FINAL
REMEDIAL INVESTIGATION REPORT
OFF-SITE CARRIAGE CLEANERS
NYSDEC SITE # C828131A

WORK ASSIGNMENT NO. D004434-36

Prepared for:

New York State Department of Environmental Conservation
Albany, New York

Prepared by:

MACTEC Engineering and Consulting, P.C.
Portland, Maine

MACTEC: 3612102168

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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

ASP	Analytical Services Protocols
AOC	area of concern
BCP	Brownfield Cleanup Program
BIOCHLOR	Biochlor Model
bgs	below ground surface
cis-1,2-DCE	cis-1,2-dichloroethene
cm/sec	centimeter(s) per second
COC	contaminant of concern
CSM	conceptual site model
CVOC	chlorinated volatile organic compounds
C_{sat}	Soil Saturation Limit
DER	Division of Environmental Remediation
DNAPL	dense non-aqueous phase liquid
DO	dissolved oxygen
DUSR	Data Usability Summary Report
ESA	Environmental Site Assessment
°F	degrees Fahrenheit
FDR	Field Data Record
GIS	Geographic Information System
GPS	Global Positioning System
Hg	Mercury
ID	inside diameter
IDW	investigation-derived wastes
IRM	Interim Remedial Measure

GLOSSARY OF ACRONYMS AND ABBREVIATIONS (CONTINUED)

LaBella	LaBella Associates, P.C.
MACTEC	MACTEC Engineering and Consulting, P.C.
mg/kg	milligram(s) per kilogram
mg/L	milligram(s) per liter
MNA	monitoring natural attenuation
NYCRR	New York Codes, Rules, and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
ORP	oxidation reduction potential
PCE	tetrachloroethene
PID	photoionization detector
PVC	polyvinyl chloride
QHHEA	Qualitative Human Health Exposure Assessment
RI	Remedial Investigation
SCGs	standards, criteria and guidance values
Site	Carriage Cleaners
SSD	sub-slab depressurization
SVI	Soil Vapor Intrusion
TAGM	Technical and Administrative Guidance Memorandum
TCE	trichloroethene
TOC	total organic carbon
µg/L	microgram per liter
$\mu g/m^3$	microgram per cubic meter

GLOSSARY OF ACRONYMS AND ABBREVIATIONS (CONTINUED)

USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
VC	vinyl chloride
VOC	volatile organic compound
WA	Work Assignment

1.0 INTRODUCTION

This Remedial Investigation (RI) Report has been prepared by MACTEC Engineering and Consulting, P.C. (MACTEC) in response to Work Assignment (WA) No. D004434-36 from the New York State Department of Environmental Conservation (NYSDEC) for the Off-Site Carriage Cleaners contamination investigation in the Town of Penfield, Monroe County, New York (Figure 1.1). The Carriage Cleaners site (Site) is listed as a Class A Brownfield Cleanup Program (BCP) site (Site No. C828131) in the New York State (NYS) Environmental Remediation Database. As part of the brownfield agreement, the property owner accepted responsibility for cleanup of this significant threat BCP site and the NYSDEC agreed to evaluate potential off-site contamination resulting from former activities at the Site. A RI and a soil removal as an interim remedial measure (IRM) were conducted at the Site property by LaBella Associates, P.C. (LaBella) under contract to the property owner. This WA is for the NYS funded off-site investigation at Carriage Cleaners. The Off-Site Carriage Cleaners is listed in the NYS Environmental Remediation Database as site No. C828131A. This report has been prepared in accordance with the NYSDEC requirements in WA No. D004434-36 dated September 13, 2010, between MACTEC and the NYSDEC (NYSDEC, 2010b).

1.1 REPORT ORGANIZATION

The RI report is structured in general accordance with the NYSDEC Division of Environmental Remediation (DER)-10 "Technical Guidance for Site Investigation and Remediation" (NYSDEC, 2010a) and the United States Environmental Protection Agency (USEPA) RI guidance (USEPA, 1988). The RI includes Sections 1.0 to 7.0 and associated Appendices, as outlined below.

Section 1.0: Discusses the purpose of the RI, Site history and previous investigations.

Section 2.0: Presents the specific scope of work for the RI.

Section 3.0: Summarizes the physical characteristics of the Site and surrounding area. This includes results of physical characteristics as determined during the RI field program.

Section 4.0: Presents results of the analytical data and discusses the nature and extent of contamination.

Section 5.0: Discusses the fate and transport of Site contaminants.

Section 6.0: Presents the qualitative human health exposure assessment (QHHEA).

Section 7.0: Presents the summary and conclusions, including a discussion of data gaps.

Field data records (FDRs) and supporting information are included in the Appendices of this report. The RI Report is supplemented by the following attached documents:

- Appendix A – Site Photographs
- Appendix B – Site Survey Data
- Appendix C – Field Data Records
- Appendix D – Slug Test and Hydraulic Conductivity Data
- Appendix E – Soil Grain Size Data
- Appendix F – Data Usability Summary Reports
- Appendix G – Natural Attenuation Screening Protocol Forms

1.2 PURPOSE OF REPORT

The purpose of the report is to present the findings of the RI, the results of the IRM activities conducted to date, and the evaluation of the potential exposure pathways and receptors of the Site contaminants.

This Draft RI Repot includes a summary of the Site background and history, including results of investigations conducted prior to the RI, summarizes results of the field investigations and laboratory analytical activities performed during the RI field investigations, summarizes the IRMs performed, presents a Human Health Exposure Assessment characterizing the potential exposure pathways under the current and potential future land use if no further remedial action is taken, and provides recommendations for future remedial efforts to address potentially complete exposure pathways.

1.3 OFF-SITE RI TECHNICAL OBJECTIVES

Based on historical data, chlorinated solvents are present in groundwater at the Site at concentrations that exceed Class GA groundwater standards as defined in 6 o f New York Codes, Rules, and Regulations (NYCRR) Part 700-705 (NYS, 1999b). In addition, confirmatory soil samples collected from the Site after the IRM soil removal indicated the presence of chlorinated solvents above 6 NYCRR Part 375 Soil Cleanup Objectives for commercial use (NYS, 2006). The chlorinated volatile organic compounds (CVOCs) detected at the Site are listed hazardous wastes under Title 6 of NYCRR Part 371 (NYS, 1999a). B ased on previously detected groundwater and soil contaminant

concentrations at the Site, it was anticipated, but not known if CVOCs had migrated off-site in groundwater and/or soil vapor and if those CVOCs posed a potential significant threat to public health and the environment as defined in 6 NYCRR 375 (NYS, 2006) outside the Site property limits. Previous investigations identified two specific tetrachloroethene (PCE) source/disposal areas and evaluated the nature and extent of the on Site contamination, but did not address off-site contamination. The Off-Site Carriage Cleaners RI was performed to address the following technical objectives:

- evaluate off-site groundwater conditions emanating from the Site by assessing the horizontal and vertical extent of contamination in off-site groundwater;
- evaluate whether the CVOC contamination emanating from the Site is resulting in the potential for soil vapor intrusion at downgradient residential and commercial structures; and,
- evaluate present and future human health exposure pathways, such as through exposure to site source materials, groundwater, and/or soil vapor migration to indoor air.

The off-site RI field program described in Section 2 was conducted to further evaluate off-site conditions resulting from historical practices at the Site based on the technical objectives listed above. This information was used to evaluate the need for further action, including potential additional investigations, remedial evaluations and interim remedial measures.

1.4 SITE BACKGROUND

On September 23, 201 0, MACTEC personnel visited the Site and adjacent properties west and northwest of the Site with Charlotte Theobald (NYSDEC), and Katie Fish (New York State Department of Health [NYSDOH]). Information pertaining to the history of site operations and past releases of contamination were reviewed to help prepare the scope of work for the RI field investigation. Observations of the Site reconnaissance, the information collected, and other information provided in the WA are summarized below. Photographs of the Site taken during the site visit, as well as during various RI field efforts, are presented in Appendix A.

1.4.1 Site Description

The Site is located at 1600 Penfield Road in a mixed residential/commercial area in the Town of Penfield, Monroe County (Figure 1.1). It is identified on the Town of Penfield tax map as Map

123.20, Block 2, Lot 47. The site property size is 0.68 acres, with fencing at the perimeter. The Site consists of a former building concrete slab, construction debris and a paved parking lot. The former site building was constructed in 1961 and demolished in the summer of 2009.

The property is bordered immediately to the north by a day care facility and dance studio; to the east by an unoccupied automated banking facility; to the south by right of way for Penfield Road (with a large parking lot for the commercial plaza beyond); and to the west by a one story commercial office space with several tenants, including a beauty salon. Further west and northwest of the Site are residential condominiums. The Site and surrounding community are serviced by public drinking water and sewer.

The Site reportedly operated as a dry cleaning facility from 1961 until approximately 2005 (LaBella, 2009a). A plumbing diagram (unknown date) indicated that drain lines from the building discharged to a 1,500-gallon pre-cast concrete wastewater holding tank located adjacent to the northern portion of the building (LaBella, 2009a). According to Monroe County property deeds, the current owner purchased the property in 2006.

1.4.2 Previous Field Investigations

The NYSDEC provided information to MACTEC on environmental studies conducted at the Site by LaBella for the Site owner under the state's BCP. Previous studies referenced the Site as "Carriage Cleantown". For the purposes of this RI Report, the references to "Carriage Cleantown" are synonymous with "the Site". The Carriage Cleantown Site is identified under New York State Spill # 0270503.

Background documents reviewed by MACTEC include the Carriage Cleantown RI Report (LaBella, 2009a) and the Carriage Cleantown IRMs (Labella, 2009b). These reports indicate that four prior investigations have been completed at the Site.

LaBella – Phase II Environmental Site Assessment (ESA), 2002

LaBella completed a Phase II Environmental Site Assessment (ESA) at the Carriage Cleantown site in 2002 as part of a potential real estate transaction. Field work consisted of nine Geoprobe® soil borings and the installation of one groundwater monitoring well (MW-1). Results indicated soil contamination

exceeding the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 Soil Clean-up Objectives to Protect Groundwater Quality adjacent to a wastewater holding underground storage tank, located north of the building.

LaBella – Passive Soil Vapor Survey, 2003

LaBella completed a passive soil vapor survey at the Carriage Cleantown site in 2003. The soil vapor survey included sampling of 13 soil vapor locations. Results indicated the presence of PCE and trichloroethylene (TCE) on the Site. The highest concentrations of soil vapor contamination were detected on the northwest portion of the Site.

LaBella – Remedial Investigation, 2005 through 2006

LaBella completed a RI of the Carriage Cleantown Site in 2006. The RI included a shallow soil and groundwater evaluation, a deep soil and groundwater evaluation, and a soil vapor investigation. During the RI LaBella advanced 55 shallow soil borings and one deep soil boring, installed three permanent soil vapor implants, installed nine shallow overburden groundwater monitoring wells and two deep groundwater monitoring wells, and collected soil, groundwater and soil vapor samples. The initial phase of borings consisted of a grid pattern around the concrete wastewater holding tank area, area of concern (AOC) 1, to evaluate the extent of shallow soil contamination. In addition, several borings were advanced within the building to evaluate the floor drains/drain lines, and other potential source areas. The second phase of soil borings provided evaluation of the former PCE Still area (AOC 2) and overall groundwater impacts. A deep soil boring was advanced and a nested pair consisting of two deep groundwater monitoring wells was installed to evaluate the vertical extent of contamination. Soil vapor sampling was conducted along property lines and off-site as part of a qualitative exposure assessment. LaBella defined the extent of contamination on the Site as three AOCs as described in the following paragraphs. Figure 1.2 identifies the locations of historical investigations at the Site.

AOC #1: Concrete Wastewater Holding Tank Area

LaBella determined that the horizontal extent of site soil contamination that exceeded hazardous waste criteria was limited to the concrete wastewater holding tank area north/northeast of the former site building. LaBella determined the vertical extent of soils that exceeded hazardous waste criteria was limited to approximately 10 feet in depth. PCE and TCE were detected at low concentrations in the deeper soil and groundwater samples collected.

AOC #2: Former PCE Still Area

The second phase of soil borings characterized contamination from the former PCE still, located in the southeastern corner of the former site building. LaBella determined that PCE contamination from the former PCE still potentially migrated from the still through the site building slab and into the shallow overburden soil and groundwater. Soil contamination from the former PCE still was identified beneath the southern corner of the former site building. Soil samples from adjacent borings did not indicate concentrations of volatile organic compounds (VOCs) that exceed the NYSDEC guidance.

AOC #3: Groundwater Contamination

LaBella characterized groundwater contamination on the Site at nine shallow groundwater monitoring wells and a deep nested pair of monitoring wells, MW-6M (40 feet below ground surface [bgs]) and MW-6D (72 feet bgs). The highest concentration of PCE was detected in a groundwater sample from shallow well MW-1 (142,000 microgram per liter [µg/L]). PCE was detected in groundwater samples from MW-6M and MW-6D, at concentrations of 19 µg/L and 46 µg/L, respectively. Based on photoionization detector (PID) readings from within the saturated zone that generally decreased with depth, as well as the analytical results from the soil and groundwater samples collected, LaBella concluded that the vertical extent of shallow groundwater impacts was limited to be approximately 15 feet in depth (concentrations of VOCs detected in groundwater below approximately 15 feet were determined by LaBella to be minimal). The horizontal extent of groundwater contamination was relatively widespread across the Site (Labella, 2009a), with CVOC concentrations in groundwater below standards in samples collected from the northern, eastern, and southern edge of the property and concentrations above groundwater standards in samples collected from the center and western edge of the Site property.

LaBella – IRM, 2007

On June 30, 2007, LaBella conducted an IRM at the Site (LaBella, 2009b). During the IRM, impacted soil and water (i.e. above published standards, criteria, and guidance values [SCGs]) in the proximity of the former wastewater holding tank located to the north of the former site building was removed. The stated goal of the IRM was to remove soil that exceeded characteristic hazardous waste criteria (i.e. exceeding USEPA criteria for VOCs following the toxicity

characteristic leaching procedure extraction). This area was characterized using a grid of soil borings. Materials removed from the Site during the 2007 IRM included:

- 632 gallons of CVOC contaminated water that was pumped from the wastewater holding tank prior to its removal, and pumped from the excavation during the soil removal;
- 175.38 tons of CVOC impacted soil disposed as non-hazardous waste on August 31, 2007;
- 19.22 tons of CVOC impacted soil was disposed of as hazardous waste at Waste Management's Model City Landfill in Model City, New York; and,
- 43.28-tons of heavily CVOC-impacted soil was transported to the Recupere Sol, Inc. treatment facility in St. Ambrose, Quebec, Canada for thermal treatment on November 13, 2007.

Confirmation soil samples were collected from the base and the side walls of the IRM soil excavation area. Soils collected from the base of the excavation pit ranged in concentrations of PCE from 9.3 milligrams per kilograms (mg/kg) to 130,000 mg/kg. Soils collected from the side walls of the pit excavation ranged in concentrations of PCE from 1.6 mg/kg to 46 mg/kg. LaBella recommended that "Based on the confirmatory soil sampling results, additional remedial actions appear warranted for this area".

1.4.3 Current on-Site Status

The Site building was demolished in the summer of 2009 (NYSDEC, 2010b). The Site is still in the NYS BCP.

2.0 SCOPE OF WORK

The off-site RI focused on groundwater conditions downgradient from the Site, and was conducted based on the detection of chlorinated solvents present in Site media. PCE, TCE, cis-1,2-dichloroethene (DCE), and vinyl chloride (VC) are listed hazardous wastes under 6 NYCRR Part 371 (NYS, 1999a). Based on existing Site data, chlorinated solvents (including PCE, TCE, cis-1,2-DCE, and VC) are present in soil and groundwater at the Site at concentrations above the state Class GA groundwater standards as defined in 6 NYCRR Part 700-705 (NYS, 1999b). Based on previously collected groundwater and soil data, the Site poses a potential significant threat to public health and the environment as defined in 6 NYCRR 375 (NYS, 2006).

Section 2 outlines the off-site RI scope of work performed by MACTEC. Field activities were conducted to evaluate the nature and extent of the contaminants present in groundwater and soil vapor outside the property limits of the Site, (i.e. downgradient of the Carriage Cleaners Site).

2.1 REMEDIAL INVESTIGATION FIELD WORK

The fieldwork was conducted in accordance with the specifications presented in the Work Plan (MACTEC, 2010). Groundwater analysis was performed by Chemtech Laboratory and soil vapor, indoor and ambient air analyses were performed by Enalytic. Chemtech and Enalytic are accredited through the NYSDOH Environmental Laboratory Approval Program for the analysis performed during this RI.

MACTEC and its subcontractors mobilized to the Site and performed the RI fieldwork activities between November 2010 and August 2011. Figure 2.1 is an aerial photograph of the Site area showing locations sampled from November 2010 and August 2011 by MACTEC. Table 2.1 outlines the off-site RI sampling program, including types of explorations completed, samples collected, and dates. The RI was conducted in two phases. A summary of the phases is outlined below and are discussed in further detail in following subsections. FDRs documenting the RI field investigation are included in Appendix C.

Phase I: November 2010

- Twenty direct push borings (DP-01 to DP-20) were advanced in the vicinity of the Site. DP-01 through DP-18 were advanced at locations presumed to be hydraulically downgradient from the Site. D P-19 and DP-20 were advanced at presumed hydraulically upgradient locations from the Site. Groundwater samples were collected from one or two depth intervals per boring and analyzed for VOCs. An additional groundwater sample depth interval was collected at DP-04, and two additional depth intervals were collected at DP-10.
- Groundwater samples were collected from five existing microwells on the Site (MW-2, MW-5, MW-6M, MW-6D, and MW-7). Groundwater samples were submitted for VOC analysis.
- Four, one-inch microwells (DP-06, DP-10, DP-12, and DP-15) were installed at presumed downgradient locations from the Site. The microwells were installed to obtain groundwater samples and to evaluate off-site groundwater flow direction.
- Three permanent soil vapor implants were installed adjacent to the Site (SV-01, SV-02, and SV-03). Soil vapor samples were collected from SV-03 and from an existing off-site soil vapor implant, SV-04. Soil vapor sample were not able to be collected from SV-01 and SV-02 due to subsurface conditions. Soil vapor samples were submitted for VOC analysis.
- Four pore water samples were collected from the banks of Irondequoit Creek (PS-01, PS-02, PS-03, and PS-05) and submitted for VOC analysis.
- Newly installed microwells, existing Site wells, and Irondequoit Creek water level at Old Penfield Road were surveyed by Lu Engineers, a licensed land surveyor.

Based on the results of the initial investigation, Phase II field work was conducted.

Phase II: January 2011 to August 2011

- An additional 14 direct push borings (DP-21 to DP-34) were advanced at presumed downgradient locations from the Carriage Cleaners Site. Groundwater samples were collected from one or two depth intervals per boring and analyzed for VOCs.
- Two direct push borings (DP-33 and DP-34) were installed as temporary microwells to further evaluate groundwater flow direction.
- Six additional, two-inch monitoring wells were installed at presumed downgradient locations from the Site. Four shallow monitoring wells were installed at direct push sampling locations (DP-22, DP-23, DP-27, and DP-28); and two deeper monitoring wells paired with existing wells (MW-11 paired with DP-10; MW-12 paired with DP-23).
- Saturated soil samples were collected from MW-11 and MW-12 borings during monitoring well installation and submitted for total organic carbon (TOC) analysis. A saturated soil sample was also collected from DP-28 and submitted for grain size analysis.
- Three additional pore water samples were collected from the banks of the Irondequoit Creek (PS-04, PS-06, and PS-07) and submitted for VOC analysis.

- The six new monitoring wells, temporary wells (DP-33 and DP-34) and the Irondequoit Creek and gravel quarry water level adjacent to DP-34, were surveyed by Lu Engineers.
- Groundwater samples were collected from nine newly installed and four existing Site monitoring wells for VOC analyses. In addition, groundwater samples were collected from six monitoring wells and submitted for monitored natural attenuation (MNA) parameters. MNA parameters are discussed in detail under section 2.1.4.
- Hydraulic conductivity testing was conducted at five off-site monitoring wells and three direct push boring locations.
- Two sump water samples (SW-15A and SW-15B) were collected from within the sump pit of one residential structure.
- Indoor air and soil vapor samples were collected at 15 commercial and/or residential structures from the vicinity of the Site.

Health and Safety. Daily tailgate briefings were held prior to the field work with MACTEC and subcontractor personnel to familiarize field personnel with Site history, health and safety requirements, equipment calibration procedures, and other investigation methods and procedures. RI fieldwork was conducted at Level D personal protection. Due to the presence of underground utilities located in the area as identified by the dig-safe markout, a sub-set of borings were cleared using an air compressor and vacuum truck by a subcontractor. These borings were cleared to a minimum of four feet bgs.

Investigation Derived Waste. The method of disposing investigation derived wastes (IDW) generated during this RI was based upon whether the wastes were considered hazardous or non-hazardous. If visual (e.g. sheen) or olfactory indications of contamination were not noted, purged groundwater was allowed to infiltrate into the ground surface in the vicinity of the sample location. Due to the field program being conducted in a primarily landscaped residential area, soil cuttings generated during monitoring well installation were containerized in United States Department of Transportation approved 55-gallon drums. Drums filled during Phase 1 and Phase 2 field work were labeled and staged on the Site property prior to disposal. Clean Harbors transported the IDW in March 2012 to a licensed facility (Spring Grove Resource Recovery, Inc., in Cincinnati, Ohio) for disposal. Based on analytical results, four 55-gallon drums of purge water were transported under hazardous waste manifest as hazardous waste liquid. Two additional drums of purge water and five drums of soil and drilling/sampling waste were disposed of as non-regulated material.

Site Survey. MACTEC's survey subcontractor (Lu Engineers) completed a survey of existing Site monitoring wells, newly installed off-site wells, and surface water elevations for Irondequoit Creek. Horizontal locations were tied to the NYS Plane Coordinate System using North American Datum of

1983 and measured to an accuracy of 0.01 feet. Vertical elevations of groundwater wells were tied to mean sea level, using North American Vertical Datum of 1988, and measured to an accuracy of 0.01 feet.

Horizontal and vertical locations were provided to MACTEC and entered into a database to be used with geographic information system (GIS) software. Locations of direct push samples and pore water samples that were not surveyed by Lu Engineers were surveyed by MACTEC using a Trimble Global Positioning Satellite (GPS), or tied to building corners and plotted using GIS. GPS data is tied to the NYS Plane Coordinate System using North American Datum of 1983 and is accurate to within one meter. The sample locations are presented on Figure 2.1. The summary tables of the survey data are included in Appendix B.

2.1.1 Direct Push Groundwater Sampling

The existing set of monitoring wells located on the Site did not give sufficient coverage to adequately characterize the limits of the VOC contamination in off-site groundwater. To supplement the Site data, 34 Geoprobe® borings (DP-01 through DP-34) were advanced and discrete groundwater samples were collected from various depth intervals within each location (Figure 2.1). Direct push groundwater samples were collected during three events; November 2010, January 2011, and July 2011.

Groundwater samples were collected using direct push technology to advance either a wire-wrapped, stainless steel screen or polyvinyl chloride (PVC) to a desired depth. Groundwater was purged using a peristaltic pump. One volume of water approximately equal to the volume in the rods was purged and one set of groundwater parameters including temperature, conductivity, pH, dissolved oxygen (DO) and turbidity was measured prior to sampling, if possible. Groundwater samples were collected from two depths within the majority of these locations. Based on subsurface conditions, one groundwater sample was collected at DP-04, DP-10, DP-20, DP-31 and DP-32. Groundwater samples were collected at a low purge rate (approximately 100 milliliters per minute) to evaluate off-site groundwater VOC contamination.

Groundwater measurements and sampling activities were documented using a groundwater grab FDR and are presented in Appendix C-1. Groundwater samples were analyzed by Chemtech for VOCs by USEPA Method 8260. Groundwater laboratory analysis included Category B deliverables.

Direct push Geoprobe® boring locations were located using a GPS by MACTEC on November 19, 2010 (DP-01 through DP-20) and January 21, 2011 (DP-21 through DP-32).

