation (feet AMSL*):****Total Depth (feet):** 15**Borehole Diameter (inches):** 2

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
		0.0		80		Asphalt and fill.
5		0.0				Well-Graded Sand with Gravel (SW) Yellowish-brown (10YR 5/4) sand with some gravel, trace fines; medium- to coarse-grained; moderate sorting; dense to loose; 0.5" diameter sub-angular to angular gravel; dry. - Silt and clay decreases downward.
10		1.2		90		Well-Graded Sand with Gravel (SW) Yellowish-brown (10YR 5/4) sand with some gravel, trace fines; medium- to coarse-grained; moderate sorting; loose to very loose; 0.5" diameter angular to sub-angular gravel; dry.
15		0.0		90		
		0.0				Bottom of Boring at 15 feet
20						
25						

Geologist(s): Nathaniel S. Goodhue
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Jose Garcia
Method: Direct Push

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Boring Log: SB-23**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 27, 2012**Surface Elevation (feet AMSL*):****Total Depth (feet):** 15**Borehole Diameter (inches):** 2

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
		0.0		70		Asphalt and fill.
		0.0				Well-Graded Sand with Gravel (SW) Yellowish-brown (10YR 5/4) sand and some gravel, trace fines; fine- to coarse-grained; moderate sorting loose; 0.5" diameter sub-angular gravel; moist to dry.
5		0.0		85		Well-Graded Sand with Gravel (SW) Yellowish-brown (10YR 5/4), medium-grained to coarse-grained loose sand some gravel; gravel sub-angular to angular (0.5" to 1" diameter); finer grains present 9 ft. bgs; below 10 ft. bgs gravel increases to >1" diameter.
		0.0				
10		0.0		100		
		0.0				
15						Bottom of Boring at 15 feet
20						
25						

Geologist(s): Nathaniel S. Goodhue
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Jose Garcia
Method: Direct Push

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Boring Log: SB-24**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 27, 2012**Surface Elevation (feet AMSL*):****Total Depth (feet):** 15**Borehole Diameter (inches):** 2

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
		0.0		60		Asphalt and fill.
5		0.0				Well-Graded Sand with Gravel (SW) Dark yellowish-brown (10YR 4/4 to 10YR 5/8) sand with some gravel, trace fines; fine- to medium-grained; medium stiff; 0.5" diameter sub-angular and sub-rounded gravel; moist. - Films of coarse-grained sand at 5 ft. bgs. - Silt and clay increasing downwards.
		0.0		90		
10		0.0				Well-Graded Sand with Gravel (SW) Yellowish-brown (10YR 5/8) sand with some gravel, trace fines; coarse-grained; loose; 0.5"-1" diameter sub-angular to angular gravel; dry. - Increase in silt and clay downwards. - Alternating films of coarse-grained sand with clayey sand downwards.
		0.0		95		
15						Bottom of Boring at 15 feet
20						
25						

Geologist(s): Nathaniel S. Goodhue
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Jose Garcia
Method: Direct Push

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Boring Log: SB-25**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 27, 2012**Surface Elevation (feet AMSL*):****Total Depth (feet):** 15**Borehole Diameter (inches):** 2

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
		0.0		85		Asphalt and fill
5		0.0				Well-Graded Sand with Gravel (SW) Yellowish-brown (10YR 5/4) sand with some gravel, trace fines; fine-to medium-grained; medium stiff; 0.25"-1" diameter sub-angular and angular gravel; dry. - Slight discoloration near ground surface. - Increasing silt content downwards.
		0.0		95		Well-Graded Sand with Gravel (SW) Yellowish-brown (10YR 5/4) sand with some gravel; fine- to medium-grained; loose; 0.5"-1" diameter sub-angular gravel; dry.
10		0.0				
		0.0		90		Well-Graded Sand with Gravel (SW) Yellow (10YR 7/6) sand with some gravel; very loose; 0.5"-1" diameter sub-angular to angular gravel; dry.
15		0.0				
						Bottom of Boring at 15 feet
20						
25						

Geologist(s): Nathaniel S. Goodhue
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Jose Garcia
Method: Direct Push

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Boring Log: SB-26**Project:** Former TransTechnology**Project No.:** 28873/03**Location:** Glen Head, NY**Completion Date:** February 27, 2012**Surface Elevation (feet AMSL*):****Total Depth (feet):** 15**Borehole Diameter (inches):** 2

*AMSL = Above mean sea level

Sample Data					Subsurface Profile	
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
		0.0		80		Asphalt and Fill
5		0.0				Well-Graded Sand with Gravel (SW) Brown (10YR 5/3) sand with some gravel; medium- to coarse-grained; moderate sorting; 0.5"-2.5" diameter sub-angular to angular gravel; dry to moist. - 2.5 ft. bgs films of fine-grained sand.
		2.2		60		Well-Graded Sand with Gravel (SW) Brown (10YR 5/3) sand with some gravel, trace fines; medium- to coarse-grained; moderate sorting; 0.5"-2.5" diameter angular to sub-angular gravel; moist to wet. - Layers of asphalt observed.
10		0.0				Well-Graded Sand with Gravel (SW) Brown (10YR 5/3) sand with some gravel, trace fines; fine-grained; moderate sorting; 0.5" diameter sub-angular and sub-rounded gravel; wet. - Percentage of fines increases from 10 ft. to 13 ft. bgs. - At 13 ft. bgs 4" thick black/dark gray stain.
15						Poorly-Graded Sand with Gravel (SP) Very pale brown (10YR 7/4) sand with some gravel; coarse-grained; poorly sorted; 0.5"-1.5" diameter sub-angular to angular gravel; dry to moist. - Wood fragments observed at 13 ft. bgs.
						Bottom of Boring at 15 feet
20						
25						

Geologist(s): Nathaniel S. Goodhue
Subcontractor: Zebra Environmental Corporation
Driller/Operator: Jose Garcia
Method: Direct Push

WSP Environment & Energy
 5 Sullivan Street
 Cazenovia, NY 13035
 (315) 655-3900

WSP | Parsons Brinckerhoff

300 Trade Center
Suite 4690
Woburn, MA 01801
Tel: 774-413-5109
wsp-pb.com/usa