2.1.2 Groundwater Microwell Installation

To determine groundwater flow characteristics and quality downgradient of the Site and evaluate the VOC groundwater plume, six microwells (DP-06, DP-10, DP-12, DP-15, DP-33, and DP-34) were installed. Microwell locations are shown on Figure 2.1. Off-site groundwater was encountered at depths ranging from two and eight feet bgs. Microwells were installed after soil and groundwater samples were collected from direct push borings (with the exception of DP-33 and DP-34). Each boring was advanced using direct push drilling techniques. Discrete subsurface soil samples were collected using a 4-foot long, 2.5-inch diameter core sampler with an acrylic liner. Soil samples were collected continuously from the ground surface to approximately 20 feet below the groundwater table. PID readings were used to screen soil samples for the presence of VOCs as each soil sample was removed from the sample collection tube. Samples were described using the Unified Soil Classification System (USCS). Sample descriptions and classifications, PID readings, and boring observations were recorded on the FDRs and are presented in Appendix C-2.

Four microwells were completed as permanent microwells (DP-06, DP-10, DP-12, and DP-15) and were used for groundwater level measurements and groundwater sampling locations. DP-33 and DP-34 were installed as temporary well locations to collect groundwater samples, as well as further evaluate groundwater flow direction northwest of the Irondequoit Creek. Microwells, with the exception of DP-33 and DP-34, were screened across the water table to determine groundwater table elevations and create a potentiometric surface map.

The permanent microwells were constructed with one-inch inside diameter (ID) schedule 40 PVC, with 10 foot lengths of 0.01-inch machine slotted well screens. Microwells were constructed with a # 0 sand pack to one foot above the screen, and a bentonite seal to the ground surface. Microwells were

completed with a locking cap and a six inch flush mount cover. Microwell specifications are presented in Table 2.2 and the construction diagrams are presented in Appendix C-3.

2.1.3 Groundwater Monitoring Well Installation

To further evaluate groundwater flow characteristics and quality downgradient of the Site and better define the VOC contamination, six, two-inch groundwater monitoring wells (MW-11, MW-12, DP-22, DP-23, DP-27, and DP-28) were installed. Analytical data from the direct push groundwater profiling and microwell installation was used to determine the placement of the permanent monitoring wells. Monitoring wells were installed within the interpreted off-site VOC groundwater contamination plume, located west of the Site, to allow monitoring of the contamination.

Four shallow overburden wells (DP-22, DP-23, DP-27, and DP-28) were installed at depths ranging from approximately 18 feet bgs to 24 feet bgs (Figure 2.1). These monitoring wells were installed within locations where direct push groundwater profiling was previously conducted. Two deep overburden groundwater monitoring wells (MW-11 and MW-12) were installed to a depth of approximately 61 feet bgs.

Monitoring well borings were advanced using hollow stem auger drilling techniques. Soil samples were collected within the screening interval, using 2-inch split spoons. PID readings were used to screen soil samples for the presence of VOCs as each soil sample was removed from the split-spoon. Soil samples were described using USCS. The sample description and classification, VOC reading, and boring observations were recorded on an FDR and are presented in Appendix C-2.

During monitoring well installation at MW-11 and MW-12, soil samples were collected from an interval below the water table and analyzed by Chemtech for TOC by Lloyd Kahn Method. In addition, a soil sample was collected from an interval below the water table at DP-28 and analyzed by Chemtech for grain size to aid in the hydraulic conductivity evaluation at the Site.

Monitoring wells were constructed with two-inch ID schedule 40 PVC with ten foot screens and threaded flush joint riser. Well screens have 0.010-inch wide machine slots with #0 sand pack to two feet above the screen, a 2-foot bentonite seal above the sand pack and native backfill to the ground surface (sand pack and seal depths varied slightly based on depth of screen bgs). Monitoring wells

were completed with a locking cap and a six-inch flush mount cover. Monitoring well specifications are presented in Table 2.2 and the construction diagrams are presented in Appendix C-3.

2.1.4 Well Development

Upon completion of well installations, the wells were developed (no sooner than 24 hours after installation for wells installed with top of screens below the water table) using pump and surge techniques. Wells were developed to remove excess sediment, if present, as well as to qualitatively evaluate well conductivity/recharge and remove stagnant water. Field measurements for pH, temperature, specific conductivity, oxidation reduction potential (ORP), DO, and turbidity were measured from most wells during development. These measurements were recorded on a FDR and are presented in Appendix C-4.

2.1.5 Monitoring Well Groundwater Sampling

To evaluate contaminant concentrations in groundwater at the Carriage Cleaners site in conjunction with the November 2010 off-site direct push groundwater investigation, groundwater samples were collected from five existing Site wells (MW-2, MW-5, MW-6M, MW-6D, and MW-7) in November of 2010. An attempt to sample existing Site wells MW-9 and MW-10 was unsuccessful due to the wells being clogged with debris. Field measurements for pH, temperature, specific conductivity, ORP, DO, and turbidity were collected through a flow through cell (with the exception of turbidity) from each well during pre-sample purging. These measurements were recorded on the FDRs and are presented in Appendix C-5. Purge water was observed for sheens and odors and containerized and stored on-Site for future disposal. Groundwater samples were analyzed by Chemtech for VOCs by USEPA Method 8260.

To further evaluate off-site groundwater conditions downgradient from the Site, a second round of groundwater samples was collected from 13 m onitoring wells in August 2011 (Table 2.1). Groundwater samples were analyzed for VOCs by USEPA Method 8260. In addition, six wells (MW-2, MW-7, DP-10, DP-15, DP-23, and MW-11) were sampled for MNA parameters, including: TOC by USEPA Method 415.1, Nitrate by NYSDEC Analytical Services Protocols (ASP) Method 352.1, Nitrite by NYSDEC ASP Method 354.1, Sulfate by NYSDEC ASP Method 375.4, Sulfide by NYSDEC ASP Method 376.2, Methane/Ethane/Ethene by Method RSK 175, carbon dioxide by

calculation, Alkalinity by Method 310.1, chloride by Method 325.3, and iron and manganese by USEPA Method 6010B. DO and ORP were measured in the field as part of stabilization parameters. To evaluate background conditions, MW-5 was analyzed for CO_2, alkalinity, and chloride.

2.1.6 Pore Water Sampling

Pore water samples were collected from seven locations (PS-01 to PS-07) downgradient from the Site to evaluate potential groundwater plume discharge points to surface water (Figure 2.1). Samples were collected in November 2010 to evaluate if site-related contaminants were discharging from shallow groundwater to surface water west of the Site. Samples were collected in January 2011 to further evaluate if contaminants were discharging from shallow groundwater to surface water northwest of the Site.

Temporary pore water sample points consisting of a 1/4-inch stainless steel pipe with a one-inch screen were pushed by hand to approximately 8-inches to three feet into the banks of the Irondequoit Creek. Tubing was attached to the end of the pore water sampler and groundwater samples were collected using a Geopump.

At a minimum, three sets of pore water parameters including temperature, conductivity, pH, DO and turbidity were measured prior to sampling. Prior to pore water sample collection, temperature and DO measurements were compared to surface water measurements (Irondequoit Creek) to verify the collection of groundwater (DO in groundwater is typically much lower than DO concentrations in surface water). DO in the pore water sample and the surface water were measured using a Hach DR 890 calorimetric field testing kit. Pore water, associated surface water measurements, and other sampling observations were documented on a FDR and are presented in Appendix C-6. Pore water samples were analyzed for VOCs by USEPA Method 8260.

Pore water sample locations were surveyed using a GPS by MACTEC on November 19, 2010 (PS-01, PS-02, PS-03 and PS-05) and January 21, 2011 (PS-04, PS-06 and PS-07).

2.1.7 Hydraulic Conductivity Testing

In January 2011, pneumatic slug testing was conducted at three direct push groundwater profiling locations (DP-22, DP-30 and DP-31) to evaluate the hydraulic conductivity of the shallow aquifer.

Pneumatic slug testing was conducted by using direct push technology to advance a point to a desired depth and exposing a wire-wrapped stainless steel screen to the aquifer. Pneumatic slug testing consisted of pressurizing the rods to a known pressure (the slug) and measuring groundwater elevation data with a pressure transducer placed within the screened interval. A hand pump was used to add pressure to the rods, "depressing" the groundwater table. The pressure within the rods was then released, allowing the aquifer to rebound. The aquifer rebound within the screened interval was monitored and recorded using a transducer, at times ranging from one to four minutes. Pneumatic slug test data was analyzed by the methods Hvorslev and Bouwer and Rice (1976).

Upon completion of groundwater sampling in August 2011, hydraulic conductivity slug tests were performed on five off-site monitoring wells to characterize shallow and deep overburden aquifer characteristics (MW-11, MW-12, DP-22, DP-23 and DP-28). The hydraulic conductivity tests consisted of slug tests, using a solid mass of PVC (the slug) and a data logger. Two rising head and falling head tests were conducted within the five monitoring wells. Hydraulic conductivity test data were analyzed by the methods Springer-Gelhar and Bouwer and Rice (1976). Pneumatic slug testing and slug test data is presented in Appendix D.

2.1.8 Soil Vapor Implant Installation and Sampling

Based on the Sites' proximity to nearby residences and businesses, exterior soil vapor samples were collected to evaluate the potential for soil vapor contaminant migration from the vadose zone. Three exterior permanent soil vapor implants (GV-01, GV-02, and GV-03) were installed in November 2010 using direct-push drilling technology. An existing soil vapor implant (GV-04) was located adjacent to the Site (Figure 2.1). Soil vapor probe construction and sampling procedures were in accordance with the NYSDOH guidance (NYSDOH, 2006).

The soil vapor implants were installed by advancing a two-inch diameter borehole using direct-push drilling methods to evacuate a soil profile with a macrocore sampler. Subsurface soil samples were collected using a 4-foot long 2-inch diameter core sampler with an acrylic liner. Soil samples were collected continuously from the ground surface to approximately six feet bgs. PID headspace readings were used to screen soil samples for the presence of VOCs as each soil sample was removed from the sample collection tube. Soil samples from the soil vapor implant borings were described using USCS. The soil sample description and classification, VOC reading, and boring observations were recorded

on an FDR and are presented in Appendix C-7. Upon removal of the soil, the hole remained open allowing for the installation of the soil vapor implant.

After review of the subsurface conditions, MACTEC installed a soil vapor implant at within the open borehole. Glass beads were used to create a sampling zone around the screen. The implants included a 6-inch length, double woven stainless steel wire screen that threaded into a disposable stainless steel point. Approximately 250 milliliters of glass beads were placed in the hole and brought to a depth approximately one foot above the implant screen. Hydrated bentonite was placed above the glass beads to within six inches of the ground surface. Soil vapor locations were completed at the ground surface with six-inch diameter road boxes.

Three times the volume of the annular space of the screen pack plus the volume of the implant and sample tubing was purged using a personal air monitoring pump prior to collecting the sample. During the soil vapor purge, vapors were screened with a PID.

Exterior soil vapor samples were collected from two locations (SV-03 and SV-04). An attempt was made to sample SV-01 and SV-02, but sampling was unsuccessful due to low vapor flow. Soil vapor samples were collected in a SUMMA®-type canister with a flow rate of less than 0.1 liters per minute. Samples were analyzed by Enalytic Laboratory for VOCs by USEPA Method TO-15. The soil vapor implant diagrams and soil vapor sampling records are provided as Appendix C. Exterior soil vapor locations were surveyed using a GPS by MACTEC on November 19, 2010.

2.1.9 Soil Vapor Intrusion Sampling

Based on an evaluation of November 2010 groundwater results and discussions with the NYSDEC and NYSDOH, soil vapor intrusion (SVI) samples were collected from structures at presumed hydraulically downgradient locations from the Site. SVI sampling was conducted during the 2010/2011 heating season, at fifteen commercial and/or residential structures. A summary of the soil vapor and indoor air sampling program is included in Table 2.1. The SVI investigation included the collection of 14 sub-slab vapor samples and 18 indoor air samples, two sump water samples from one location, as well as five exterior ambient air samples and one duplicate sample. The SVI sampling program is discussed in detail in a confidential report issued to the NYSDEC on June 30, 2011.

Prior to collecting SVI samples, an indoor air survey was completed using the NYSDOH "Indoor Air Quality Questionnaire and Building Inventory" form. To collect the sub-slab soil vapor samples, a one-inch diameter hole was drilled with an impact drill two inches into the building floor, near the center of the basement/slab-on grade, but away from any cracks or sumps. The hole was continued with a 3/8-inch drill bit, until the building slab was penetrated. The hole was continued approximately 3-inches below the slab. The hole was swept to remove drill cuttings/dust from the area. A ¼-inch piece of Teflon tubing was inserted through a 1" diameter rubber stopper, and placed into the hole, so that the bottom of the tubing was below the slab floor and the stopper rested inside the one-inch hole, forming a seal. The stopper was then covered with bees wax to provide a seal to prevent the migration of indoor air into the sub-slab. One 60 cubic centimeter volume of air was purged from the tubing with a polyethylene syringe. The syringe was capped and the air was screened outside the building using a PID. A SUMMA®-type canister with a 24-hour flow valve was connected to the tubing.

Helium leak tests were conducted on four sub-slab soil vapor sample locations (Structure 08, Structure 09, Structure 12 and Structure 13) to ensure samples were representative of subsurface conditions and not ambient air. Helium leak tests were conducted by encapsulating the sample point using a bucket or plastic sheeting sealed to the floor surface. The encapsulated area was filled with helium to a concentration exceeding 90-percent and measured using a MGD 2002, a portable helium monitoring device. Care was taken not to pressurize the enclosure while introducing the helium. The soil vapor sample port was then tested for helium breakthrough before collection of the soil vapor sample. Helium concentrations within the enclosures ranged from 90 to 98 percent, and helium concentrations within the sample ports ranged from zero to 0.6-percent. Based on the helium leak testing conducted within the four structures, it is reasonable to believe the soil vapor samples collected from the vicinity of the Site are representative of subsurface conditions.

Basement indoor air samples (or first floor air samples if slab on-grade) were collected in a SUMMA®-type canisters from the vicinity of the sub-slab vapor sample collection points. MACTEC collected the indoor air samples as far away from sumps as possible. Indoor air samples were collected from approximately three to six feet above the floor level. Indoor air samples were set up with 24-hour flow valves. SVI from within Structure 15 consisted of one indoor air sample; there were no sub-slab soil vapor samples collected at Structure 15. The air sample from structure 15 was used to evaluate potential vapors from groundwater that was leaking into the basement. Sub-slab vapor samples were

collected from the adjoining Structures on both sides of Structure 15 (one shares the same foundation) and were used to evaluate potential risk from vapor intrusion into this Structure.

Ambient air samples were collected in SUMMA®-type canisters from the vicinity of the structures being sampled for indoor air and sub-slab vapor VOC contamination. Samples were collected from approximately three to six feet above ground surface. Ambient air samples were set up with 24-hour flow valves.

Once the sub-slab vapor sample canisters, indoor air sample canisters, and exterior ambient air canister were set up with 24-hour flow valves for an individual location, the valves from each container was opened. Sample collection information was recorded on an Indoor Air/Soil Vapor Sampling FDR which is presented in a standalone SVI report.

The samples were shipped to Enalytic laboratory for analyses of VOCs via USEPA Method TO-15 with a detection limit of 1 microgram per cubic meter ($\mu g/M^3$) for most compounds. TCE, VC, and carbon tetrachloride were reported with a detection limit of 0.25 $\mu g/M^3$ for indoor and ambient air samples. The laboratory provided category B deliverables.

Upon completion of the sampling, tubing and stopper were removed from the building floor and the holes were filled completely with a fast drying hydraulic concrete (i.e. Quickcrete).

In addition to the active sample collectors (i.e. SUMMA®-type cans), two indoor air samples were collected from a co mmercial structure (Structure 11) using Radiello 130 passive samplers and analyzed for VOCs under USEPA method TO-17. The samplers were placed approximately four feet above the ground surface and left for two weeks. After the two weeks, the samplers were placed in a sealed container and shipped to Air Toxics of California for analysis of select VOCs.

2.1.10 DER-31 Implementation

This section describes the NYSDEC DER approach to remediating sites in the context of the larger environment, a concept known as "Green Remediation". The approach is intended to improve the overall sustainability of the investigation by promoting the use of more sustainable practices and technologies. Green Remediation practices and technologies are less disruptive to the environment, generate less IDW, increase reuse and recycling, and emit fewer pollutants, including greenhouse

gases, to the atmosphere. Green Remediation concepts and techniques were considered during the RI investigation field events, and include:

- Installing microwells during the initial phase investigation using direct push technology with a Geoprobe® device, rather than installing monitoring wells with hollow stem auger techniques (reducing emissions to the atmosphere and production of IDW);
- Eliminating idling vehicles, when possible.

2.2 INTERIM REMEDIAL MEASURES

Three rounds of SVI sampling were conducted in the mixed residential/commercial area adjacent to the Site during the 2010 heating season in 12 residential structures and three commercial structures. In April 2011, Structure 13 was re-sampled based on the results from March 2011.

The NYSDEC and the NYSDOH evaluated the potential for exposures related to SVI in residential structures off-site. Based on their evaluation of the analytical results from the 15 residential and commercial structures sampled for SVI during the 2010 heating season, the NYSDEC and NYSDOH recommended that five residential structures receive mitigation systems, and no further action be conducted at the remaining10 structures (although SVI results did not indicate the need for mitigation at one of the five residential structures, this structure shared a foundation with a structure recommended for mitigation and therefore this structure was also recommended by the NYSDEC and NYSDOH for mitigation). In addition, three other residential structures that were not sampled were constructed with shared foundations to structures recommended for mitigation, and therefore these three structures were also recommended by the NYSDEC and NYSDOH for mitigation.

Based on discussions with and direction from the NYSDEC and the NYSDOH, an IRM in the form of sub-slab depressurization (SSD) systems was implemented to address potential exposure to SVI at eight off-site residential structures recommended for mitigation. These eight structures are part of a condominium complex. Based on the configuration of the condominium complex, four SSD systems were designed and installed to mitigate the eight residential structures. The SSD system installations included placement of plastic sump covers sealed to the basement floors to prevent the entry of vapors through these slab openings.

2.3 CONCEPTUAL SITE MODEL

MACTEC reviewed available historical data and developed a conceptual site model (CSM). The CSM describes the contaminants of potential concern, primary or secondary release mechanisms, the media affected, migration pathways, and potential receptors. The conceptual model for the Site is presented in Table 2.3.

Chlorinated solvents have migrated into site soil and groundwater as a result of previous activities at the Site. Groundwater was encountered between approximately two and eight feet bgs in the study area. Groundwater reportedly flows to the west to northwest in the shallow overburden towards a gravel quarry. Deeper groundwater flow is also expected to be in a west or northwest direction toward Irondequoit Creek and Lake Ontario.

Existing Site data indicates that groundwater and soil in the vicinity of the Site contains concentrations of chlorinated solvents above applicable SCGs. Previous investigations and IRMs suggest that the Site is contributing to the presence of PCE and PCE breakdown products on Site, and potentially in off-site groundwater and soil vapor.

3.0 SITE PHYSICAL SETTING

The sections below describe site topography, climate, surface water and groundwater hydrology, and geology.

3.1 TOPOGRAPHY

Figure 1.1 shows the general topography of the surrounding area.

3.2 CLIMATE

The climate of the area is characterized by moderately warm summers and cold winters. Mean monthly temperatures range from 24 degrees Fahrenheit (°F) in January to 70°F in July. Average annual precipitation is 32 inches. Average annual snowfall is 90 inches per year (National Climatic Data Center, 1999).

3.3 SURFACE WATER HYDROLOGY

The Site property consists primarily of impermeable surfaces (asphalt pavement or former building concrete slab), with the exception of the west and north edges of the property which are covered in vegetation. Surface water at the site is expected to flow to low areas on the Site, and then to local storm sewers located west of the Site. Water that does not flow into the sewers may infiltrate into unpaved areas of the Site. The storm sewers flow to Irondequoit Creek, located approximately 650 feet west of the Site. Irondequoit Creek eventually flows into Irondequoit Bay and then to Lake Ontario. Although a gravel quarry is located approximately 1900 feet northwest of the Site, it is not connected to the surrounding surface water bodies (i.e. there are no inlets or outlets to Irondequoit Creek).

3.4 GROUNDWATER HYDROLOGY

Groundwater at the Site is present at approximately two to seven feet bgs, with some seasonal variability. Based on groundwater levels collected during the RI, overburden groundwater flow is

interpreted to flow predominantly northwest towards Irondequoit Creek and the nearby quarry. Surface water levels within the quarry were two to three feet lower than those measured just southeast of the quarry in Irondequoit Creek. Table 3.1 presents a summary of groundwater level measurements and measuring point elevation data. Figure 3.1 presents interpreted overburden groundwater contours from synoptic water level measurements collected in July 2011. Studies of Irondequoit Creek indicated that the creek water level can fluctuate several feet in elevation with rain events. This change in surface water elevation can affect groundwater levels within the vicinity of the creek, causing the typically gaining stream to be a losing stream at times (USGS, 1999). Shallow groundwater is interpreted to discharge to Irondequoit Creek, but based on analytical data, deeper overburden groundwater is interpreted to flow beneath the creek and discharge to the adjacent gravel quarry. Due to the depth of the quarry (greater than 100 feet deep), and it being used for sand and gravel, the surface water elevation within the quarry is interpreted to reflect the surface water elevation of groundwater. Groundwater that enters the quarry is interpreted to flow through the quarry to the northeast as part of regional groundwater flow towards Lake Ontario.

Three well clusters with screens set at varying depths are located within the monitoring well network at and off the Site. Water levels were collected at these wells to evaluate potential vertical groundwater gradients. Groundwater elevation measurements from August 2011 show vertical gradients range from 0.2 feet, indicating a slight upward gradient at the Site (MW-6M and MW-6D), to negligible further downgradient of the Site (DP-23 and MW-12). These measurements indicate minimal vertical gradients within the overburden. The lack of silt or clay layers observed within the boring logs also indicates that significant confining layers are likely not present in the overburden in the vicinity of the Site.

Hydraulic conductivity slug tests were conducted at selected shallow (10 to 24 feet bgs) and deep (50 to 60 feet bgs) overburden locations to estimate hydraulic conductivity values. S lug tests were conducted both pneumatically at direct push locations with four inch screens, and with a solid slug at two-inch monitoring wells. Hydraulic conductivities were calculated using Aqtesolv and primarily using the methods of Bouwer and Rice (1976) and Hvorslev (1951) for the shallow overburden wells with regular appearing data. Hydraulic conductivities were calculated using the method of Springer and Gelhar (1971) for the deeper overburden wells, and for one of the shallow overburden wells, where the data indicated inertial effects. The estimated hydraulic conductivities for the shallow overburden locations ranged from 1.2 feet/day to 41.7 feet/day. The variations in hydraulic

conductivities indicate that the overburden in the study area is not uniform and that some areas likely have higher silt content. The geometric mean hydraulic conductivity in the shallow overburden was 9.2 feet/day. The estimated hydraulic conductivities for the deeper overburden locations ranged from84 feet/day to 81 feet/day. The geometric mean hydraulic conductivity in the deeper overburden was 131 feet/day. Based on an average horizontal gradient for the shallow overburden in the vicinity of the wells tested of 0.001 feet per foot and an assumed porosity of 0.25, the estimated travel time for shallow overburden groundwater ranged from four feet per year to 45 feet per year, with an average estimated travel time of 13 feet per year. This range represents zones of varying conductivity; with groundwater flow expected follow preferential pathways within the overburden. Site related CVOCs were detected at least 1600 feet downgradient of the source area, and if spills occurred forty years ago, that would indicate an estimated contaminant travel time along preferential pathways of 40 feet per year.

Based on an average horizontal gradient for the shallow overburden in the vicinity of the wells tested of 0.0012 feet per foot and an assumed porosity of 0.25, the average travel time for deeper overburden groundwater was estimated to be 230 feet per year. The higher estimated hydraulic conductivity and faster groundwater travel time for the deeper overburden is reflected in the observation of less fine soil at depths. A summary of the hydraulic conductivity slug test results is presented on Table 3.2. Hydraulic conductivity slug test plots and FDRs are presented in Appendix D.

3.5 GEOLOGY

Irondequoit Creek flows through a valley carved out of a pre-glacial Genesee River valley that was filled in with glacial drift (Rogers, 1893). Based on the off-site RI and previous investigations at the Site, the overburden at and in the vicinity of the Site consists of fine to very fine grained sand with little to some silt and trace amounts of gravel to approximately 12 feet bgs. Below 12 feet bgs soils predominantly consist of medium to very fine-grained sand with some to no silt with occasional gravel. Based on the one deep boring at the Site property, silt, followed by gravel and then silt and clay were encountered from 70 to 74 feet bgs, at which point the boring was terminated. Bedrock was not encountered in the on-site borings, although pieces of shale were noted in the deep boring between 72 and 74 feet bgs (LaBella, 2009a). Based on discussions with employees from the Dolomite Products Co., a gravel quarry located approximately 0.5 miles northwest of the Site, bedrock is anticipated to be greater than 115 feet bgs downgradient of the

Site. Figure 3.2 presents the interpreted geologic cross-section of the investigation area, along a line running from the southeast to the northwest (A to A'). The aerial presentation of the cross-section is shown on Figure 2.1.

A soil sample was collected from a depth of 15 feet from DP-28, located approximately 1,300 northwest of the Site, and submitted for grain size analysis. Grain size analytical results from DP-28 were described as, fine to coarse grained sand (79 percent), with little gravel (12 percent), and trace fines (6 percent of silt and clay). Analytical laboratory results of Site soil grain size sample is presented in Appendix E. Soil TOC results are presented in Table 3.3

4.0 NATURE AND EXTENT OF CONTAMINATION

To determine whether the laboratory data met the project specific criteria for data quality and data usability a Data Usability Summary Report (DUSR) was prepared. The DUSR was prepared for each batch of samples analyzed in accordance with the "Guidance for the Development of Data Usability Reports" (NYSDEC, 2010a) and included as an appendix to the RI Report.

Analytical results were compared to the appropriate SCGs, as indicated below. Reported concentrations of individual analytes indicating contravention of standards or guidelines will be noted in the report.

Groundwater and Pore Water Samples. Analytical results were compared to the NYS Class GA Groundwater Quality Standards from 6 NYCRR Parts 700-705 (NYS, 1999b), as well as to guidance values in the NYSDEC Technical and Operational Guidance Series 1.1.1 (NYSDEC, 1998), as appropriate.

Soil Vapor and Indoor Air Samples. Analytical results were compared to Matrices 1 and 2 of the NYSDOH Guidance for Evaluating Vapor Intrusion into Indoor Air in the State of New York (NYSDOH, 2006).

4.1 GROUNDWATER

Groundwater samples were collected from 34 temporary Geoprobe® sampling points (DP-01 through DP-34) and 14 permanent monitoring wells from both the Site and presumed downgradient locations from the Carriage Cleaners Site. Groundwater sampling locations are shown on 2.1.

An oblique view of the valley showing groundwater sampling locations is presented on Figure 4.1. Figures 4.2 through 4.5 also show the same oblique view of the valley as Figure 4.1, although the surface of the land is shown as transparent so that the various sampling depths can also be portrayed, allowing more of a three dimensional presentation of the data. The range of detected concentrations of PCE in groundwater is shown on Figure 4.2. The range of detected concentrations of TCE, a primary breakdown product of PCE, in groundwater is shown on Figure 4.3. The ranges of detected

concentrations of cis-1,2-DCE and VC, a breakdown products of TCE, in groundwater are shown on Figure 4.4 and Figure 4.5, respectively.

4.1.1 Direct Push Groundwater Profiling VOC Results

A total of 34 direct push borings were advanced at the Site to characterize off-site groundwater conditions. From November 2010 through July 2011, three direct push groundwater profiling events were conducted from the Site. Direct push boring locations DP-19 and DP-20 were advanced at presumed hydraulically upgradient locations from the Site; the remaining 32 direct push borings were advance in locations presumed to be hydraulically downgradient from the Site. A total of 66 groundwater grab samples (not including quality control) were collected from the 34 direct push locations. Groundwater samples were collected at discrete intervals by pushing rods to a desired depth. Groundwater was purged from the rods using a peristaltic pump and dedicated tubing. Detected VOCs from the direct push groundwater sampling are presented in Table 4.1. Complete analytical results are presented within the DUSR in Appendix F.

To evaluate upgradient groundwater conditions from the Site, two direct push borings (DP-19 and DP-20) were advanced and three discrete groundwater samples were collected. PCE, TCE, cis-1,2-DCE and VC were not detected at concentrations above their applicable SCGs (5 µg/L, 5 µg/L, 5 µg/L, and 2 µg/L, respectively) in the three groundwater samples collected from the upgradient locations.

PCE, TCE, cis-1,2-DCE and/or VC were detected at concentrations above their applicable SCGs in groundwater samples from 21 of the 32 direct push groundwater profiling locations, downgradient from the Site. The maximum concentration of PCE (1,400 µg/L) detected was at DP-02 (screening interval from 16 to 20 feet bgs), located approximately 10 feet west of the Site. The maximum concentration TCE (570 JD µg/L) detected was at DP-10 (screening interval from 16 to 20 feet bgs), located approximately 240 feet west of the Site. The maximum concentration of cis-1,2-DCE (1,200 JD µg/L) detected was at DP-11 (screening interval from 16 to 20 feet bgs), located approximately 250 feet west of the Site. The maximum concentration of VC (360 D µg/L) detected was at DP-10 (screening interval from 8 to 12 feet bgs), located approximately 240 feet west of the Site. Based on the solubility of PCE (150 milligrams per liter [mg/L]), off-site groundwater exhibiting concentrations high enough to suggest the presence of dense non-aqueous phase liquid (DNAPL) were not reflected in the sample results during the direct push profiling events (USEPA, 1990).

4.1.2 Monitoring Well Groundwater VOC Results

Two rounds of groundwater samples were collected from monitoring wells at and further downgradient from the Site, and were analyzed for VOCs via USEPA Method 8260. The first round, or the baseline groundwater sampling event, was conducted in November 2010; and the second round was conducted in August 2011. The primary contaminants of concern (COCs) from the Site are chlorinated solvents related to dry cleaning operations; more specifically, PCE and TCE, and their breakdown products cis-1,2-DCE, and VC. Detected VOCs from monitoring well groundwater samples are presented in Table 4.2. Complete analytical results are presented within the DUSR in Appendix F.

PCE, TCE, cis-1,2-DCE, and/or VC were detected at concentrations above their applicable SCG in groundwater samples from 12 of the 14 monitoring wells sampled at the Site. The highest concentrations of PCE (680 D µg/L) and TCE (1,300 DJ µg/L) were detected on the Site (MW-2), adjacent to the former Site building. The highest concentration of cis-1,2-DCE (2,500 DJ µg/L) and VC (150 µg/L) were detected from MW-7, also located on the Site and adjacent to the former Site building.

4.1.3 Monitoring Well Groundwater MNA Results

Samples from seven overburden monitoring wells were submitted for analysis of MNA parameters August 2011. MNA groundwater results are presented in Table 4.3. Groundwater results were used to evaluate the likelihood that anaerobic biological degradation of CVOCs is occurring within groundwater at, and downgradient of the Site. MNA groundwater samples were not compared to SCGs. A subset of MNA parameters were collected from MW-5 to evaluate background groundwater conditions. An evaluation of MNA results is discussed in Section 5.

4.1.4 Pore Water VOC Results

Seven pore water samples were collected from locations west to northwest of the Site and analyzed for VOCs via USEPA Method 8260 (Figure 2.1). Pore water sampling results are summarized in Table

4.4. PCE was detected at PS-02 at a concentration of 0.52 J µg/L. The other VOC parameter detected in the pore water was chloromethane (PS-06).

4.1.5 Sump Water VOC Results

Two groundwater samples were collected from separate influent pipes within the sump pit of Structure 15 and were analyzed for VOCs via USEPA Method 8260. Sump water sampling VOC results are presented in Table 4.5. PCE concentrations in the two sump water samples ranged from non-detect to 5.6 µg/L. TCE concentrations in the two sump water samples ranged from non-detect to 37 J µg/L. Cis-1,2-DCE concentrations in the two sump water samples ranged from 17 D µg/L to 170 EJ µg/L. VC concentrations in the two sump water samples ranged from 17 D µg/L to 41 µg/L.

4.2 SOIL VAPOR INTRUSION SAMPLING

Two exterior soil vapor samples were sampled in 2010. Twelve residential structures and three commercial structures were sampled in 2011. VOCs detected in exterior soil vapor samples are presented in Table 4.6. VOCs detected in sub-slab vapor and indoor/ambient air samples are presented by location in Table 4.7. Complete analytical results are presented within the DUSR in Appendix F. The SVI sampling program is discussed in detail in a confidential report issued to the NYSDEC on June 30, 2011.

4.2.1 Exterior Soil Vapor Sampling

PCE detected in exterior soil vapor ranged in concentrations from 2.3 J µg/M^3 to 2.8 J µg/M^3. TCE detected in exterior soil vapor ranged in concentrations from non-detect to 2 J µg/M^3. Cis-1,2-DCE and VC were not detected at concentrations greater than the reporting limit.

4.2.2 Residential Soil Vapor Intrusion Sampling

PCE concentrations in the 12 sub-slab vapor samples ranged from non-detect to 21,000 µg/M^3 and indoor air concentrations ranged from non-detect to 29 J µg/M^3. TCE concentrations in the 12 sub-slab vapor ranged from non-detect to 28,000 J µg/M^3 and indoor air concentrations ranged from non-detect to 42 J µg/M^3. Cis-1,2-DCE concentrations in the 12 sub-slab vapor ranged from non-detect to 22,000 µg/M^3 and indoor air concentrations ranged from non-detect to 43 µg/M^3. VC concentrations

in the 12 sub-slab vapor ranged from non-detect to 2,000 J µg/M^3 and indoor air concentrations ranged from non-detect to 8.5 J µg/M^3.

4.2.3 Commercial Soil Vapor Intrusion Sampling

PCE concentrations in the three sub-slab vapor samples ranged from non-detect to 16 J µg/M^3 and indoor air concentrations ranged from non-detect to 2.7 µg/M^3. TCE concentrations in the three sub-slab vapor samples ranged from non-detect to 17 J µg/M^3 and indoor air concentrations ranged from non-detect to 0.082 µg/M^3. Cis-1,2-DCE concentrations in the three sub-slab vapor samples ranged from non-detect to 17 µg/M^3 and indoor air concentrations were non-detect. VC concentrations in the three sub-slab vapor samples ranged from non-detect to 19 µg/M^3 and indoor air concentrations were non-detect.

5.0 CONTAMINANT FATE AND TRANSPORT

This section presents an assessment of contaminant movement and disposition within the environment.

5.1 CONCEPTUAL SITE MODEL

The CSM takes into consideration sources of contamination, fate and transport processes, potential receptors, exposure pathways, and exposure points. C ontaminated media associated with the Site include soil, groundwater, soil vapor, and indoor air. Table 2.3 provides a summary of the contamination sources, migration pathways, and potential receptors.

Site access is currently controlled by a chain link fence. Within the fenced area, contamination is located in subsurface soil that is primarily covered by clean fill, asphalt or beneath the concrete slab of the former Site building. If the Site were to undergo development activities, workers who excavate the soil for underground utility repair or maintenance, or for construction activities, could be exposed to contaminants in soil through incidental ingestion of soil, dermal contact with the soil, or by inhaling dust or vapor that may be released from the soil.

Residential and commercial properties located within the potential groundwater plume path are serviced by public water and sewer. Therefore, direct exposure to groundwater associated with the Site through domestic or other uses is not anticipated. Minimal direct exposure to contaminated groundwater could occur if work was conducted on basement sumps that potentially contain contaminated groundwater. In addition, workers excavating in the vicinity of the Site could come in contact with contaminated groundwater. Deeper groundwater appears to be flowing below Irondequoit Creek and into the Quarry, although discharge of contaminants from shallow groundwater to surface water could also occur into Irondequoit Creek. Based on expected diffusion and dispersion of contaminants, contaminants discharged to surface water would not be expected to pose a health risk to human or ecological receptors.

SVI sampling performed within structures at presumed hydraulically downgradient locations of the Site, identified the potential for vapor intrusion of VOCs at eight residential locations. Sub-slab depressurization systems were installed at these locations in 2011, mitigating this potential route of exposure.

5.2 CONTAMINANT PERSISTENCE

The following sections discuss contaminant persistence and characteristics of COCs at the Site.

VOCs

COCs detected at concentrations greater than their associated NYS groundwater standards include PCE, TCE, cis-1,2-DCE, and, VC. These compounds are classified as halogenated hydrocarbons (specifically chlorinated hydrocarbons) and are present in groundwater and soils on the Site. The processes that likely control the fate of VOCs at, and hydraulically downgradient of, the Site include volatilization, dissolution, and biodegradation. These processes are briefly discussed below.

Volatilization. The primary fate of VOCs in soils and shallow groundwater is likely volatilization, as VOCs partition rapidly to the atmosphere, and neither biodegradation nor hydrolysis (a photolytic decomposition due to exposure to sunlight) occurs at a rapid rate. (Agency for Toxic Substances and Disease Registry, 1997)

Dissolution. Dissolution of VOCs from site sources to groundwater is a significant transport mechanism for VOCs at the Site. Factors affecting dissolution of VOCs likely are: (1) water table elevation in comparison to source areas; (2) flow rate (residence time) of the groundwater in the contaminated material; (3) solubility of the compound; (4) amount of recharge through VOCs in the unsaturated zone; and (5) the degree of partitioning to soils.

Biodegradation. Biodegradation reactions can reduce the total mass of VOCs in groundwater. Naturally occurring bacteria in soil are capable of degrading VOCs. Certain types of microorganisms (aerobes) require oxygen to aerobically biodegrade VOCs and the concentration of DO is an indicator of the potential for aerobic biologic activity in groundwater. Aerobic biodegradation is particularly effective for aromatic hydrocarbons, such as benzene and toluene, and may be effective in mineralizing chlorinated solvent daughter products such as 1,2-DCE and VC.

Under aerobic conditions, the parent compound PCE and its daughter product TCE are relatively stable and persistent in the environment. Under suitable anaerobic conditions, however, PCE and TCE

may undergo biologic transformation as the dominant fate process. It has been shown that biodegradation of PCE and TCE in groundwater increases with the organic content of the soil.

The complete anaerobic biologic transformation pathway for PCE is:

PCE→TCE→1,2-DCE→VC→ethene→carbon dioxide and water. Degradation pathways may not be complete, however, depending on the presence of suitable conditions to complete the process.

Persistence of VOCs in Site Media

Chlorinated solvents, the primary COCs at the Site, are fairly persistent in the environment. The chlorinated solvents associated with the dry cleaning process were reportedly used at the Site from approximately 1961 to 2005. The primary source of the PCE contamination, a leaky concrete waste water holding tank on the north side of the Site building, and leaks from a PCE still located in the southern half of the former Site building were removed in 2007, along with PCE contaminated soil. Soil samples collected from the base of the excavation pit indicated the continued presence of PCE in soil; concentrations detected as high as 130,000 mg/kg. PCE in Site soils present a continued source of groundwater contamination.

The properties of PCE and its degradation products are listed below.

Contaminant	Vapor pressure (mm Hg)	Henry's Law constant (atm-m^3/mol)	Density constant (g/cm^3)	Water solubility (mg/L)	Octanol-water partition coefficient (K_{ow})	Organic carbon partition coefficient (K_{oc})
tetrachloroethene	17.8	2.59E-02	1.6311	150	398	364
trichloroethene	57.9	9.10E-03	1.4679	1,100	240	126
cis-1,2-dichloroethene	208	7.58E-03	1.27	3,500	5.01	49.0
vinyl chloride	2,660	8.19E-02	0.9106	2,670	24	57

Based on the solubility (150 mg/L), Henry's Constant (0.754-unitless) and organic carbon partition coefficient (364 mg/g) of PCE and using the Soil Saturation Limit (C_{sat}[1]) equation assuming saturated conditions, DNAPL is possible if concentrations in soils exceed 300 mg/kg.

The Soil Saturation Limit equation, assuming saturated conditions is as follows:

$C_{sat} = S / \rho_b (K_d \rho_b + \Theta_w)$

Parameter = Definition (units)
C_{sat} = soil saturation concentration (mg/kg)
S = solubility in water (mg/L)
ρ_b = dry soil bulk density (kg/L) = assume 1.5
K_d = soil-water partition coefficient (L/kg) = K_{oc} x foc
K_{oc} = organic carbon partition coefficient (L/kg)
Foc = fraction organic carbon in soil (g/g) = 0.0047 (0.47% interpreted from TOC results in Table 3.3)
Θ_w = water-filled soil porosity (Lwater /Lsoil) = assume 0.43

In 2007, the highest concentration of PCE detected in soil at the Site after the soil removal program was 130,000 mg/Kg. T his PCE concentration was above the C_{sat} concentration of 300 mg/kg, suggesting that the presence of PCE as a DNAPL remains a likely possibility at the Site in soils surrounding the area excavated.

In 2011, the highest detected concentration of PCE in Site groundwater was 1,300 µg/L (MW-2). Based on the general "rule of thumb" that NAPL is potentially present if dissolved concentrations in groundwater exceed 1% of the effective solubility of the compound (Plankow, 1996), this concentration does not indicate the potential presence of PCE as DNAPL in Site soil in the vicinity of MW-2 (i.e., downgradient of the historic source). However, the primary purpose of the off-site RI investigation was evaluation of off-site groundwater, and shallow groundwater samples from within AOC 1 or AOC 2 were not collected in 2011.

Shallow soils at the Site exhibit some silt and clay content based on historic reports (Labella, 2009a) and some of the remaining mass of PCE may have diffused into the silt matrix. As stated above, the primary mechanisms of concentration reduction of VOCs are typically through volatilization into soil

[1] C_{sat} is the concentration in soil at which the solubility limits of the soil pore water, the vapor phase limits of the soil pore air, and the absorptive limits of the soil particles have been reached. C_{sat} is a theoretical threshold above which a free phase liquid hazardous substance may exist. The equation is described in the USEPA "Soil Screening Guidance" (USEPA, 1996).

gas (for unsaturated soil or groundwater table surface concentrations), and dispersion and diffusion in groundwater, as well as through biological degradation. If the mass of PCE is bound within the soil matrix (i.e., adsorbed to the soils), then dispersion through advection will be less of a factor in concentration reduction.

To evaluate contaminant persistence in groundwater, contaminant concentrations in samples collected over several years were reviewed. Table 5.1 presents concentrations of PCE and its breakdown products TCE, cis-1,2-DCE, trans-1,2-DCE, 1,1-DCE, and VC detected in groundwater in a select set of Site monitoring wells for sampling events conducted to date at the Site. MW-2 is located adjacent to AOC 1, and MW-7 is located downgradient from the historic PCE still (AOC 2). Although a soil removal action was conducted in 2007 from AOC 1, concentrations of select VOCs in groundwater samples collected from MW-2 appear to have remained relatively consistent from 2005 to 2011. This indicates that a source of groundwater contamination is likely present in soil upgradient from this location. Concentrations of PCE, TCE and cis-1,2-DCE have appear to have increased in groundwater samples collected from MW-7, when comparing available data from 2006 through 2011. Higher concentrations were historically detected in groundwater samples collected from MW-1 and MW-9, both of which were located within the approximate boundaries of the two source areas. These monitoring wells were either removed (MW-1) or were deemed not usable (MW-9) during the 2010 and 2011 groundwater sampling events. Results associated with MW-1 and MW-9 were not included in Table 5.1.

Based on direct push and monitoring well groundwater data collected during the off-site RI, PCE concentrations within the plume appear to decrease with distance from the Site. PCE concentrations decreased from 1,300 µg/L (MW-2 and DP-10) at the source area to 110 µg/L (DP-18), located approximately 700 feet northwest of the Site. For VC, a breakdown product of PCE, concentrations increased from a maximum concentration of 150 µg/L (MW-7) at the source area to 360 µg/L (DP-10) located approximately 300 feet northwest from the Site. VC was detected as high as 220 µg/L in DP-22, located approximately 1,350 feet northwest of the source.

5.3 MONITORED NATURAL ATTENUATION

Evaluation of Biological Degradation/Natural Attenuation of VOCs at the Site

Natural attenuation refers to the presence of microorganisms which are capable of degrading chlorinated solvents. Anaerobic conditions occur under reducing conditions and with little to no DO. Aerobic conditions occur under oxygenated conditions or with high levels of DO.

MNA parameters for groundwater were collected in August 2011 from select monitoring wells. MNA analytical results are presented in Table 4.3. BIOCHLOR Model (BIOCHLOR) Natural Attenuation Screening forms are included in Appendix G.

BIOCHLOR uses the MNA data to evaluate the likelihood that biodegradation of the chlorinated solvents is occurring in the aquifer. Evaluation results are presented as a numerical value in Table 4.3, which represents whether there is *inadequate evidence*, *limited evidence*, *adequate evidence*, or *strong evidence* that anaerobic biodegradation of chlorinated organics is occurring in the aquifer. Based on an evaluation of the MNA data, there is *adequate evidence for anaerobic biodegradation* in groundwater at the Site (MW-2), and *limited evidence for anaerobic biodegradation* in groundwater downgradient from the Site. Although BIOCHLOR results indicated that there is *limited evidence for anaerobic biodegradation* in the aquifer downgradient of the Site, VOC analytical groundwater data collected from 2010 and 2011 strongly suggests that reductive dechlorination is occurring based on the high concentrations of the PCE breakdown products.

The occurrence of natural attenuation is also indicated by the increase in concentration of VC as groundwater moves away from the source area of PCE contamination (See Section 5.2).

5.4 CONTAMINANT MIGRATION

Sources and Migration Pathways

Contaminants detected in Site media at concentrations above associated regulatory SCG values consist of CVOCs.

Historical documentation and previously collected data from the Site, indicate chlorinated solvents typically used in the dry cleaning industry were released to the environment. Previous investigations indicated that the two primary release mechanisms and source areas were 1) the leaking waste water

tank on the north side of the Site building (AOC 1), and 2) the spills to the ground surface from the PCE still, located inside the south end of the Site building (AOC 2). Incidental spills may also have occurred outside the site building.

Chlorinated solvents or waste water containing CVOCs can percolate into soils, and further into to groundwater. CVOCs bound to the soil matrix can also readily leach from soil with infiltration of precipitation, and migrate to groundwater. Once dissolved in groundwater, CVOCs can migrate with groundwater flow. G roundwater at and in the vicinity of the Site is present from between approximately 5.5 feet bgs to 7.5 feet bgs. Localized groundwater flow is interpreted to flow in a generally west to northwesterly direction, towards Irondequoit Creek. Regional groundwater flow is also likely to the northwest, toward Lake Ontario. Groundwater data collected during the RI indicates that CVOCs are present in groundwater below the Site, and that CVOC contaminated groundwater extends, at least, approximately 2,100 feet northwest of the Site. The highest concentrations of CVOCs in groundwater were historically detected in samples collected from the two source areas. Monitoring wells were either deemed not usable, or had been removed from these source areas prior to the MACTEC RI. The highest concentrations of CVOCs detected in groundwater during the MACTEC RI were in groundwater samples from MW-2 and MW-7, located adjacent to the historic source areas.

Groundwater from the site is expected to discharge to Irondequoit Creek (shallow groundwater) or to the gravel quarry (deep groundwater) to the northwest of the Site. Although low concentrations of CVOCs present in groundwater may be discharging to these surface water bodies, concentrations are expected to be minimal and rapidly diminish to below detectable limits due to dilution.

VOCs can partition from both soil and groundwater to soil vapor and migrate through the soil column. Detections of CVOCs in sub-slab soil vapor samples indicate that CVOCs are partitioning from groundwater to soil vapor in residential properties northwest from the Site. Soil vapor can be drawn into buildings through seams and cracks in foundations and floor slabs. Indoor air samples collected from within several structures located over the VOC-impacted groundwater indicate that the soil vapor to indoor air migration pathway was complete. For structures where the soil vapor and indoor air samples exceeded the NYSDOH guidance values, sub-slab depressurization systems were installed to reduce this exposure pathway.

Although shallow groundwater can discharge to surface water, low levels of CVOCs were detected in one pore water sample (PS-02) collected by MACTEC (PCE at a concentration of 0.52 J µg/L). Based on this data, migration of groundwater contamination to surface water is not anticipated to occur.

6.0 QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT

6.1 INTRODUCTION

This section provides a QHHEA for the off-site groundwater at the Carriage Cleaners site. The QHHEA was performed in accordance with NYSDEC DER-10 Technical Guidance (NYSDEC, 2010a), which indicates that the QHHEA should evaluate the mechanisms or exposure pathways by which humans may be potentially exposed to contamination associated with the Site. This section also evaluates the significance of exposure that may occur through the potential exposure pathways. This exposure assessment involves five elements:

1. Description of the contaminant source and the contaminated environmental medium (discussed in detail in Section 5.0);
2. An explanation of the contaminant release and transport mechanisms to the exposed population (discussed in detail in Section 5.0);
3. Identification of potential exposure points to which the populations may come in contact with contaminated medium(discussed in detail in Section 5.0);
4. Description of the routes of exposure (i.e., ingestion, inhalation, etc.); and
5. Characterization of the receptor population who may be exposed to contaminants at the identified points of exposure (takes into consideration the populations that may be potentially exposed to Site-related contamination under the current and future land uses).

In addition, this section includes a discussion of contaminant concentrations at potential exposure points compared to regulatory SCGs.

6.2 RECEPTORS, EXPOSURE PATHWAYS, AND EXPOSURE POINTS

The current and anticipated future use of the Site property is commercial. The properties bordering the Site are also commercial properties. Properties further west and northwest of the Site include both residential and commercial uses.

The Site related contaminants of concern are CVOCs. These contaminants leaked/spilled to the ground surface resulting in contamination of soil, groundwater, and soil vapor. Potentially complete

exposure pathways were identified for direct contact with groundwater via sump water, and inhalation of vapors that may migrate from groundwater to air within overlying structures.

The significance of exposure pathways associated with groundwater and soil vapor/indoor air media is evaluated in this subsection through comparison of analytical data to standard and guidance concentrations published by the NYS and NYSDOH and/or background concentrations.

Groundwater

Groundwater at and in the vicinity of the Site is not used as drinking water and therefore there are no direct exposures to contaminated groundwater from a drinking water perspective under the current or anticipated future land uses. However, a comparison of groundwater analytical data to NYS drinking water standards and guidance values provides information regarding constituents that would be of concern from a health risk perspective if the groundwater was used as potable water under existing conditions. A review of the analytical data indicates that CVOCs (PCE TCE, cis-1,2-DCE, and VC) were detected in groundwater samples collected between the Site and the quarry at concentrations that exceed NYS class GA drinking water standards. Direct contact with contaminated groundwater is possible if excavations are conducted within the area of the overburden groundwater plume (depth to groundwater at the Site varies from between approximately five and seven feet bgs). Minimal direct exposure to contaminated groundwater could also occur if work was conducted on basement sumps that potentially contain contaminated groundwater.

Surface Water

While surface water was not sampled during this RI, seven pore water samples were collected at the groundwater/surface water interface from along the banks of Irondequoit Creek. PCE was detected in one pore water sample (PS-02) at a concentration of 0.52 J µg/L. This concentration is below the drinking water standard for PCE and therefore direct contact with surface water is not anticipated to be a complete exposure pathway.

Soil Vapor Intrusion

SVI is the process by which volatile chemicals migrate from a subsurface source into the indoor air of overlying structures. Evaluations of the SVI pathways are often complex as a result of VOCs in indoor air which are present in part or all due to anthropogenic (background) sources and not the result of the migration of a subsurface source through soil vapor into an enclosed space. Therefore, the

evaluation of the SVI pathway was performed by comparing sub-slab vapor sampling data, indoor air sampling data, outdoor (ambient) air sampling data, and air guideline values, as well as evaluating adjacent residences analytical results. The NYSDOH Guidance for evaluating the potential for vapor migration into indoor air was also followed for compounds that have been assigned to the soil vapor / indoor air decision matrices (available for carbon tetrachloride, 1,1-DCE, cis-1,2-DCE, PCE, 1,1,1-TCA, TCE and VC) (NYSDOH, 2006 and 2007). Recommendations resulting from the decision matrices include: no further action, evaluate potential indoor air sources, monitor, and mitigate.

Comparing concentrations of CVOCs detected in the soil vapor and indoor air within residential and commercial structures north and northwest of the Site to the NYSDOH decision matrix, as well as evaluating residential basement construction, the NYSDEC and NYSDOH determined there was a potential complete exposure pathway at eight residential structures.

7.0 SUMMARY AND CONCLUSIONS

7.1 SUMMARY

The Site is located at 1600 Penfield Road in a mixed residential/commercial area in the Town of Penfield, Monroe County. The site property size is 0.68 acres and is currently vacant, with fencing at the perimeter. The Site contains a former building concrete slab, construction debris and a paved parking lot. The former site building was constructed in 1961 and demolished in the summer of 2009.

The site reportedly operated as a dry cleaning facility from 1961 until approximately 2005, however, on-site dry cleaning operations may not have been implemented for the entire time period. A Phase II ESA was conducted at the Site in 2002 and results indicated soil contamination exceeding the NYSDEC TAGM 4046 Soil Clean-up Objectives to Protect Groundwater Quality adjacent to AOC 1.

A RI was conducted at the Site in 2006 that included an evaluation of shallow soil and groundwater and deep soil and groundwater. The extent of contamination on the Site was divided into three AOCs (Figure 1.2).

An IRM was conducted at the Site in 2007 and approximately 238 tons of CVOC impacted soil in the proximity of AOC 1 was removed and disposed off-site. In addition, 632 gallons of contaminated water from the wastewater holding tank was also remove for off-site disposal. Confirmation soil samples were collected upon completion of the soil removal. PCE was detected at a concentration of 130,000 mg/kg in a soil sample collected from the bottom of the completed excavation prior to backfilling. LaBella recommended that "Based on the confirmatory soil sampling results, additional remedial actions appear warranted for this area".

To evaluate the extent of the off-site groundwater contamination, and the potential for soil vapor intrusion to overlying buildings, MACTEC, conducted the off-site RI between 2010 and 2011. Interpretation of groundwater table elevations recorded indicates groundwater flow is toward the

northwest. Estimated shallow overburden groundwater flow velocities ranged from 4 to 41 feet per year. Estimated deep overburden flow velocities averaged 230 feet per year.

Based on direct push and monitoring well groundwater data collected during the off-site RI, the extent of CVOC contaminated groundwater extends approximately 2100 feet northwest of the Site. PCE concentrations within the plume appear to decrease with distance from the Site. PCE concentrations in groundwater decreased from 1,300 µg/L (MW-2 and DP-10) at the source area to 110 µg/L (DP-18), located approximately 700 feet northwest of the Site.

Although BIOCHLOR results indicated that there is "*limited evidence for anaerobic biodegradation*" in the aquifer downgradient of the Site, VOC analytical groundwater data collected from 2010 and 2011 strongly suggests that reductive dechlorination is occurring based on the high concentrations of PCE daughter products detected. Vinyl chloride concentrations increased from a maximum concentration of 150 µg/L (MW-7) at the source area to 360 µg/L (DP-10) located approximately 300 feet northwest from the Site. Vinyl chloride was detected as high as 220 µg/L in DP-22, located approximately 1,350 feet northwest of the source area. Concentrations of CVOCs in groundwater continue to diminish as groundwater flows further northwest. In addition to the biological degradation, dispersion and dilution of the VOCs in the water column also likely contribute to the diminishing concentrations of VOC in groundwater.

Based on results obtained during the off-site RI, VOC groundwater contamination appears to be primarily located in shallow groundwater (extending to approximately 35 feet bgs) downgradient from the Site property. Concentrations of PCE at the Site were detected at 780 µg/L (12 feet bgs) from MW-2, and at approximately 30 µg/L at both 35 feet bgs and 65 feet bgs from MW-6M/D. The concentrations of CVOCs in groundwater downgradient of AOC 1, located north of the former Site building, also appear to be higher in the shallow groundwater. PCE was detected at a concentration of 400 D µg/L (10 feet bgs) from DP-03, but was not detected from the sample at 20 feet bgs. Further west of the Site, high concentrations of CVOCs were detected at DP-10 from the top of the water table down to 25 feet bgs, with the highest concentrations detected at approximately 17 to 27 feet bgs (PCE at 1,300 µg/L; cis-1,2-DCE at 760 µg/L). PCE concentrations detected at DP-10 decreased with depth to approximately 50 µg/L (at approximately 35 and 45 feet bgs). Based on the low concentrations of PCE detected in one of the seven pore water samples collected along the banks of Irondequoit Creek

northwest of the Site, surface water is not anticipated to be a potential complete exposure pathway for CVOCs.

Although the Site and surrounding area are serviced by public water and sewer, shallow groundwater has the potential to migrate into basement sumps. Chlorinated solvents were detected in water samples collected from a basement sump within the residential neighborhood northwest of the Site.

Contaminated groundwater has the potential to migrate to soil vapor and into overlying occupied structures. Based on an evaluation by the NYSDOH and NYSDEC of the soil vapor and indoor air samples collected from 15 structures, four mitigation systems were recommended and installed to mitigate eight residences (these included SSD systems and sump covers). No further action was recommended for the remaining 10 structures. This SVI information is presented in a standalone document.

7.2 CONCLUSIONS

CVOCs have been disposed of at the Site property. Although a soil removal was conducted to remediate soil defined as a characteristic hazardous waste based on the CVOC concentrations CVOCs are still present in soils at the Site above the SCGs for unrestricted use. This contamination appears to be a continuing source of overburden groundwater contamination. Based on data collected during the RI, site-related CVOCs have migrated in groundwater as far as 2,100 feet to the northwest of the Site at concentrations in excess of SCGs (refer to Figure 4.2 through Figure 4.5). Groundwater concentrations diminish further to the northwest of the Site at DP-34 (cis-1,2-DCE at a concentration of 47 µg/L in 2011) through dispersion, dilution, and anaerobic biological degradation. Shallow groundwater contamination may be discharging to the gravel quarry, northwest of the Site, but likely at concentrations below regulatory criteria.

Chlorinated VOCs present in shallow groundwater in the vicinity of the Site appear to be volatilizing to soil vapor. The soil vapor has the potential to migrate to indoor air through vapor intrusion.

Based on an evaluation of the data collected to date, several potential complete exposure pathways for site related CVOCs were identified. Although the site is currently inactive and surrounded by a fence, potential future construction workers at the Site that perform earthwork could come into contact with

contaminated soil and groundwater above SCGs. Groundwater in the vicinity of the Site is not used as a source of drinking water. Direct contact with contaminated groundwater is therefore not anticipated to be a complete exposure pathway under most circumstances, although incidental exposure to contaminated groundwater entering basement sumps is a possibility. The primary potential exposure route for site related CVOCs is to contaminated air resulting from the migration of contaminants from groundwater to indoor air through SVI. A complete exposure pathway from SVI was identified within several residential structures northwest of the Site. This potential and actual exposure pathway was mitigated with the installation of four sub-slab depressurization systems.

7.3 DATA GAPS AND RECOMMENDATIONS

Based on the information collected to date, several data gaps were identified, including:

1. Previous investigations have not determined the full extent/mass of soil contamination remaining at the Site within AOC 1 and AOC 2. This soil contamination appears to be a continuing source of groundwater contamination.
2. The vertical extent of groundwater contamination at and downgradient of the Site has not been defined.

To remediate groundwater contamination migrating off-site and the continued potential for vapor migration of CVOCs into the indoor air of structures located above and adjacent to the groundwater plume, the residual soil contamination on the Site should be further evaluated and remediated. This remediation should be conducted prior to, or in conjunction with remediation of the off-site groundwater plume. Prior to remediating soil and groundwater contamination at and downgradient from the Site, a feasibility study is recommended to evaluate remedial alternatives.

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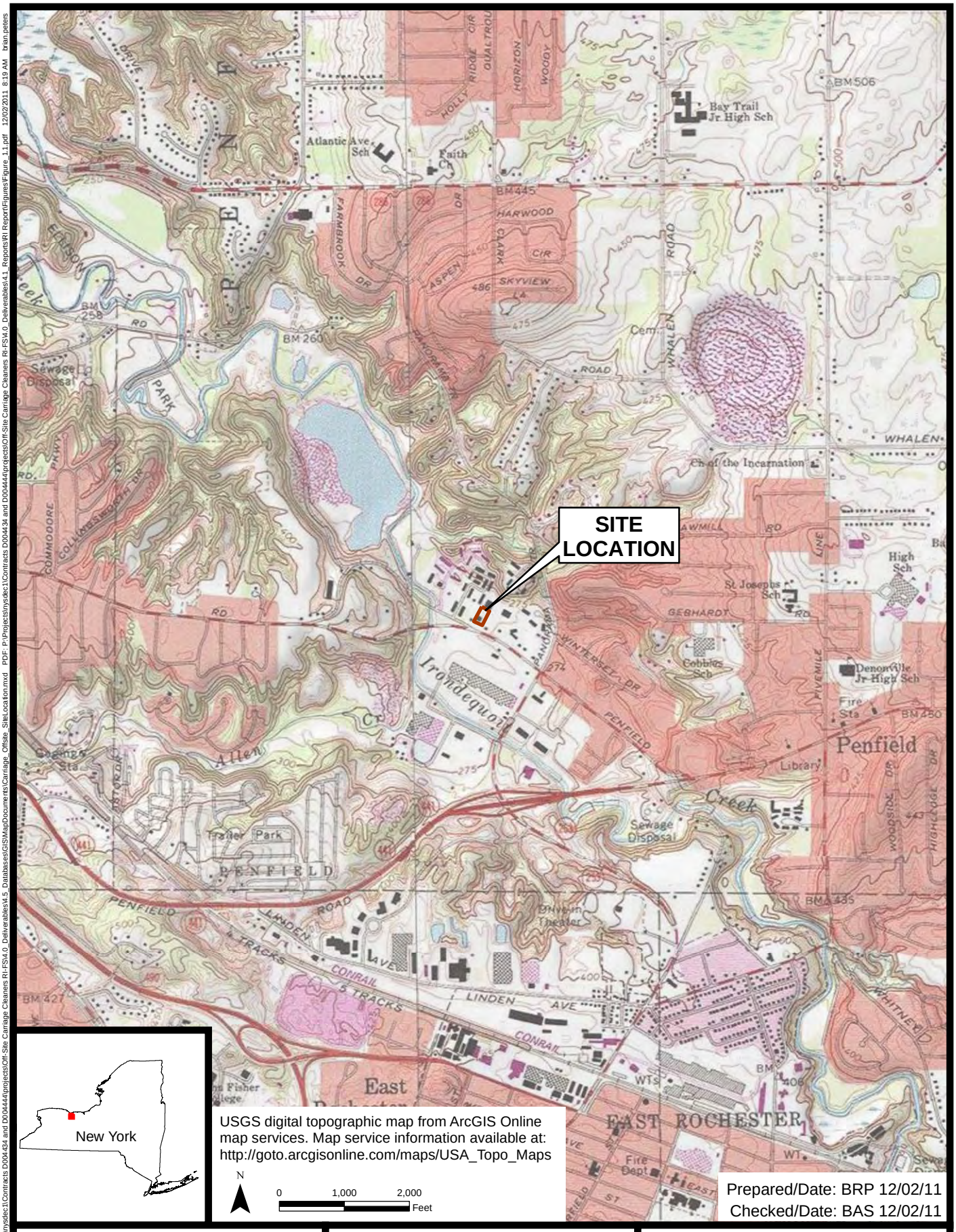
FIGURES

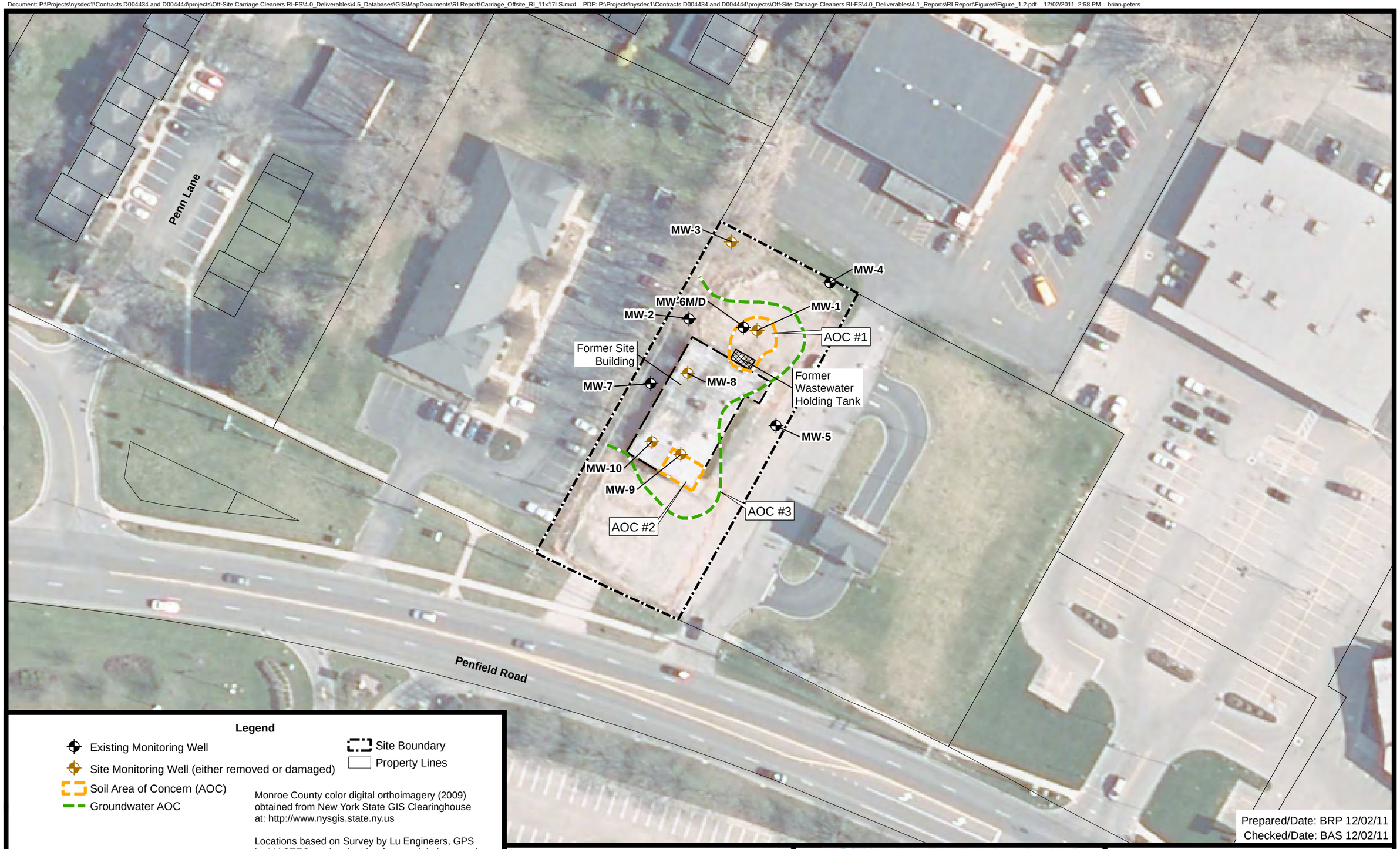


Remedial Investigation Report
Off-Site Carriage Cleaners
Penfield, New York

MACTEC

Site Location Map
Project 3612-10-2168
Figure 1.1

Document: P:\Projects\nysdec1\Contracts D004434 and D004444\projects\Off-Site Carriage Cleaners RI-FS\4.0_Deliverables\4.5_Databases\GIS\MapDocuments\RI Report\Carriage_Offsite_RI_11x17LS.mxd PDF: P:\Projects\nysdec1\Contracts D004434 and D004444\projects\Off-Site Carriage Cleaners RI-FS\4.0_Deliverables\4.1_Reports\RI Report\Figures\Figure_1.2.pdf 12/02/2011 2:58 PM brian.peters



Legend

- Existing Monitoring Well
- Site Monitoring Well (either removed or damaged)
- Soil Area of Concern (AOC)
- Groundwater AOC
- Site Boundary
- Property Lines

N

0 30 60 Feet

Monroe County color digital orthoimagery (2009) obtained from New York State GIS Clearinghouse at: http://www.nysgis.state.ny.us

Locations based on Survey by Lu Engineers, GPS by MACTEC, and estimation from aerial photograph

AOCs approximated from Carriage Cleantown IRM Report (LaBella, 2009b)

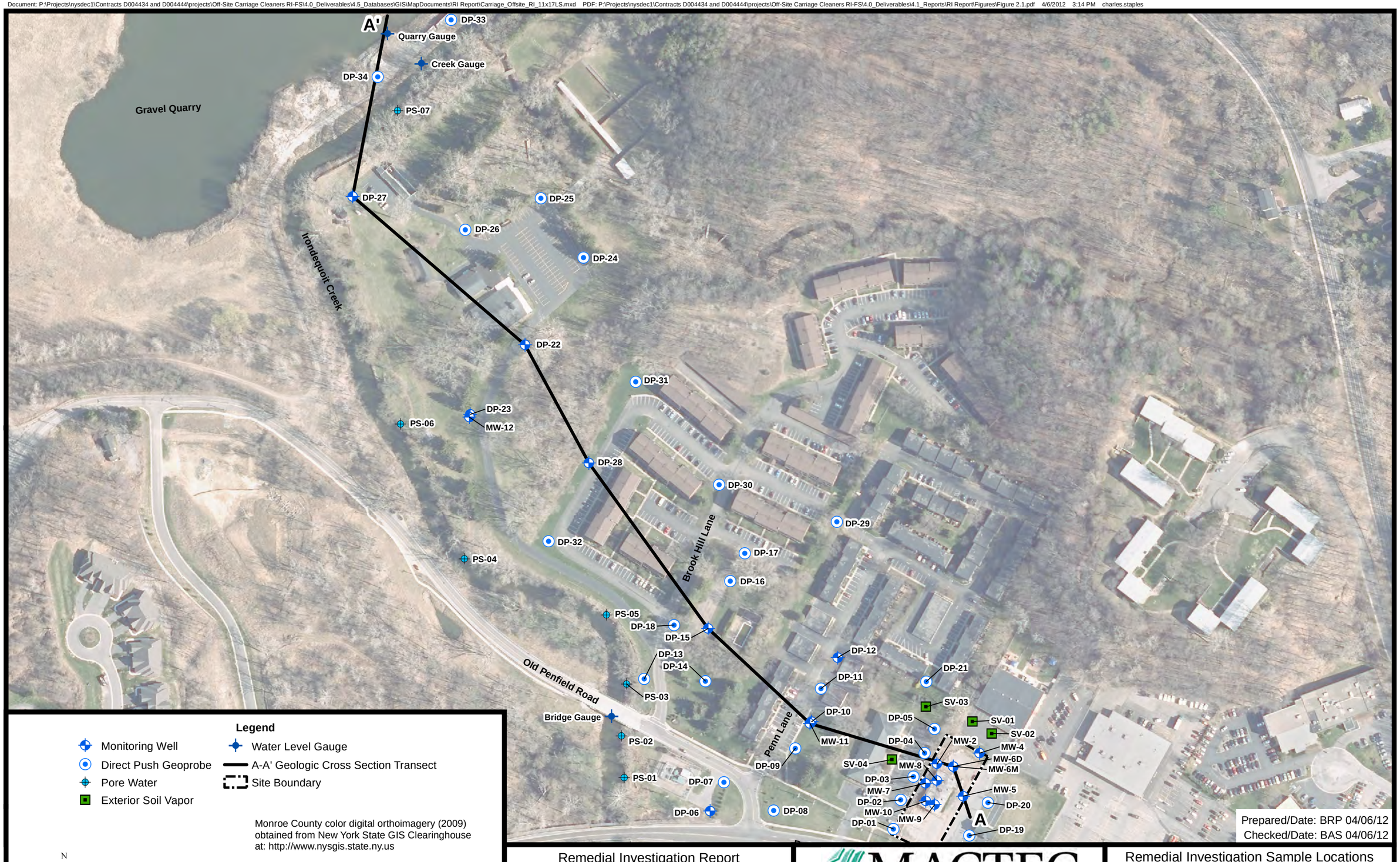
Prepared/Date: BRP 12/02/11
Checked/Date: BAS 12/02/11

Remedial Investigation Report
Off-Site Carriage Cleaners
Penfield, New York

MACTEC

Historical Investigation Locations

Project 3612-10-2168 Figure 1.2



Legend

- Monitoring Well
- Direct Push Geoprobe
- Pore Water
- Exterior Soil Vapor
- Water Level Gauge
- A-A' Geologic Cross Section Transect
- Site Boundary

Monroe County color digital orthoimagery (2009) obtained from New York State GIS Clearinghouse at: http://www.nysgis.state.ny.us

Locations based on Survey by Lu Engineers, GPS by MACTEC, and estimation from aerial photograph

N

0 100 200 Feet

Prepared/Date: BRP 04/06/12
Checked/Date: BAS 04/06/12

Remedial Investigation Report
Off-Site Carriage Cleaners
Penfield, New York

MACTEC

Remedial Investigation Sample Locations

Project 3612-10-2168 Figure 2.1

Legend

Water Level Measuring Points
(elevations in feet above MSL)
- Water Level Gauge
- Temporary Well
- Monitoring Well

Interpreted July 2011 Groundwater Contour
Site Boundary

N
0 110 220
Feet

Monroe County color digital orthoimagery (2009) obtained from New York State GIS Clearinghouse at: http://www.nysgis.state.ny.us

261.40 - Groundwater Elevation; Measured 7/11/2011

Prepared/Date: BRP 12/02/11
Checked/Date: BAS 12/02/11

Remedial Investigation Report
Off-Site Carriage Cleaners
Penfield, New York

MACTEC

July 2011 Interpreted Groundwater Contours

Project 3612-10-2168 Figure 3.1

A'
Northeast

A
Southwest

Elevation, ft

Gravel Quarry

Irondequoit Creek

DP-34

DP-27

DP-22

MW-12

DP-28

DP-15

MW-11

DP-10

MW-6M

MW-2

MW-6D

MW-5

Fill & Sand

Fill

Sand

Sand Trace Silt

Sand & Trace Silt

Sand, Fine Silt

Sand & Gravel

Sand

Fine to Coarse Sand Little Gravel to Some Gravel

Silty Sand

Sand & Gravel

Sand & Silt

Sand & Gravel

Medium Sand & Fine Silt

Sand

Silty Sand

Sand Coarse Sand & Gravel

Sand & Gravel, Trace Silt

Silty Sand

Coarse Sand & Gravelly Sand

Silt

Sand & Silt

Sand

Sand

Silt, Clayey Silt

Sand

Fine to Coarse Sand, Trace Silt & Trace Gravel at different depths

Silt

?

Possible Bedrock (Shale)

270
260
250
240
230
220
210
200
190
180

2300
2100
1900
1700
1500
1300
1100
900
700
500
300
100
0

= groundwater elevation measured August 1, 2011 by MACTEC

= soils described as silty sands, sandy silt mixtures or USGS group symbol code SM.

= soil described as sand, fine to coarse, gravelly sands, with little fines or USGS group symbol code SW/SP.

= Soils described as fill

Notes: Vertical scale = ft above mean sea level = NAVD-88
Horizontal scale = ft from arbitrary station 0+00

Interpreted soil descriptions based on field observations at individual borings; soil between borings may vary from those described.

Prepared/Date: CRS 12/9/11
Checked/Date: BAS 12/9/11

Remedial Investigation Report
Off-Site Carriage Cleaners
Penfield, New York

MACTEC

A-A' Geologic Cross-Section

Project Number: 3612102168

Figure 3.2

PORT2011039a.cdr

Note:
Oblique view not to scale: verical scale exagerated for clarity.

Prepared/Date: MJW 12/09/11
Checked/Date: BAS 12/09/11

N

Monroe County color digital orthoimagery (2009) obtained from New York State GIS Clearinghouse at: http://www.nysgis.state.ny.us

Remedial Investigation Report
Off-Site Carriage Cleaners
Penfield, New York

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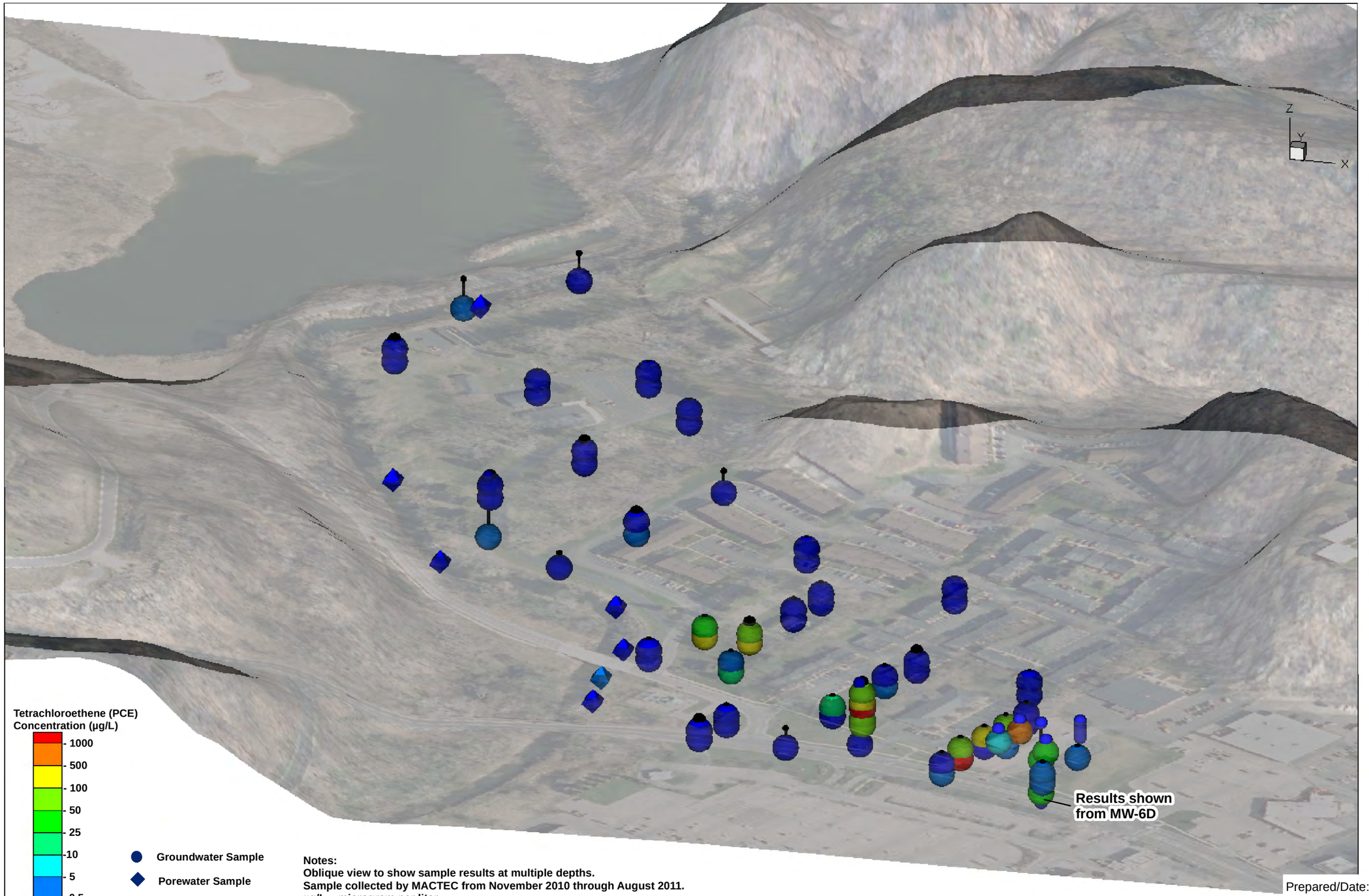
Groundwater Sampling Locations - Oblique View

Project 3612-10-2168 Figure 4.1



Notes:
Oblique view to show sample results at multiple depths.
Sample collected by MACTEC from November 2010 through August 2011.
µg/L = microgram per liter

Prepared/Date: MJW 12/09/11
Checked/Date: BAS 12/09/11

N

Monroe County color digital orthoimagery (2009) obtained from
New York State GIS Clearinghouse at: http://www.nysgis.state.ny.us

Remedial Investigation Report
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Penfield, New York

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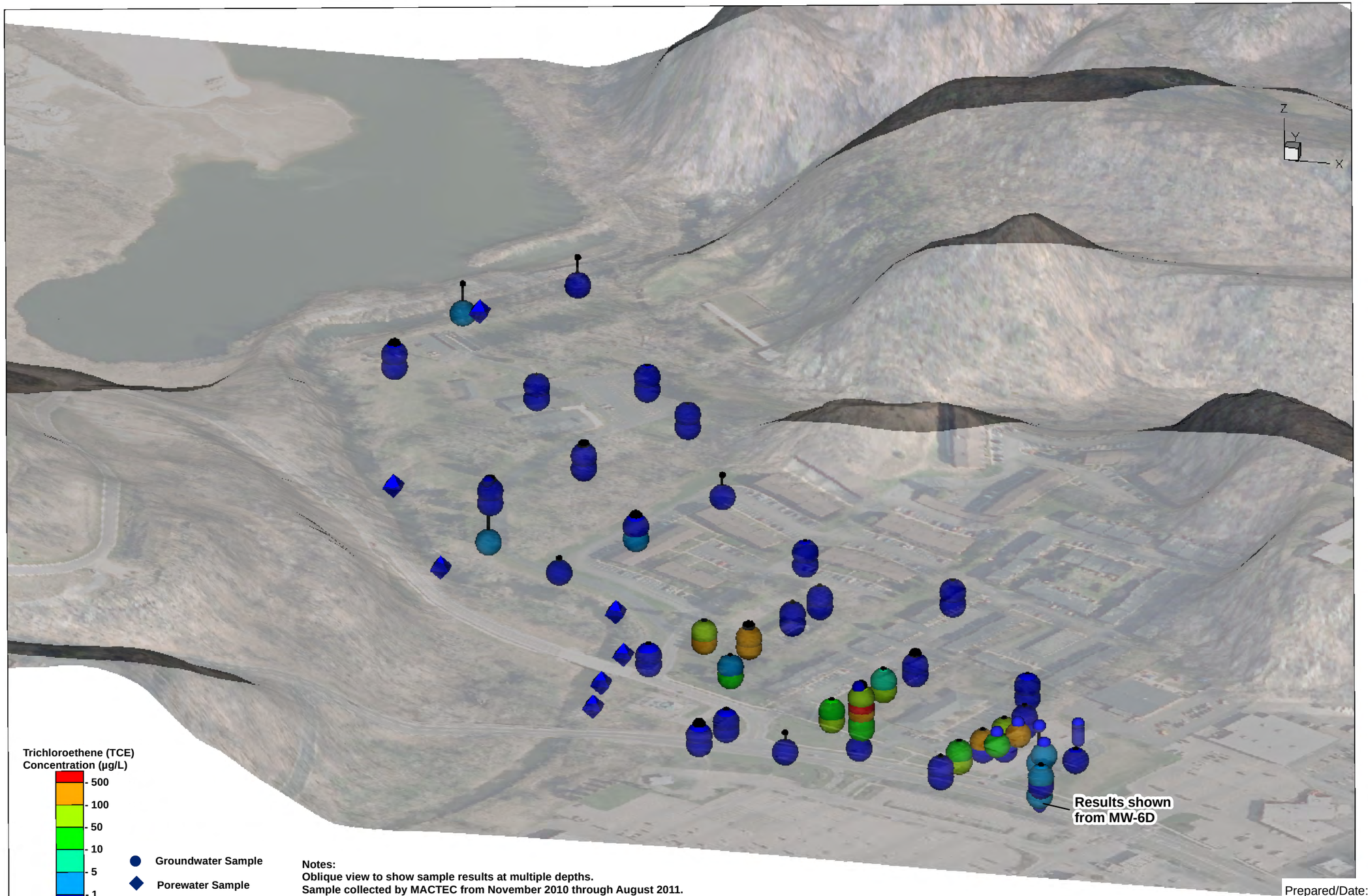
Tetrachloroethene Concentrations in Groundwater

Project 3612-10-2168 Figure 4.2



Notes:
Oblique view to show sample results at multiple depths.
Sample collected by MACTEC from November 2010 through August 2011.
µg/L = microgram per liter

Prepared/Date: MJW 12/09/11
Checked/Date: BAS 12/09/11

N

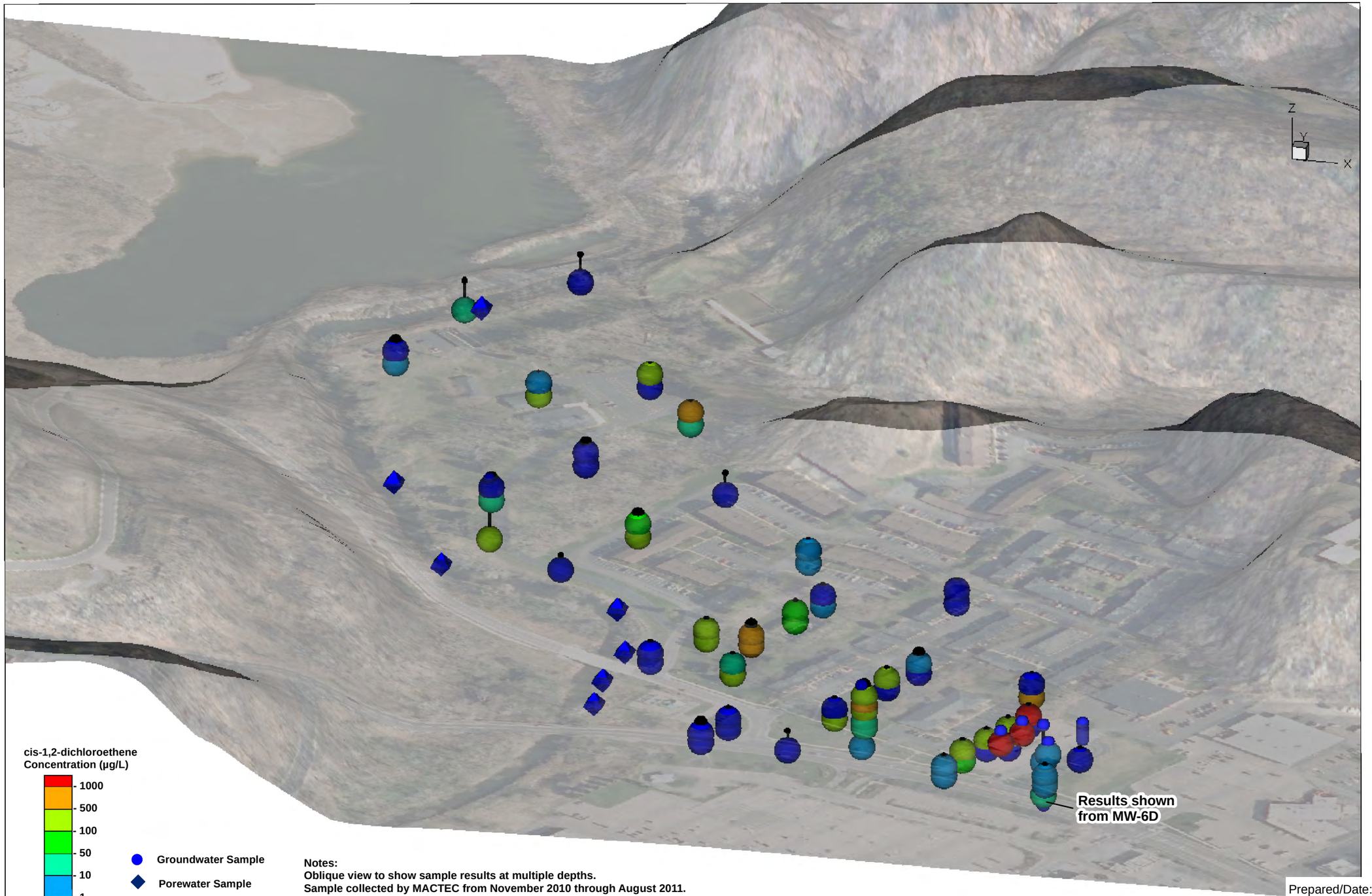
Monroe County color digital orthoimagery (2009) obtained from New York State GIS Clearinghouse at: http://www.nysgis.state.ny.us

Remedial Investigation Report
Off-Site Carriage Cleaners
Penfield, New York

MACTEC

Trichloroethene Concentrations in Groundwater

Project 3612-10-2168 Figure 4.3



Notes:
Oblique view to show sample results at multiple depths.
Sample collected by MACTEC from November 2010 through August 2011.
µg/L = microgram per liter

Prepared/Date: MJW 12/09/11
Checked/Date: BAS 12/09/11

N

Monroe County color digital orthoimagery (2009) obtained from New York State GIS Clearinghouse at: http://www.nysgis.state.ny.us

Remedial Investigation Report
Off-Site Carriage Cleaners
Penfield, New York

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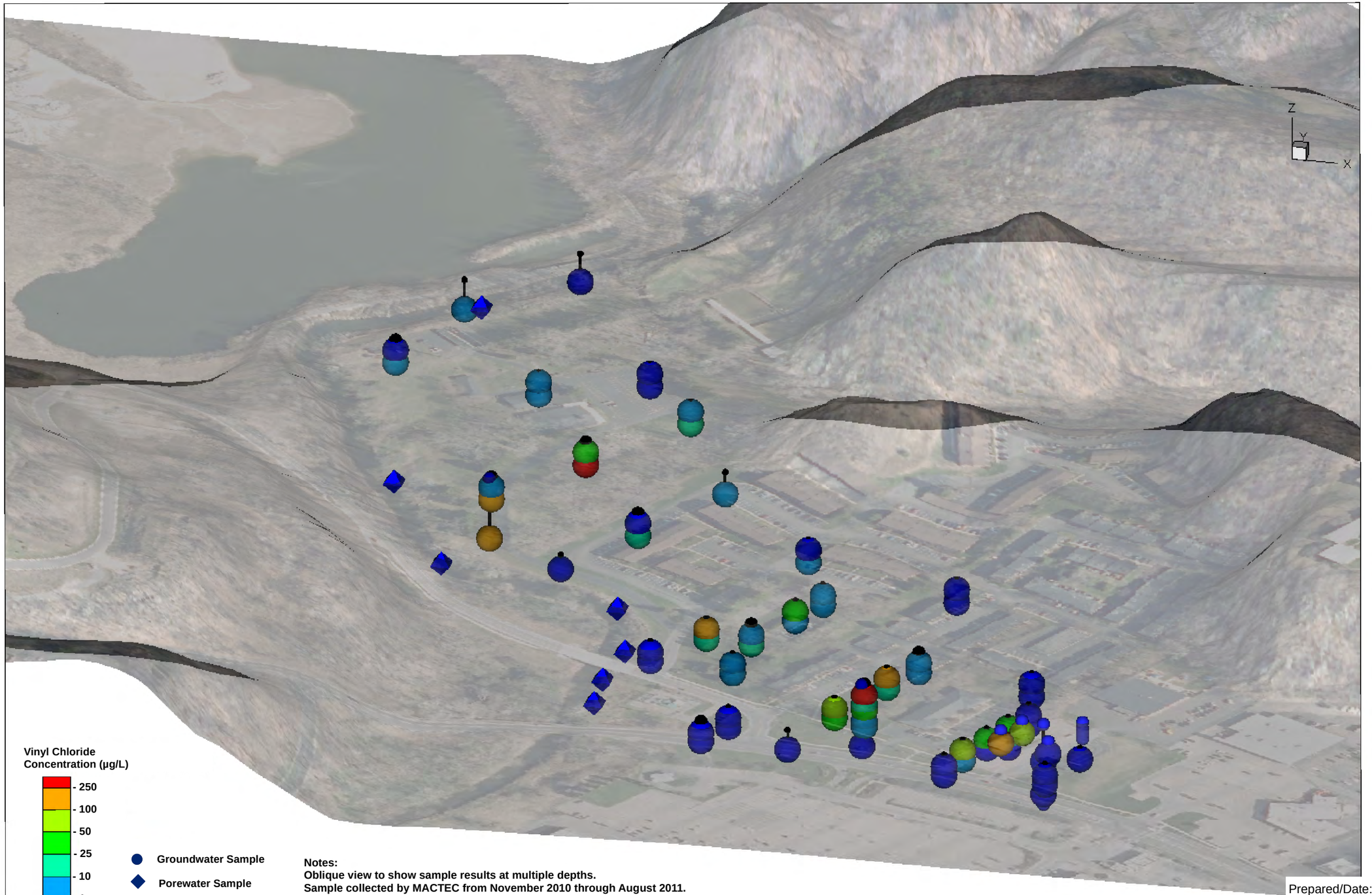
cis-1,2-dichloroethene Concentrations in Groundwater

Project 3612-10-2168 Figure 4.4



Notes:
Oblique view to show sample results at multiple depths.
Sample collected by MACTEC from November 2010 through August 2011.
µg/L = microgram per liter

Prepared/Date: MJW 12/09/11
Checked/Date: BAS 12/09/11

N

Monroe County color digital orthoimagery (2009) obtained from New York State GIS Clearinghouse at: http://www.nysgis.state.ny.us

Remedial Investigation Report
Off-Site Carriage Cleaners
Penfield, New York

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Vinyl Chloride Concentrations in Groundwater

Project 3612-10-2168 Figure 4.5

TABLES

Table 2.1: Remedial Investigation Field Activities

Media Type	Date	Sample Locations	Parameters
Pore Water Sampling	November 15-18, 2010	PS-1, PS-2, PS-3, PS-5	VOCs
	January 17-21, 2011	PS-4, PS-6, PS-7	VOCs
Direct Push Geoprobe Groundwater Sampling	November 15-18, 2010	DP-1 to DP-20	VOCs
	January 17-21, 2011	DP-21 to DP-32	VOCs
	July 13, 2011	DP-33 to DP-34	VOCs
Microwell Installation	November 15-18, 2010	Installed four (4), one-inch microwells: DP-6, DP-10, DP-12, DP-15	NA
Groundwater Monitoring Well Installation	January 17-21, 2011	Installed four (4), two-inch monitoring wells: DP-22, DP-23, DP-27, DP-28	NA
	July 14, 2011	Installed two (2), two-inch monitoring wells: MW-11, MW-12	Total Organic Carbon
Hydraulic Conductivity (Slug) Testing	January 17-21, 2011	DP-22, DP-30, DP-31	NA
	August 1-3, 2011	DP-22, DP-23, DP-28, MW-11, MW-12	NA
Groundwater Monitoring Well Sampling	November 15-18, 2010	MW-2, MW-5, MW-6M, MW-6D, MW-7	VOCs
	August 1-3, 2011	DP-10, DP-12, DP-15, DP-22, DP-23, DP-27, DP-28, MW-2, MW-5, MW-6M, MW-7, MW-11, MW-12	VOCs, MNA (select wells)
Soil Vapor/Indoor Air Sampling and Sump Water	January 17-21, 2011	AA-1 to AA-3, SS/IA-1 to SS/IA-5, SS/IA-6A, SS/IA-6B, SS/IA-7 to SS/ IA-10, IA-11A, IA-11B	VOCs (TO-15 and TO-17)
	March 16, 2011	AA-12, SS/IA-12, SS/IA-13	VOCs (TO-15)
	March 24, 2011	AA-14, SS/IA-14	VOCs (TO-15)
	April 28, 2011	IA-13 (first floor), IA-15, SW-15	VOCs (TO-15), VOCs
Site Survey	February 22, 2011	DP-6, DP-10, DP-12, DP-15, DP-22, DP-23, DP-27, DP-28, MW-2, MW-4, MW-5, MW-6M, MW-6D, MW-7	NA
	July 13, 2011	DP-33, DP-34, MW-11, MW-12	NA

Notes:
VOC = volatile organic compound
TOC = total organic carbon
MNA = monitored natural attenuation
NA = not applicable
Sample Location types:
DP = direct push
SW = sump water
MW = monitoring well
PS = porewater sample
SW = sump water
SV = soil vapor
IA = indoor air
GV = soil vapor point

Table 2.2: Monitoring Well Details

Monitoring Well ID	Northing	Easting	Ground Elevation (ft amsl)	Casing Elevation (ft amsl)	Measuring Point (TOR) Elevation (ft amsl)	TOC-TOR (ft)	BOW (from TOR) (ft)	Screen Length
DP-06	1144251.052	1438065.202	268.26	268.33	267.85	0.48	16.30	10
DP-10	1144452.473	1438293.115	267.57	267.58	267.14	0.44	15.90	10
DP-12	1144596.758	1438352.500	267.18	267.19	266.76	0.44	16.44	10
DP-15	1144661.879	1438060.782	264.24	264.22	263.83	0.39	16.40	10
DP-22	1145299.481	1437649.187	266.66	266.71	266.55	0.16	19.60	10
DP-23	1145143.156	1437526.181	264.29	264.28	263.89	0.39	20.80	10
DP-27	1145633.093	1437261.896	266.18	266.32	265.91	0.41	18.10	10
DP-28	1145033.933	1437792.854	268.42	268.62	268.37	0.24	23.60	10
DP-33	1146030.199	1437483.341	265.91	NA	266.54	NA	28.00	5
DP-34	1145901.892	1437318.571	263.52	NA	263.97	NA	29.40	5
MW-2	1144357.243	1438575.489	269.21	269.24	268.84	0.40	14.45	10
MW-4	1144381.661	1438670.624	266.78	266.78	266.44	0.34	10.00	5
MW-5	1144285.345	1438634.106	269.35	269.34	269.11	0.23	14.65	10
MW-6M	1144351.711	1438612.045	269.10	269.15	268.78	0.37	39.01	10
MW-6D	1144351.694	1438611.943	269.10	269.15	268.90	0.24	68.10	10
MW-7	1144313.802	1438549.540	268.99	269.02	268.79	0.23	15.10	10
MW-11	1144448.222	1438290.021	267.67	267.67	267.32	0.35	59.90	10
MW-12	1145136.763	1437524.205	264.31	264.31	264.02	0.29	58.60	10

Notes:
TOC = top of casing
TOR = top of riser
BOW = bottom of monitoring well
DP = direct push boring
MW = overburden monitoring well
ft = feet
amsl = above mean sea level
Points Surveyed by LU Engineering on 2/2/11,
Horizontal Datum New York State Plane 1983 West Zone
Vertical Datum North American Vertical Datum 1988
Elevation in Feet Above Mean Sea Level (AMSL)
NA = Not Applicable

Table 2.3: Conceptual Site Model

Media	Known or Suspected Source of Contamination	Type of Contamination (General)	COPCs (Specific)	Primary or Secondary Source Release Mechanism	Migration Pathways	Potential Receptors
Soil	Concrete Wastewater Holding Tank Area (portions of the source area have been removed, residual contamination remains in Site soils) and Former PCE Still Area.	PCE dry cleaning solvent	PCE; TCE; cis-1,2 DCE; vinyl choride	Infiltration and percolation	Infiltration / percolation	Human: direct contact if excavation occurs in contaminated area (s)
Groundwater	Contaminated Soil (Secondary Source)	Solvents	PCE; TCE; cis-1,2 DCE; vinyl choride	Infiltration / percolation from contaminated soils	Groundwater flow	Humans could come in contact with contaminated groundwater from contact through basement sumps, as well as construction workers if excavation occurred below the water table.
Indoor Air /Soil Vapor	Contaminated groundwater downgradient from the Off-Site Carriage Cleaners Site.	Solvents	PCE; TCE; cis-1,2 DCE; vinyl choride	Volatilization of contaminated groundwater	Soil vapor migration into commercial and residential structures	Human: Inhalation
Surface Water	Contaminated groundwater could discharge to surface water	Solvents	PCE; TCE; 1,2-DCE; vinyl chloride	Groundwater discharge to surface water	Groundwater flow	Human or ecological: direct contact (likely diluted below risk levels).

COPCs = contaminants of potential concern
PCE = tetrachloroethene
TCE = trichloroethene
DCE = dichloroethene

Table 3.1: Groundwater Elevation Measurements

Monitoring Well ID	Ground Elevation (ft amsl)	Casing Elevation (ft amsl)	Measuring Point (TOR) Elevation (ft amsl)	DTW 1/21/2011	Groundwater Elevation (1/21/2011)	DTW 3/16/2011	Groundwater Elevation (3/16/2011)	DTW 7/11/2011	Groundwater Elevation (7/11/2011)	DTW (8/1/2011)	Groundwater Elevation (8/1/2011)
DP-06	268.26	268.33	267.85	7.31	260.54	6.13	261.72	7.77	260.08	7.81	260.04
DP-10	267.57	267.58	267.14	6.43	260.71	5.07	262.07	6.87	260.27	6.93	260.21
DP-12	267.18	267.19	266.76	6.09	260.67	4.87	261.89	6.54	260.22	6.61	260.15
DP-15	264.24	264.22	263.83	4.61	259.22	2.34	261.49	4.05	259.78	4.15	259.68
DP-22	266.66	266.71	266.55	6.80	259.75	5.29	261.26	7.18	259.37	7.42	259.13
DP-23	264.29	264.28	263.89	4.37	259.52	2.94	260.95	4.75	259.14	5.00	258.89
DP-27	266.18	266.32	265.91	6.80	259.11	5.30	260.61	7.21	258.70	7.50	258.41
DP-28	268.42	268.62	268.37	8.69	259.68	7.25	261.12	9.07	259.30	9.28	259.09
DP-33	265.91	NA	266.54	--	--	--	--	7.96	258.58	--	--
DP-34	263.52	NA	263.97	--	--	--	--	5.79	258.18	--	--
MW-2	269.21	269.24	268.84	7.18	261.66	5.87	262.97	--	--	7.57	261.27
MW-4	266.78	266.78	266.44	4.71	261.73	2.20	264.24	--	--	--	--
MW-5	269.35	269.34	269.11	7.37	261.74	6.06	263.05	7.71	261.40	7.75	261.36
MW-6M	269.10	269.15	268.78	7.10	261.68	--	--	--	--	7.46	261.32
MW-6D	269.10	269.15	268.90	7.36	261.54	--	--	--	--	7.74	261.16
MW-7	268.99	269.02	268.79	7.17	261.62	5.89	262.90	--	--	7.60	261.19
MW-11	267.67	267.67	267.32	--	--	--	--	--	--	7.22	260.10
MW-12	264.31	264.31	264.02	--	--	--	--	--	--	5.11	258.91
Bridge Gauge	277.62	NA	NA	18.11	259.51	16.7	260.92	18.91	258.71	18.85	258.77
Creek Gauge	NA	261.52	NA	--	--	2.91	258.61	--	258.59*	2.80	258.72
Quarry Gauge	NA	262.16	NA	--	--	5.98	256.18	--	256.11*	6.51	255.65

Notes:
TOR = top of riser
DTW = depth to water
DP = direct push boring
MW = monitoring well
ft = feet
amsl = above mean sea level
Points Surveyed by LU Engineering on 02/02/2011, 07/13/2011, and 08/01/2011
Horizontal Datum New York State Plane 1983 West Zone
Vertical Datum North American Vertical Datum 1988
Elevation in Feet AMSL
NA = Not Applicable
-- = indicates a depth to water measurement was not recorded
* = water table elevation surveyed directly by Lu Engineering on 07/13/2011

Table 3.2: Summary of Hydraulic Conductivity Test Results

Location Identification	Well Type	Hvorslev (ft/day)	Bouwer-Rice (ft/day)	Springer-Gelhar (ft/day)	K values Geometric mean (ft/day)	V = Ki/n (ft/day)	V (ft/year)	Geometric mean	
DP-22* Screening Interval: 18' - 22' bgs	Overburden 10 PSI - RHT	8.1	6.2		7.1	0.028	10	**4**	**=V (ft/year)**
	Overburden 10 PSI - RHT	3.7	3.0		3.3	0.013	5		
	Overburden 20 PSI - RHT	2.3	2.0		2.2	0.009	3		
	Overburden 30 PSI - RHT	1.4	1.2		1.3	0.005	2		
	Overburden 30 PSI - RHT	1.4	1.2		1.3	0.005	2		
DP-30* Screening Interval: 18' - 22' bgs	Overburden 10 PSI - RHT	13.9	11.2		12.5	0.050	18	**15**	**=V (ft/year)**
	Overburden 10 PSI - RHT	11.9	9.2		10.5	0.042	15		
	Overburden 20 PSI - RHT	9.6	7.8		8.6	0.035	13		
	Overburden 20 PSI - RHT	10.0	7.9		8.9	0.035	13		
	Overburden 30 PSI - RHT	8.8	7.2		7.9	0.032	12		
	Overburden 30 PSI - RHT	11.6	9.5		10.5	0.042	15		
	Overburden 38 PSI - RHT	12.7	10.0		11.3	0.045	16		
	Overburden 37 PSI - RHT	14.6	12.5		13.5	0.054	20		
DP-31* Screening Interval: 18' - 22' bgs	Overburden 10 PSI - RHT	9.9	7.5		8.6	0.035	13	**21**	**=V (ft/year)**
	Overburden 10 PSI - RHT	22.8	17.2		19.8	0.079	29		
	Overburden 20 PSI - RHT	13.2	10.7		11.9	0.048	17		
	Overburden 20 PSI - RHT	25.4	18.0		21.4	0.085	31		
	Overburden 30 PSI - RHT	16.2	11.9		13.9	0.055	20		
	Overburden 30 PSI - RHT	16.6	12.5		14.4	0.058	21		
DP-22** Screening Interval: 9.6' - 19.6' bgs	MW - FHT-1	11.6	8.2		9.8	0.039	14	**18**	**=V (ft/year)**
	MW - FHT-2	13.7	10.3		11.9	0.047	17		
	MW - RHT-1	17.6	11.5		14.2	0.057	21		
	MW - RHT-2	16.6	10.7		13.3	0.053	19		
DP-23** Screening Interval: 10.8' - 20.8' bgs	MW - FHT-1		32.9	41.7	37.1	0.148	54	**45**	**=V (ft/year)**
	MW - FHT-2		32.8	40.0	36.2	0.145	53		
	MW - RHT-1		16.2	23.0	19.3	0.077	28		
	MW - RHT-2		28.9	38.7	33.4	0.134	49		
DP-28** Screening Interval: 13.6' - 23.6' bgs	MW - FHT-1	4.6	3.6		4.0	0.016	6	**7**	**=V (ft/year)**
	MW - FHT-2	4.9	3.7		4.3	0.017	6		
	MW - RHT-1	6.3	4.6		5.4	0.022	8		
	MW - RHT-2	5.4	4.0		4.7	0.019	7		
MW-11** Screening Interval: 49.9' - 59.9' bgs	MW - FHT-1			191	191	0.915	334	**222**	**=V (ft/year)**
	MW - FHT-2			159	159	0.762	278		
	MW - RHT-1			101	101	0.486	177		
	MW - RHT-2			84	84	0.403	147		
MW-12** Screening Interval: 48.6' - 58.6' bgs	MW - FHT-1			159	159	0.765	279	**238**	**=V (ft/year)**
	MW - FHT-2			170	170	0.817	298		
	MW - RHT-1			111	111	0.530	194		
	MW - RHT-2			114	114	0.545	199		

Notes:
cm/sec = centimeters per seconds
MW = monitoring well
FHT = Falling Head Test
RHT = Rising Head Slug Test
ft/day = feet per day
ft/year = feet per year
K = hydraulic conductivity
V = velocity (in either ft/day or ft/year)
i = hydraulic gradient (feet per foot); hydraulic gradient calculated at 0.0010 feet per foot for the shallow overburden and 0.0012 feet per foot for the deep overburden

Geometric Mean of Shallow Overburden = 13 ft/year
Geometric Mean of Deep Overburden = 230 ft/year

Notes (Continued):
n = porosity, using assumed porosity of 0.25 for the overburden locations
* indicates results were obtained through pneumatic slug testing of 1" direct push explorations, conducted by MACTEC in January 20
** indicates results were obtained through solid slug testing on five 2-inch ID monitoring wells by MACTEC in August 2011
bgs = below ground surface

Table 3.3: Soil Total Organic Carbon Results

Location ID	MW-11		MW-12	
Field Sample ID	828131A-MW11		828131A-MW12	
Field Sample Depth (ft bgs)	29-31		20-22	
Field Sample Date	7/11/2011		7/13/2011	
Parameter Name	Result	Qualifier	Result	Qualifier
Total Organic Carbon (TOC)	4500	EJ	4900	EJ

Notes:
TOC soil samples analyzed by Lloyd Kahn Method
Results in milligram per kilogram
ft bgs = feet below ground surface
Qualifiers:
E and J indicate estimated concentration

Table 4.1: Direct Push Groundwater VOC Results

	Location Name	DP-01		DP-01		DP-02		DP-02		DP-03		DP-03	
	Location Type	Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab	
	Field Sample Date	11/15/2010		11/15/2010		11/15/2010		11/15/2010		11/15/2010		11/15/2010	
	Field Sample ID	828131A-DP0120X		828131A-DP0110X		828131A-DP0220X		828131A-DP0210X		828131A-DP0320X		828131A-DP0310X	
	Sample Depth	20		10		20		10		20		10	
	QC Code	FS		FS		FS		FS		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	1	U	1	U	1	U	1	U	1	U	**2.3**	
1,3-Dichlorobenzene	3	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone	50*	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ
Acetone	50*	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ
Benzene	1	1	U	1	U	1	U	**0.52**	J	1	U	1	U
Carbon disulfide	60*	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ
Chloromethane	5	1	U	1	U	1	U	1	U	1	U	1	U
Cis-1,2-Dichloroethene	5	**5.2**	J	**5.4**	J	**69**	J	**180**	JD	1	UJ	**440**	JD
Cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	1	U
Ethyl benzene	5	1	U	1	U	1	U	1	U	1	U	1	U
Methyl cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	1	U
Methyl Tertbutyl Ether	10	1	U	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene	5	**1.6**		1	U	**1400**	D	**95**		1	U	**400**	D
Toluene	5	1	U	1	U	1	U	**1.3**		1	U	**0.72**	J
trans-1,2-Dichloroethene	5	1	U	1	U	**3**		**4.3**		1	U	**12**	
Trichloroethene	5	**0.87**	J	1	U	**95**	D	**27**		1	U	**180**	D
Vinyl chloride	2	1	U	1	U	**4**	J	**72**	J	1	U	**49**	J

Notes:
VOC = volatile organic compounds
Results in microgram per liter (µg/L)
Only detected compounds shown.
Detections are indicated in **BOLD**
Samples analyzed for VOCs by EPA Method 8260B
QC Code:
FS = Field Sample, FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the reporting limit
J = Estimated value
D = Result from diluted run
Criteria = Values from Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance values and Groundwater Effluent Limitations (NYSDEC, 1998). Criteria shown is the Ambient Water Quality Standard unless unless noted.
* Criteria is Ambient Water Quality Guidance Value.
Highlighted results exceed criteria
NA = No criteria available

Table 4.1: Direct Push Groundwater VOC Results

	Location Name	DP-04		DP-04		DP-04		DP-04		DP-05		DP-05	
	Location Type	Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab	
	Field Sample Date	11/15/2010		11/15/2010		11/15/2010		11/15/2010		11/15/2010		11/15/2010	
	Field Sample ID	828131A-DP0430X		828131A-DP0420X		828131A-DP0410X		828131A-DP0410XDUP		828131A-DP0520X		828131A-DP0510X	
	Sample Depth	30		20		10		10		20		10	
	QC Code	FS		FS		FS		FD		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	1	U	1	U	**0.7**	J	**0.66**	J	1	U	1	U
1,3-Dichlorobenzene	3	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone	50*	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ
Acetone	50*	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ
Benzene	1	1	U	1	U	1	U	1	U	1	U	1	U
Carbon disulfide	60*	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ
Chloromethane	5	1	U	1	U	1	U	1	U	1	U	1	U
Cis-1,2-Dichloroethene	5	**0.57**	J	**130**	JD	**340**	JD	**330**	JD	1	UJ	1	UJ
Cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	1	U
Ethyl benzene	5	1	U	1	U	1	U	1	U	1	U	1	U
Methyl cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	1	U
Methyl Tertbutyl Ether	10	1	U	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene	5	**0.71**	J	**2.9**	J	**59**	J	**59**		1	U	1	U
Toluene	5	1	U	**0.56**	J	**0.52**	J	1	U	1	U	1	U
trans-1,2-Dichloroethene	5	1	U	**1.8**	J	**6.8**		**4.3**	J	1	U	1	U
Trichloroethene	5	1	U	**1.5**	J	**73**		**68**	J	1	U	1	U
Vinyl chloride	2	1	U	**15**	J	**31**	J	**26**	J	1	U	1	U

Notes:
VOC = volatile organic compounds
Results in microgram per liter (µg/L)
Only detected compounds shown.
Detections are indicated in **BOLD**
Samples analyzed for VOCs by EPA Method 8260B
QC Code:
FS = Field Sample, FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the reporting limit
J = Estimated value
D = Result from diluted run
Criteria = Values from Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance values and Groundwater Effluent Limitations (NYSDEC, 1998). Criteria shown is the Ambient Water Quality Standard unles unless noted.
* Criteria is Ambient Water Quality Guidance Value.
Highlighted results exceed criteria
NA = No criteria available

Table 4.1: Direct Push Groundwater VOC Results

	Location Name	DP-06		DP-06		DP-07		DP-07		DP-08		DP-09	
	Location Type	Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab	
	Field Sample Date	11/16/2010		11/16/2010		11/16/2010		11/16/2010		11/16/2010		11/16/2010	
	Field Sample ID	828131A-DP0620X		828131A-DP0610X		828131A-DP0720X		828131A-DP0710X		828131A-DP0820X		828131A-DP0920X	
	Sample Depth	20		10		20		10		20		20	
	QC Code	FS		FS		FS		FS		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	1	U	1	U	1	U	1	U	1	U	**1.1**	
1,3-Dichlorobenzene	3	**1**	J	1	U	1	U	1	U	1	U	1	U
2-Butanone	50*	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ	5	U
Acetone	50*	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ	5	U
Benzene	1	1	U	1	U	1	U	1	U	1	U	1	U
Carbon disulfide	60*	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	U
Chloromethane	5	1	U	1	U	1	U	1	U	1	U	1	U
Cis-1,2-Dichloroethene	5	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	**830**	D
Cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	1	U
Ethyl benzene	5	**1**		1	U	1	U	1	U	1	U	1	U
Methyl cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	**0.94**	J
Methyl Tertbutyl Ether	10	**2.5**		1	U	**1.2**	J	**2.2**	J	**2**		1	U
Tetrachloroethene	5	1	U	1	U	1	U	1	U	1	U	1	U
Toluene	5	1	U	1	U	1	U	1	U	**0.77**	J	**1.2**	
trans-1,2-Dichloroethene	5	1	U	1	U	1	U	1	U	1	U	**16**	
Trichloroethene	5	1	U	1	U	1	U	1	U	1	U	**58**	
Vinyl chloride	2	1	U	1	U	1	U	1	U	1	U	**31**	

Notes:
VOC = volatile organic compounds
Results in microgram per liter (µg/L)
Only detected compounds shown.
Detections are indicated in **BOLD**
Samples analyzed for VOCs by EPA Method 8260B
QC Code:
FS = Field Sample, FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the reporting limit
J = Estimated value
D = Result from diluted run
Criteria = Values from Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance values and Groundwater Effluent Limitations (NYSDEC, 1998). Criteria shown is the Ambient Water Quality Standard unles unless noted.
* Criteria is Ambient Water Quality Guidance Value.
Highlighted results exceed criteria
NA = No criteria available

Table 4.1: Direct Push Groundwater VOC Results

	Location Name	DP-09		DP-10		DP-10		DP-10		DP-10		DP-10	
	Location Type	Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab	
	Field Sample Date	11/16/2010		11/17/2010		11/17/2010		11/17/2010		11/17/2010		11/17/2010	
	Field Sample ID	828131A-DP0910X		828131A-DP1020X		828131A-DP1010X		828131A-DP1010XDUP		828131A-DP1045X		828131A-DP1035X	
	Sample Depth	10		20		10		10		45		35	
	QC Code	FS		FS		FS		FD		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	**0.7**	J	**1.5**		1	U	**0.5**	J	1	U	1	U
1,3-Dichlorobenzene	3	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone	50*	5	UJ	5	U	5	U	5	UJ	5	U	5	U
Acetone	50*	5	UJ	5	U	5	U	5	UJ	5	U	5	U
Benzene	1	1	U	1	U	1	U	1	U	**0.56**	J	1	U
Carbon disulfide	60*	1	UJ	1	U	1	U	1	UJ	1	UJ	1	UJ
Chloromethane	5	1	U	1	U	1	U	1	U	1	U	1	U
Cis-1,2-Dichloroethene	5	**260**	JD	**760**	JD	**310**	D	**390**	JD	**42**		**35**	
Cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	1	U
Ethyl benzene	5	1	U	1	U	1	U	1	U	1	U	1	U
Methyl cyclohexane	NA	1	U	**7**		**1.2**		1	U	**0.59**	J	1	U
Methyl Tertbutyl Ether	10	1	U	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene	5	**21**		**430**	JD	**61**		**65**		**51**		**53**	
Toluene	5	1	U	**0.59**	J	**0.58**	J	1	U	**0.57**	J	1	U
trans-1,2-Dichloroethene	5	**7.2**		**11**		**2.6**		**2.5**		1	U	1	U
Trichloroethene	5	**37**		**570**	JD	**100**		**130**	D	**19**		**16**	
Vinyl chloride	2	**70**	J	**28**		**360**	D	**250**	JD	**3.5**		**1.9**	

Notes:
VOC = volatile organic compounds
Results in microgram per liter (µg/L)
Only detected compounds shown.
Detections are indicated in **BOLD**
Samples analyzed for VOCs by EPA Method 8260B
QC Code:
FS = Field Sample, FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the reporting limit
J = Estimated value
D = Result from diluted run
Criteria = Values from Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance values and Groundwater Effluent Limitations (NYSDEC, 1998). Criteria shown is the Ambient Water Quality Standard unles unless noted.
* Criteria is Ambient Water Quality Guidance Value.
Highlighted results exceed criteria
NA = No criteria available

Table 4.1: Direct Push Groundwater VOC Results

	Location Name	DP-10		DP-11		DP-11		DP-12		DP-12		DP-13	
	Location Type	Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab	
	Field Sample Date	11/17/2010		11/17/2010		11/17/2010		11/17/2010		11/17/2010		11/17/2010	
	Field Sample ID	828131A-DP1025X		828131A-DP1120X		828131A-DP1110X		828131A-DP1220X		828131A-DP1210X		828131A-DP1320X	
	Sample Depth	25		20		10		20		10		20	
	QC Code	FS		FS		FS		FS		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	**1.7**		**1.7**		1	U	1	U	1	U	1	U
1,3-Dichlorobenzene	3	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone	50*	5	U	5	U	5	U	5	U	5	U	5	U
Acetone	50*	5	U	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ
Benzene	1	1	U	1	U	1	U	1	U	1	U	1	U
Carbon disulfide	60*	1	UJ	1	U	1	U	1	U	1	U	1	U
Chloromethane	5	1	U	1	U	1	U	1	U	1	U	1	U
Cis-1,2-Dichloroethene	5	**240**	D	**1200**	D	**290**	D	**0.54**	J	**3.7**		1	U
Cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	1	U
Ethyl benzene	5	1	U	1	U	1	U	1	U	1	U	1	U
Methyl cyclohexane	NA	**7.2**		**0.78**	J	1	U	1	U	1	U	1	U
Methyl Tertbutyl Ether	10	1	U	1	U	1	U	1	U	1	U	**0.98**	J
Tetrachloroethene	5	**1300**	D	**1.7**		1	U	1	U	1	U	1	U
Toluene	5	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	5	**6**		**26**		**2.7**		1	U	1	U	1	U
Trichloroethene	5	**280**	D	**71**		**6.1**		1	U	1	U	1	U
Vinyl chloride	2	**23**		**20**		**130**		**1.5**		**6.9**		1	U

Notes:
VOC = volatile organic compounds
Results in microgram per liter (µg/L)
Only detected compounds shown.
Detections are indicated in **BOLD**
Samples analyzed for VOCs by EPA Method 8260B
QC Code:
FS = Field Sample, FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the reporting limit
J = Estimated value
D = Result from diluted run
Criteria = Values from Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance values and Groundwater Effluent Limitations (NYSDEC, 1998). Criteria shown is the Ambient Water Quality Standard unles unless noted.
* Criteria is Ambient Water Quality Guidance Value.
Highlighted results exceed criteria
NA = No criteria available

Table 4.1: Direct Push Groundwater VOC Results

	Location Name	DP-13		DP-14		DP-14		DP-15		DP-15		DP-16	
	Location Type	Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab	
	Field Sample Date	11/17/2010		11/17/2010		11/17/2010		11/18/2010		11/18/2010		11/18/2010	
	Field Sample ID	828131A-DP1310X		828131A-DP1420X		828131A-DP1410X		828131A-DP1520X		828131A-DP1510X		828131A-DP1620X	
	Sample Depth	10		20		10		20		10		20	
	QC Code	FS		FS		FS		FS		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	1	U	1	U	1	U	**1.4**		**1.5**		1	U
1,3-Dichlorobenzene	3	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone	50*	5	U	5	U	5	U	5	U	5	U	5	U
Acetone	50*	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ
Benzene	1	1	U	1	U	1	U	1	U	1	U	1	U
Carbon disulfide	60*	1	U	1	U	1	U	1	U	1	U	1	U
Chloromethane	5	1	U	1	U	1	U	1	U	1	U	1	U
Cis-1,2-Dichloroethene	5	1	U	**140**		**37**		**710**	D	**670**	D	**56**	
Cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	1	U
Ethyl benzene	5	1	U	1	U	1	U	1	U	1	U	1	U
Methyl cyclohexane	NA	1	U	1	U	1	U	**5.5**		**5.1**		1	U
Methyl Tertbutyl Ether	10	**1.1**		1	U	1	U	1	U	1	U	1	U
Tetrachloroethene	5	1	U	**21**		**4.1**		**110**		**95**		1	U
Toluene	5	1	U	1	U	1	U	1	U	**0.73**	J	1	U
trans-1,2-Dichloroethene	5	1	U	**4.5**		**0.64**	J	**20**		**18**		**0.64**	J
Trichloroethene	5	1	U	**27**		**3.5**		**460**	D	**390**	D	1	U
Vinyl chloride	2	1	U	**8.4**		**8.8**		**17**		**3.4**		**2.1**	

Notes:
VOC = volatile organic compounds
Results in microgram per liter (µg/L)
Only detected compounds shown.
Detections are indicated in **BOLD**
Samples analyzed for VOCs by EPA Method 8260B
QC Code:
FS = Field Sample, FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the reporting limit
J = Estimated value
D = Result from diluted run
Criteria = Values from Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance values and Groundwater Effluent Limitations (NYSDEC, 1998). Criteria shown is the Ambient Water Quality Standard unles unless noted.
* Criteria is Ambient Water Quality Guidance Value.
Highlighted results exceed criteria
NA = No criteria available

Table 4.1: Direct Push Groundwater VOC Results

	Location Name	DP-16		DP-17		DP-17		DP-18		DP-18		DP-19	
	Location Type	Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab	
	Field Sample Date	11/18/2010		11/18/2010		11/18/2010		11/18/2010		11/18/2010		11/18/2010	
	Field Sample ID	828131A-DP1610X		828131A-DP1720X		828131A-DP1710X		828131A-DP1820X		828131A-DP1810X		828131A-DP1920X	
	Sample Depth	10		20		10		20		10		20	
	QC Code	FS		FS		FS		FS		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	1	U	1	U	1	U	**0.82**	J	1	U	1	U
1,3-Dichlorobenzene	3	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone	50*	5	U	5	U	5	U	5	U	5	U	5	U
Acetone	50*	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ	5	U
Benzene	1	1	U	1	U	1	U	1	U	1	U	**0.59**	J
Carbon disulfide	60*	1	U	1	U	**0.66**	J	1	U	**0.59**	J	1	UJ
Chloromethane	5	1	U	1	U	1	U	1	U	1	U	1	U
Cis-1,2-Dichloroethene	5	**100**		**3.6**		**0.58**	J	**470**	D	**310**	D	**1.8**	
Cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	**0.85**	J
Ethyl benzene	5	1	U	1	U	1	U	1	U	1	U	1	U
Methyl cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	**1.1**	
Methyl Tertbutyl Ether	10	1	U	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene	5	1	U	1	U	1	U	**110**		**42**		**1.9**	
Toluene	5	1	U	1	U	1	U	1	U	1	U	**1.1**	
trans-1,2-Dichloroethene	5	**1.8**		1	U	1	U	**12**		**5.3**		1	U
Trichloroethene	5	1	U	1	U	1	U	**270**	D	**84**		**0.72**	J
Vinyl chloride	2	**46**		**7.6**		**7.3**		**13**		**220**	D	1	U

Notes:
VOC = volatile organic compounds
Results in microgram per liter (µg/L)
Only detected compounds shown.
Detections are indicated in **BOLD**
Samples analyzed for VOCs by EPA Method 8260B
QC Code:
FS = Field Sample, FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the reporting limit
J = Estimated value
D = Result from diluted run
Criteria = Values from Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance values and Groundwater Effluent Limitations (NYSDEC, 1998). Criteria shown is the Ambient Water Quality Standard unles unless noted.
* Criteria is Ambient Water Quality Guidance Value.
Highlighted results exceed criteria
NA = No criteria available

Table 4.1: Direct Push Groundwater VOC Results

	Location Name	DP-19		DP-20		DP-21		DP-21		DP-22		DP-22	
	Location Type	Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab	
	Field Sample Date	11/18/2010		11/18/2010		1/20/2011		1/20/2011		1/17/2011		1/17/2011	
	Field Sample ID	828131A-DP1910X		828131A-DP2020X		828131A-DP2120X		828131A-DP2110X		828131A-DP2220X		828131A-DP2207X	
	Sample Depth	10		20		10		10		20		7	
	QC Code	FS		FS		FS		FS		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	1	U	1	U	1	U	1	U	1	U	1	U
1,3-Dichlorobenzene	3	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone	50*	5	U	5	U	5	U	5	U	5	U	5	U
Acetone	50*	5	UJ	5	U	**6.6**		**7.6**		**5.7**		**6.2**	
Benzene	1	1	U	1	U	1	U	1	U	1	U	1	U
Carbon disulfide	60*	1	U	1	UJ	1	U	1	U	1	U	1	U
Chloromethane	5	1	U	1	U	**0.83**	J	1	U	1	U	1	U
Cis-1,2-Dichloroethene	5	**2.4**		**0.77**	J	1	U	1	U	1	U	1	U
Cyclohexane	NA	**0.51**	J	**0.56**	J	1	U	**0.54**	J	1	U	1	U
Ethyl benzene	5	1	U	1	U	1	U	1	U	1	U	1	U
Methyl cyclohexane	NA	**0.81**	J	**0.92**	J	1	U	**0.66**	J	1	U	1	U
Methyl Tertbutyl Ether	10	1	U	1	U	1	U	1	U	**0.8**	J	1	U
Tetrachloroethene	5	**2.3**		**1.9**		1	U	1	U	1	U	1	U
Toluene	5	**0.92**	J	**0.93**	J	1	U	**0.55**	J	1	U	1	U
trans-1,2-Dichloroethene	5	1	U	1	U	1	U	1	U	**0.56**	J	1	U
Trichloroethene	5	**1.9**		**0.55**	J	1	U	1	U	1	U	1	U
Vinyl chloride	2	1	U	1	U	1	U	1	U	**260**	D	**43**	

Notes:
VOC = volatile organic compounds
Results in microgram per liter (µg/L)
Only detected compounds shown.
Detections are indicated in **BOLD**
Samples analyzed for VOCs by EPA Method 8260B
QC Code:
FS = Field Sample, FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the reporting limit
J = Estimated value
D = Result from diluted run
Criteria = Values from Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance values and Groundwater Effluent Limitations (NYSDEC, 1998). Criteria shown is the Ambient Water Quality Standard unles unless noted.
* Criteria is Ambient Water Quality Guidance Value.
Highlighted results exceed criteria
NA = No criteria available

Table 4.1: Direct Push Groundwater VOC Results

	Location Name	DP-23		DP-23		DP-24		DP-24		DP-24		DP-25	
	Location Type	Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab	
	Field Sample Date	1/18/2011		1/18/2011		1/18/2011		1/18/2011		1/18/2011		1/18/2011	
	Field Sample ID	828131A-DP2320X		828131A-DP2307X		828131A-DP2420X		828131A-DP2407X		828131A-DP2407XDUP		828131A-DP2520X	
	Sample Depth	20		7		20		7		7		20	
	QC Code	FS		FS		FS		FS		FD		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	**1.9**		1	U	1	U	1	U	1	U	1	U
1,3-Dichlorobenzene	3	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone	50*	5	U	5	U	5	U	5	U	5	U	5	U
Acetone	50*	**4.2**	J	5	U	**5.9**		5	UJ	**5.6**	J	**6.1**	
Benzene	1	1	U	1	U	1	U	1	U	1	U	1	U
Carbon disulfide	60*	1	U	1	U	1	U	1	U	1	U	1	U
Chloromethane	5	1	U	1	U	**0.59**	J	1	U	1	U	**1.1**	
Cis-1,2-Dichloroethene	5	**920**	D	**30**		**220**	D	**40**		**50**		1	U
Cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	1	U
Ethyl benzene	5	1	U	1	U	1	U	1	U	1	U	1	U
Methyl cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	1	U
Methyl Tertbutyl Ether	10	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
Toluene	5	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	5	**31**		1	U	**2.2**		**0.94**	J	1	U	1	U
Trichloroethene	5	1	U	1	U	1	U	1	U	1	U	1	U
Vinyl chloride	2	**110**	D	**3.3**		**24**		**2.4**		**3.8**		1	U

Notes:
VOC = volatile organic compounds
Results in microgram per liter (µg/L)
Only detected compounds shown.
Detections are indicated in **BOLD**
Samples analyzed for VOCs by EPA Method 8260B
QC Code:
FS = Field Sample, FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the reporting limit
J = Estimated value
D = Result from diluted run
Criteria = Values from Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance values and Groundwater Effluent Limitations (NYSDEC, 1998). Criteria shown is the Ambient Water Quality Standard unles unless noted.
* Criteria is Ambient Water Quality Guidance Value.
Highlighted results exceed criteria
NA = No criteria available

Table 4.1: Direct Push Groundwater VOC Results

	Location Name	DP-25		DP-26		DP-26		DP-27		DP-27		DP-28	
	Location Type	Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab	
	Field Sample Date	1/18/2011		1/18/2011		1/18/2011		1/19/2011		1/19/2011		1/19/2011	
	Field Sample ID	828131A-DP2507X		828131A-DP2620X		828131A-DP2607X		828131A-DP2720X		828131A-DP2707X		828131A-DP2820X	
	Sample Depth	7		20		7		20		7		20	
	QC Code	FS		FS		FS		FS		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	1	U	1	U	1	U	1	U	1	U	1	U
1,3-Dichlorobenzene	3	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone	50*	5	U	5	U	5	U	5	U	5	U	5	U
Acetone	50*	**5.2**		**4.8**	J	**6.1**		**5.6**		**9.1**		5	U
Benzene	1	1	U	1	U	1	U	1	U	1	U	1	U
Carbon disulfide	60*	1	U	1	U	1	U	1	U	1	U	1	U
Chloromethane	5	1	U	1	U	**0.86**	J	**0.54**	J	**0.61**	J	1	U
Cis-1,2-Dichloroethene	5	1	U	**110**	D	**4.1**		**1.3**		1	U	**210**	D
Cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	1	U
Ethyl benzene	5	1	U	1	U	1	U	1	U	1	U	1	U
Methyl cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	1	U
Methyl Tertbutyl Ether	10	1	U	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene	5	1	U	1	U	1	U	1	U	1	U	**1.1**	
Toluene	5	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	5	1	U	**2.6**		1	U	1	U	1	U	1	U
Trichloroethene	5	1	U	1	U	1	U	1	U	1	U	**2.6**	
Vinyl chloride	2	1	U	**3.4**		**3.5**		**1.3**		1	U	**22**	

Notes:
VOC = volatile organic compounds
Results in microgram per liter (µg/L)
Only detected compounds shown.
Detections are indicated in **BOLD**
Samples analyzed for VOCs by EPA Method 8260B
QC Code:
FS = Field Sample, FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the reporting limit
J = Estimated value
D = Result from diluted run
Criteria = Values from Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance values and Groundwater Effluent Limitations (NYSDEC, 1998). Criteria shown is the Ambient Water Quality Standard unles unless noted.
* Criteria is Ambient Water Quality Guidance Value.
Highlighted results exceed criteria
NA = No criteria available

Table 4.1: Direct Push Groundwater VOC Results

	Location Name	DP-28		DP-28		DP-29		DP-29		DP-30		DP-30	
	Location Type	Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab		Direct Push Grab	
	Field Sample Date	1/19/2011		1/19/2011		1/19/2011		1/19/2011		1/20/2011		1/20/2011	
	Field Sample ID	828131A-DP2807X		828131A-DP2807XDUP		828131A-DP2920X		828131A-DP2907X		828131A-DP3020X		828131A-DP3007X	
	Sample Depth	7		7		20		7		20		7	
	QC Code	FS		FD		FS		FS		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	1	U	1	U	1	U	1	U	1	U	1	U
1,3-Dichlorobenzene	3	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone	50*	5	U	**2.8**	J	5	U	5	U	5	U	5	U
Acetone	50*	**15**		**19**		5	U	5	U	5	U	5	U
Benzene	1	1	U	1	U	1	U	1	U	1	U	1	U
Carbon disulfide	60*	1	U	1	U	1	U	1	U	1	U	**1.1**	
Chloromethane	5	1	U	1	U	1	U	**0.63**	J	1	U	1	U
Cis-1,2-Dichloroethene	5	**59**		**46**		1	U	1	U	**3.5**		**2.6**	
Cyclohexane	NA	1	U	1	U	1	U	1	U	1	U	1	U
Ethyl benzene	5	1	U	1	U	1	U	1	U	1	U	1	U
Methyl cyclohexane	NA	1	U	1	U	1	U	1	UJ	1	U	1	U
Methyl Tertbutyl Ether	10	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
Toluene	5	1	U	1	U	1	U	1	UJ	1	U	1	U
trans-1,2-Dichloroethene	5	1	U	1	U	1	U	1	U	1	U	1	U
Trichloroethene	5	**0.98**	J	**0.82**	J	1	U	1	U	1	U	1	U
Vinyl chloride	2	**0.85**	J	**0.57**	J	1	U	1	U	**1.1**		1	U

Notes:
VOC = volatile organic compounds
Results in microgram per liter (µg/L)
Only detected compounds shown.
Detections are indicated in **BOLD**
Samples analyzed for VOCs by EPA Method 8260B
QC Code:
FS = Field Sample, FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the reporting limit
J = Estimated value
D = Result from diluted run
Criteria = Values from Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance values and Groundwater Effluent Limitations (NYSDEC, 1998).
Criteria shown is the Ambient Water Quality Standard unles unless noted.
* Criteria is Ambient Water Quality Guidance Value.
Highlighted results exceed criteria
NA = No criteria available

Table 4.1: Direct Push Groundwater VOC Results

	Location Name	DP-31		DP-32		DP-33		DP-34	
	Location Type	Direct Push Grab		Direct Push Grab		Temporary Well Grab		Temporary Well Grab	
	Field Sample Date	1/20/2011		1/20/2011		7/13/2011		7/13/2011	
	Field Sample ID	828131A-DP3120X		828131A-DP3215X		828131A-DP3325X		828131A-DP3225X	
	Sample Depth	20		15		25		25	
	QC Code	FS		FS		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	1	U	1	U	1	U	1	U
1,3-Dichlorobenzene	3	1	U	1	U	1	U	1	U
2-Butanone	50*	5	U	5	U	5	U	5	U
Acetone	50*	5	U	5	U	5	U	5	U
Benzene	1	1	U	1	U	1	U	1	U
Carbon disulfide	60*	1	U	1	U	1	U	1	U
Chloromethane	5	1	U	1	U	1	U	1	U
Cis-1,2-Dichloroethene	5	**0.96**	J	1	U	1	U	**47**	
Cyclohexane	NA	1	U	1	U	1	U	1	U
Ethyl benzene	5	1	U	1	U	1	U	1	U
Methyl cyclohexane	NA	1	U	1	U	1	U	1	U
Methyl Tertbutyl Ether	10	1	U	1	U	1	U	1	U
Tetrachloroethene	5	1	U	1	U	1	U	**3.2**	
Toluene	5	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	5	1	U	1	U	1	U	**0.94**	J
Trichloroethene	5	1	U	1	U	1	U	**3.5**	
Vinyl chloride	2	**7.8**		1	U	1	U	**2.1**	

Notes:
VOC = volatile organic compounds
Results in microgram per liter (µg/L)
Only detected compounds shown.
Detections are indicated in **BOLD**
Samples analyzed for VOCs by EPA Method 8260B
QC Code:
FS = Field Sample, FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the reporting limit
J = Estimated value
D = Result from diluted run
Criteria = Values from Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance values and Groundwater Effluent Limitations (NYSDEC, 1998). Criteria shown is the Ambient Water Quality Standard unles unless noted.
* Criteria is Ambient Water Quality Guidance Value.
Highlighted results exceed criteria
NA = No criteria available

Table 4.2: Monitoring Well Groundwater VOC Results

	Location Name	MW-2		MW-2		MW-2		MW-5		MW-5	
	Field Sample Date	11/16/2010		8/2/2011		8/2/2011		11/16/2010		8/2/2011	
	Field Sample ID	828131A-MW2		828131A-MW02012		828131A-MW02012DUP		828131A-MW5		828131A-MW05012	
	Sample Depth	12		12		12		12		12	
	QC Code	FS		FS		FD		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	**2.1**		**2.5**		**3.2**		1	U	1	U
Chloromethane	5	1	U	1	U	1	U	1	U	1	U
Cis-1,2-Dichloroethene	5	**1300**	JD	**1400**	D	**1500**	D	**1.1**		**0.81**	J
Methyl cyclohexane	NA	**4.4**		1	U	1	U	1	U	1	U
Methyl Tertbutyl Ether	50*	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene	5	**760**	JD	**1300**	DJ	**1300**	DJ	**35**		**14**	J
trans-1,2-Dichloroethene	5	**14**		**47**		**31**		1	U	1	U
Trichloroethene	5	**410**	JD	**660**	D	**680**	D	**2.2**		**1.9**	
Vinyl chloride	2	**83**		**63**		**71**		1	U	1	U

Notes:
Samples analyzed for VOCs by EPA Method SW8260B
VOC = volatile organic compound
Results reported in micrograms per liter (µg/L)
Only detected compounds shown (detections in **bold**).
ft bgs = feet below ground surface
Criteria = Groundwater guidance or standard values from Technical and Operational Guidance Series (TOGS) 1.1.1, "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (*NYSDEC, 1998*).

Criteria shown is the Ambient Water Quality Standard unless noted.
* Criteria is Ambient Water Quality Guidance Value.

Highlighted results exceed criteria

QC Code:
FS = Field Sample;
FD = Field Duplicate

Qualifiers:
U = Not detected greater than the reporting limit
D = Result is reported from a dilution
J = Estimated value

Table 4.2: Monitoring Well Groundwater VOC Results

	Location Name	MW-6D		MW-6D		MW-6M		MW-6M		MW-7	
	Field Sample Date	11/15/2010		11/15/2010		11/15/2010		8/2/2011		11/15/2010	
	Field Sample ID	828131A-MW6D		828131A-MW6DDUP		828131A-MW6M		828131A-MW6035		828131A-MW-7	
	Sample Depth	67		67		37		35		12	
	QC Code	FS		FD		FS		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	1	U	1	U	1	U	1	U	**5.3**	
Chloromethane	5	1	U	1	U	1	U	1	U	1	U
Cis-1,2-Dichloroethene	5	**31**		**22**		**1.9**		1	U	**1100**	D
Methyl cyclohexane	NA	1	U	1	U	1	U	1	U	1	U
Methyl Tertbutyl Ether	50*	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene	5	**30**		**19**		**27**		1	U	**8**	
trans-1,2-Dichloroethene	5	1	U	1	U	1	U	1	U	**25**	
Trichloroethene	5	**2**		**1.5**		**1.2**		**0.67**	J	**32**	
Vinyl chloride	2	1	U	1	U	1	U	1	UJ	**150**	

Notes:
Samples analyzed for VOCs by EPA Method SW8260B
VOC = volatile organic compound
Results reported in micrograms per liter (µg/L)
Only detected compounds shown (detections in **bold**).
ft bgs = feet below ground surface
Criteria = Groundwater guidance or standard values from Technical and Operational Guidance Series (TOGS) 1.1.1, "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (*NYSDEC, 1998*).

Criteria shown is the Ambient Water Quality Standard unless not

* Criteria is Ambient Water Quality Guidance Value.

Highlighted results exceed criteria

QC Code:
FS = Field Sample;
FD = Field Duplicate

Qualifiers:
U = Not detected greater than the reporting limit
D = Result is reported from a dilution
J = Estimated value

Table 4.2: Monitoring Well Groundwater VOC Results

	Location Name	MW-7		MW-11		MW-12		DP-10		DP-12	
	Field Sample Date	8/2/2011		8/2/2011		8/2/2011		8/2/2011		8/2/2011	
	Field Sample ID	828131A-MW07012		828131A-MW11055		828131A-MW12055		828131A-DP10013		828131A-DP12013	
	Sample Depth	12		55		55		13		13	
	QC Code	FS		FS		FS		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	**7.6**		1	U	1	U	**1.9**	J	1	U
Chloromethane	5	1	U	1	U	1	U	1	U	1	U
Cis-1,2-Dichloroethene	5	**2500**	DJ	**1.9**		**130**		**410**	D	**0.82**	J
Methyl cyclohexane	NA	1	U	1	U	1	U	1	U	1	U
Methyl Tertbutyl Ether	50*	1	U	1	U	**1.1**		1	U	1	U
Tetrachloroethene	5	**11**	J	1	U	**0.98**	J	**2.2**	J	1	U
trans-1,2-Dichloroethene	5	**32**		1	U	**4.2**		**15**	J	1	U
Trichloroethene	5	**78**		1	U	**2.9**		**70**	D	1	U
Vinyl chloride	2	**89**		1	U	**110**		**86**	D	**2.7**	

Notes:
Samples analyzed for VOCs by EPA Method SW8260B
VOC = volatile organic compound
Results reported in micrograms per liter (µg/L)
Only detected compounds shown (detections in **bold**).
ft bgs = feet below ground surface
Criteria = Groundwater guidance or standard values from Technical and Operational Guidance Series (TOGS) 1.1.1, "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (*NYSDEC, 1998*).

Criteria shown is the Ambient Water Quality Standard unless not

* Criteria is Ambient Water Quality Guidance Value.

Highlighted results exceed criteria

QC Code:
FS = Field Sample;
FD = Field Duplicate

Qualifiers:
U = Not detected greater than the reporting limit
D = Result is reported from a dilution
J = Estimated value

Table 4.2: Monitoring Well Groundwater VOC Results

	Location Name	DP-15		DP-22		DP-23		DP-27		DP-28	
	Field Sample Date	8/2/2011		8/2/2011		8/2/2011		8/2/2011		8/2/2011	
	Field Sample ID	828131A-DP15013		828131A-DP22015		828131A-DP23015		828131A-DP27015		828131A-DP28018	
	Sample Depth	13		15		15		15		18	
	QC Code	FS		FS		FS		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	**1.8**		1	U	1	U	1	U	1	U
Chloromethane	5	1	U	**0.69**	J	1	U	1	U	1	U
Cis-1,2-Dichloroethene	5	**1100**	D	1	U	**240**	D	1	U	**5.1**	
Methyl cyclohexane	NA	1	U	1	U	1	U	1	U	1	U
Methyl Tertbutyl Ether	50*	1	U	1	U	**0.54**	J	1	U	1	U
Tetrachloroethene	5	**330**	DJ	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	5	**8.6**		1	U	**8.1**		1	U	1	U
Trichloroethene	5	**610**	D	1	U	1	U	1	U	1	U
Vinyl chloride	2	**7.9**	J	**130**		**120**		1	U	**4.5**	J

Notes:
Samples analyzed for VOCs by EPA Method SW8260B
VOC = volatile organic compound
Results reported in micrograms per liter (µg/L)
Only detected compounds shown (detections in **bold**).
ft bgs = feet below ground surface
Criteria = Groundwater guidance or standard values from Technical and Operational Guidance Series (TOGS) 1.1.1, "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (*NYSDEC, 1998*).

Criteria shown is the Ambient Water Quality Standard unless not

* Criteria is Ambient Water Quality Guidance Value.

Highlighted results exceed criteria

QC Code:
FS = Field Sample;
FD = Field Duplicate

Qualifiers:
U = Not detected greater than the reporting limit
D = Result is reported from a dilution
J = Estimated value

Table 4.3: Monitored Natural Attenuation Results

		Location Name	DP-10		DP-15		DP-23		MW-2		MW-5		MW-7		MW-11	
		Field Sample ID	828131A-DP10013		828131A-DP15013		828131A-DP23015		828131A-MW02012		828131A-MW05012		828131A-MW07012		828131A-MW11055	
		Field Sample Depth (ft bgs)	13		13		15		12		12		12		55	
		Sample Date	8/2/2011		8/2/2011		8/2/2011		8/2/2011		8/2/2011		8/2/2011		8/2/2011	
Parameter Name	**Analysis Method**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Iron	SW6010B	µg/L	**834**		121	U	**1450**		**1920**		--		**728**		**254**	
Manganese	SW6010B	µg/L	**831**		**412**		**219**		**564**		--		**711**		**98.7**	
Chloride	E300.0	mg/L	**250**	D	**250**	D	**260**	D	**350**	D	**320**	D	**350**	D	**500**	D
Nitrate as N	E300.0	mg/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nitrite as N	E300.0	mg/L	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U
Sulfate	E300.0	mg/L	**280**	D	**150**	D	**71**	D	**120**	D	**120**	D	**130**	D	**88**	D
Ethane	RSK175	µg/L	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Ethene	RSK175	µg/L	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Methane	RSK175	µg/L	**13.56**		**4.1**	J	**16.85**		**5.63**		--		**12.64**		**3.59**	J
Total Alkalinity, as CaCO3	SM 2320 B	mg/L	**520**		**400**		**420**		**420**		**420**		**430**		**400**	
Carbon Dioxide	SM2320 B	mg/L	**540**		**400**		**420**		**440**		**430**		**440**		**390**	
Sulfide	SM4500 S	mg/L	1	U	1	U	1	U	1	U	--		1	U	1	U
Total Organic Carbon	SM5310B	mg/L	**2**		**3.7**		**3.9**		**4.9**		--		**4**		**2.9**	
Oxidation Reduction Potential (ORP)	YSI 556 MP	mV	**-8.3**		**32**		**-0.7**		**-23**		**44**		**-15**		**-28**	
Dissolved Oxygen	YSI 556 MP	mg/L	**0.3**		**0.2**		**0.3**		**0.3**		**0.4**		**0.2**		**0.3**	
pH	YSI 556 MP	pH	**6.7**		**6.8**		**6.9**		**6.8**		**6.8**		**6.9**		**7.0**	
		NASP Score	**12**		**12**		**13**		**15**		**Background**		**12**		**10**	

Notes:
mg/L = milligrams per liter
µg/L = micrograms per liter
mV = millivolts
ft bgs = feet below ground surface
Bolded value = Compound detected
ORP = Oxidation Reduction Potential
DO, pH, and ORP from Yellow Springs Instruments 556 MP water quality meter.
NASP = natural attenuation screening protocol (for chlorinated organics) from USEPA Biochlor Model:
Score 0-5 = inadequate evidence for anaerobic biodegradation
Score 6-14 = limited evidence for anaerobic biodegradation
Score 14-20 = adequate evidence for anaerobic biodegradation
Score > 20 = strong evidence for anaerobic biodegradation
Qualifiers:
U = Not detected greater than the reporting limit
D = Result is reported from a dilution
J = Estimated value
-- = compound not analyzed

Table 4.4: Pore Water VOC Results

	Sample Location	PS-01		PS-02		PS-03		PS-04		PS-05		PS-06		PS-07	
	Field Sample Date	11/16/2010		11/16/2010		11/16/2010		1/17/2011		11/17/2010		1/17/2011		1/21/2011	
	Field Sample ID	828131A-PS0101		828131A-PS0201		828131A-PS0301		828131A-PS0402		828131A-PS0501		828131A-PS0602		828131A-PS0702	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloromethane	5	1	U	1	U	1	U	1	U	1	U	**0.58**	J	1	U
Tetrachloroethene	5	1	U	**0.52**	J	1	U	1	U	1	U	1	U	1	U

Notes:
VOC = volatile organic compounds
Results reported in micrograms per liter (µg/L)
Detected compounds shown in **bold**.
Samples analyzed for VOCs by EPA Method SW8260B
Criteria = Groundwater guidance or standard values from Technical and Operational Guidance Series (TOGS) 1.1.1, "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (*NYSDEC, 1998*).

Qualifiers:
U = Not detected greater than the reporting limit
J = Estimated value
NA = criteria not available
QC code:
FS = field sample

Table 4.5: Sump Water VOC Results

	Location Name	SW-15		SW-15	
	Field Sample ID	828131A-SW1501A		828131A-SW1501B	
	Field Sample Date	4/27/2011		4/27/2011	
Parameter Name	**Criteria***	Result	Qualifier	Result	Qualifier
Cis-1,2-Dichloroethene	5	**170**	EJ	**17**	D
Tetrachloroethene	5	**5.6**		5	U
trans-1,2-Dichloroethene	5	**4.6**		5	U
Trichloroethene	5	**37**		5	U
Vinyl chloride	2	**41**		**17**	D

Notes:
Results reported in micrograms per liter (µg/L)
Detected compounds shown in **bold**.
Samples analyzed for VOCs by EPA Method SW8260B
Highlighted results exceed criteria
Criteria = Groundwater guidance or standard values from Technical and Operational Guidance Series (TOGS) 1.1.1, "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (*NYSDEC, 1998*).

*Although there are no criteria for sump water, the groundwater Ambient Water Quality Standards and Guidance Values were used for comparitive purposes.
Qualifiers:
U = Not detected greater than the reporting limit
D = Result is reported from a dilution
E and J = Estimated value

Table 4.6: Exterior Soil Vapor VOC Results

Sample Type	Exterior Soil Vapor		Exterior Soil Vapor	
Location ID	GV-03		GV-04	
Field Sample Date	11/29/2010		11/29/2010	
Field Sample ID	828131A-GV0301		828131A-GV0401	
QC Code	FS		FS	
Parameter Name	Result	Qualifier	Result	Qualifier
1,3,5-Trimethylbenzene	1	UJ	**1.4**	J
2-Butanone	0.6	U	**57**	
Acetone	**16**	J	**180**	J
Benzene	**3.8**	J	0.65	U
Carbon disulfide	**69**	J	0.63	U
Chloroform	0.99	U	**2.1**	
Cyclohexane	**7.1**	J	0.7	U
Dichlorodifluoromethane	**2.6**	J	**2.3**	
Ethyl benzene	0.88	UJ	**3.6**	J
Heptane	**21**	J	0.83	U
Hexane	**120**	J	0.72	U
Methylene chloride	0.71	U	**0.78**	J
Styrene	0.87	U	**3.9**	J
Tetrachloroethene	**2.3**	J	**2.8**	J
Tetrahydrofuran	**4.9**	J	**1,700**	
Toluene	**20**	J	**2.7**	
Trichloroethene	**2**	J	1.1	U
Xylene, o	0.88	UJ	**4**	J
Xylenes (m&p)	**6.5**	J	**13**	J

Notes:

Results in microgram per cubic meter ($\mu g/m^3$)
Detected compounds shown in **bold**.
Qualifiers
U = not detected at the reporting limit
J = estimated concentration
QC Code
FS = Field Sample

Table 4.7: Soil Vapor and Indoor Air VOC Results

Structure ID	Ambient Air Samples										Structure 1						Structure 2			
Location Type	Ambient Air										Residential						Residential			
Location ID	AA-01		AA-02		AA-03		AA-12		AA-14		IA-01		SS-01		SS-01		IA-02		SS-02	
Field Sample Date	1/18/2011		1/19/2011		1/20/2011		3/16/2011		3/24/2011		1/18/2011		1/18/2011		1/18/2011		1/19/2011		1/19/2011	
Field Sample ID	828131A-AA0101		828131A-AA0201		828131A-AA0301		828131A-AA1202		828131A-AA1402		828131A-IA0101		828131A-SS0101		828131A-SS0101DUP		828131A-IA0201		828131A-SS0201	
QC Code	FS		FS		FS		FS		FS		FS		FS		FD		FS		FS	
Parameter Name	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1-Trichloroethane	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
1,1-Dichloroethene	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U
1,2,4-Trimethylbenzene	1.5	U	1.5	U	1.5	U	1.5	UJ	1.5	UJ	1.5	U	**7.2**		**7**		1.5	U	1	U
1,2-Dichloroethane	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U
1,3,5-Trimethylbenzene	1	U	1	U	1	U	1	UJ	1	UJ	**1.5**		**17**		**17**		1	U	**1.6**	
1,4-Dichlorobenzene	1.2	UJ	1.2	U	1.2	U	1.2	UJ	1.2	UJ	1.2	UJ	1.2	U	1.2	U	1.2	UJ	1.2	U
2-Butanone	**1.6**		**1.6**		**3.5**		**1.8**	J	0.6	UJ	**3.2**		**6.7**	J	**12**	J	0.6	U	**9.7**	
2-Propanol	**5.2**	J	**8.4**	J	**11**	J	**2**	J	**1**	J	**36**	J	**11**	J	**6.1**	J	**18**	J	**13**	J
4-Ethyltoluene	1	U	1	U	1	U	1	UJ	1	UJ	1	U	**7.1**		**7.3**		1	U	**1.7**	
4-Methyl-2-pentanone	0.83	U	0.83	U	0.83	U	0.83	UJ	0.83	UJ	0.83	U	**5.1**		**4**		0.83	U	**1.2**	
Acetone	**11**	J	**17**	J	12	U	9.7	U	8.7	U	**17**	J	**230**	J	**220**	J	**13**	J	**330**	J
Benzene	**1.5**		**1.1**		0.65	U	**0.88**		**0.65**	J	**1.6**		**4.7**		**4.7**		**2.2**		0.65	U
Benzyl chloride	1.1	U	1.1	U	1.1	U	1.1	UJ	1.1	UJ	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
Carbon disulfide	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U	**6.2**		**6**		0.63	U	**7**	
Carbon tetrachloride	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	1.3	U	1.3	U	0.26	U	1.3	U
Chlorobenzene	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U
Chloroform	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U
Chloromethane	**1.3**		**1.3**		**1.2**		**1.1**		**1.2**		0.42	U	0.42	U	0.42	U	**1.2**		0.42	U
Cis-1,2-Dichloroethene	0.81	U	0.81	U	0.81	U	**0.85**	J	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U
Cyclohexane	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	**1.4**		**6.7**		**6.5**		0.7	U	0.7	U
Dichlorodifluoromethane	**2.3**		**2.5**		**2.5**		**2.5**		**2.7**		1	U	**3.5**		**3.3**		**2.4**		**2.3**	
Ethanol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Ethyl acetate	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Ethyl benzene	0.88	U	0.88	U	0.88	U	0.88	U	0.88	U	**1.2**		**4.2**		**4.8**		0.88	U	**2.3**	
Heptane	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	**21**		**21**		0.83	U	**2.5**	
Hexane	0.72	U	0.72	U	0.72	U	0.72	U	0.72	U	**2.3**	J	**14**		**14**		**1**	J	**1.2**	
Methylene chloride	0.71	U	0.71	U	0.71	U	0.71	U	0.71	U	**1.7**		0.71	U	0.71	U	0.71	U	0.71	U
Propylbenzene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Styrene	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	**1.3**		0.87	U	0.87	U	1.3	U	**3.9**	
Tetrachloroethene	1.4	U	1.4	U	1.4	U	**1.5**	J	1.4	UJ	1.4	U	1.4	U	1.4	U	1.4	U	**1.4**	
Tetrahydrofuran	0.6	U	0.6	U	**1.6**		0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
Toluene	**2.2**		**1.6**		**0.8**		**1.3**		**2.6**		**6.2**		**61**		**65**		**2.4**		**170**	
trans-1,2-Dichloroethene	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U
Trichloroethene	0.22	U	0.22	U	0.22	U	**1.1**	J	0.22	UJ	0.22	U	1.1	U	1.1	U	0.22	U	1.1	U
Trichlorofluoromethane	**1.3**		1.1	U	**1.3**		**1.6**		**1.5**		**2**		**1.3**		**1.3**		**1.3**		**1.2**	
Vinyl chloride	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U
Xylene, o	0.88	U	0.88	U	0.88	U	0.88	U	0.88	U	0.88	U	**9.9**		**7.3**		0.88	U	**1.8**	
Xylenes (m&p)	2.6	U	2.6	U	2.6	U	2.6	U	2.6	U	**3.1**	J	**29**		**26**		2.6	U	**8.8**	

Notes:
SVI = Soil Vapor Intrusion
VOCs = volatile organic compounds
Samples analyzed by EPA Method TO-15
(IA-6A and 6B analyzed by Method TO-17)
Results in micrograms per cubic meter (µg/m3).
Detected compounds shown in **bold.**
Qualifiers
U = not detected at the reporting limit
J = estimated concentration
QC Code
FS = Field Sample
FD = Field Duplicate Sample
NA = not analyzed; requested method did not include the target analyte

Table 4.7: Soil Vapor and Indoor Air VOC Results

Structure ID	Structure 3				Structure 4				Structure 5				Structure 6							
Location Type	Residential				Residential				Residential				Commercial							
Location ID	IA-03		SS-03		IA-04		SS-04		IA-05		SS-05		IA-06A		IA-06B		SS-06A		SS-06B	
Field Sample Date	1/19/2011		1/19/2011		1/19/2011		1/19/2011		1/19/2011		1/19/2011		1/19/2011		1/19/2011		1/19/2011		1/19/2011	
Field Sample ID	828131A-IA0301		828131A-SS0301		828131A-IA0401		828131A-SS0401		828131A-IA0501		828131A-SS0501		828131A-IA06A01		828131A-IA06B01		828131A-SS06A01		828131A-SS06B01	
QC Code	FS		FS		FS		FS		FS		FS		FS		FS		FS		FS	
Parameter Name	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1-Trichloroethane	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	**1.6**	
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
1,1-Dichloroethene	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U
1,2,4-Trimethylbenzene	1.5	U	1	U	1.5	U	1	U	1.5	U	1	U	1.5	U	1.5	U	**2.2**		**5.9**	
1,2-Dichloroethane	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U
1,3,5-Trimethylbenzene	1	U	**1.9**		1	U	**1.3**		**1.2**		1	U	1	U	1	U	**3.6**		**11**	
1,4-Dichlorobenzene	1.2	UJ	1.2	U	1.2	UJ	1.2	U	1.2	U	1.2	U	1.2	UJ	1.2	U	1.2	U	1.2	U
2-Butanone	**3.4**		**9.8**		**1.6**		**2.5**		**3.1**		**2.7**		**5.5**		**5.6**		**2**		**3.6**	
2-Propanol	**10**	J	**6.9**	J	**23**	J	**14**	J	**4**	J	**5.2**	J	**14**	J	**19**	J	5	U	**15**	J
4-Ethyltoluene	1	U	**1.1**		**1**		1	U	1	U	1	U	1	U	1	U	**1.6**		**5**	
4-Methyl-2-pentanone	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U
Acetone	**16**	J	**150**	J	**11**	J	**170**	J	8.9	U	**240**	J	**130**	J	**170**	J	**110**	J	**150**	J
Benzene	**1.2**		**0.68**		**1.2**		**1.2**		**1.1**		0.65	U	**1.1**		**1.3**		**2.4**		**3.2**	
Benzyl chloride	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
Carbon disulfide	0.63	U	**2.6**		0.63	U	**1.7**		0.63	U	**1.9**		0.63	U	0.63	U	**1.8**		**2.6**	
Carbon tetrachloride	0.26	U	1.3	U	0.26	U	1.3	U	0.26	U	1.3	U	0.26	U	**5.8**		1.3	U	1.3	U
Chlorobenzene	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U
Chloroform	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	**7.4**		0.99	U	0.99	U	0.99	U	**25**	
Chloromethane	**1.2**		0.42	U	**1.2**		0.42	U	**1.2**		0.42	U	**1.2**		**1.4**		0.42	U	0.42	U
Cis-1,2-Dichloroethene	0.81	U	0.81	U	**1.3**		0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U
Cyclohexane	0.7	U	0.7	U	0.7	U	**1.6**		0.7	U	0.7	U	0.7	U	0.7	U	**4**		**8.5**	
Dichlorodifluoromethane	**2.3**		**2.5**		**2.2**		**2.3**		**2.4**		**2.5**		**2.5**		**2.6**		**2.5**		**9.8**	
Ethanol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Ethyl acetate	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Ethyl benzene	0.88	U	**1.1**		0.88	U	0.88	U	0.88	U	0.88	U	0.88	U	0.88	U	**1**		**2.3**	
Heptane	0.83	U	**2.6**		0.83	U	**4.5**		0.83	U	0.83	U	0.83	U	**3.1**		**5.9**		**17**	
Hexane	0.72	U	**1.6**		0.72	U	**4.1**		**0.75**		**1.3**		0.72	U	**1.1**		**4.7**		**12**	
Methylene chloride	0.71	U	0.71	U	0.71	U	0.71	U	0.71	U	0.71	U	0.71	U	0.71	U	0.71	U	0.71	U
Propylbenzene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Styrene	1.3	U	0.87	U	1.3	U	0.87	U	1.3	U	0.87	U	1.3	U	**3.8**		0.87	U	0.87	U
Tetrachloroethene	**3**		1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	**2.7**		**2.1**		**1.7**		**1.9**	
Tetrahydrofuran	**5.5**		0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
Toluene	**2.1**		**50**		**2.5**		**35**		**2.2**		**44**		**2**		**3.3**		**26**		**35**	
trans-1,2-Dichloroethene	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U
Trichloroethene	0.22	U	1.1	U	0.22	U	1.1	U	0.22	U	1.1	U	0.22	U	0.22	U	1.1	U	1.1	U
Trichlorofluoromethane	**1.2**		**1.3**		**1.3**		**1.2**		**1.3**		**1.3**		**1.3**		**1.4**		**1.3**		**1.3**	
Vinyl chloride	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U
Xylene, o	0.88	U	**1.8**		0.88	U	**1.1**		0.88	U	**1.3**		**0.97**		**1.3**		**2.4**		**5.9**	
Xylenes (m&p)	2.6	U	**5.1**		2.6	U	**3.4**		2.6	U	**3.2**		2.6	U	2.6	U	**9.6**		**19**	

Notes:
SVI = Soil Vapor Intrusion
VOCs = volatile organic compounds
Samples analyzed by EPA Method TO-15
(IA-6A and 6B analyzed by Method TO-17)
Results in micrograms per cubic meter (µg/m3
Detected compounds shown in **bold.**
Qualifiers
U = not detected at the reporting limit
J = estimated concentration
QC Code
FS = Field Sample
FD = Field Duplicate Sample
NA = not analyzed; requested method did not include the target analyte

Table 4.7: Soil Vapor and Indoor Air VOC Results

Structure ID	Structure 7				Structure 8				Structure 9				Structure 10				Structure 11			
Location Type	Residential				Residential				Residential				Residential				Commercial			
Location ID	IA-07		SS-07		IA-08		SS-08		IA-09		SS-09		IA-10		SS-10		IA-11A		IA-11B	
Field Sample Date	1/19/2011		1/19/2011		1/20/2011		1/20/2011		1/20/2011		1/20/2011		1/20/2011		1/20/2011		1/20/2011		1/20/2011	
Field Sample ID	828131A-IA0701		828131A-SS0701		828131A-IA0801		828131A-SS0801		828131A-IA0901		828131A-SS0901		828131A-IA1001		828131A-SS1001		828131A-IA11A01		828131A-IA11B01	
QC Code	FS		FS		FS		FS		FS		FS		FS		FS		FS		FS	
Parameter Name	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1-Trichloroethane	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	UJ	1.1	U	1.1	U	0.08	U	0.08	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	UJ	1.6	U	1.6	U	NA		NA	
1,1-Dichloroethene	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	UJ	0.81	U	0.81	U	NA		NA	
1,2,4-Trimethylbenzene	1.5	U	1	U	1.5	U	**1.1**		1.5	U	**1.1**	J	1.5	U	**1.6**		NA		NA	
1,2-Dichloroethane	**1.2**		0.82	U	0.82	U	0.82	U	0.82	U	0.82	UJ	0.82	U	0.82	U	0.064	U	0.064	U
1,3,5-Trimethylbenzene	1	U	1	U	1	U	**2.4**		1	U	**2.6**	J	1	U	**3.3**		NA		NA	
1,4-Dichlorobenzene	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	UJ	1.2	U	1.2	U	0.097	UJ	0.097	UJ
2-Butanone	**1.9**		**2.7**		**6**		**3.6**		**1.1**		**3.6**	J	**1.5**		**13**		**0.41**		**0.52**	
2-Propanol	**11**	J	5	U	**660**	J	**14**	J	**65**	J	**15**	J	**35**	J	**8.4**	J	**3.7**		**17**	
4-Ethyltoluene	1	U	1	U	1	U	**1.2**		1	U	**1.6**	J	1	U	**3.5**		NA		NA	
4-Methyl-2-pentanone	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	UJ	0.83	U	0.83	U	**0.15**		**0.16**	
Acetone	**24**	J	**180**	J	**170**	J	**120**	J	11	U	**230**	J	**35**	J	**160**	J	**3.5**		**7.9**	
Benzene	**1.4**		**3.1**		**2.6**		**0.84**		**0.84**		**1.7**	J	**0.84**		**5.7**		**0.75**		**0.89**	
Benzyl chloride	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	UJ	1.1	U	1.1	U	NA		NA	
Carbon disulfide	0.63	U	**10**		0.63	U	**1.8**		0.63	U	**3.4**	J	0.63	U	**36**		NA		NA	
Carbon tetrachloride	0.26	U	1.3	U	**0.51**		1.3	U	0.26	U	1.3	UJ	0.26	U	1.3	U	**0.41**		**0.48**	
Chlorobenzene	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	UJ	0.94	U	0.94	U	0.073	U	0.073	U
Chloroform	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	UJ	0.99	U	0.99	U	**0.2**		**0.24**	
Chloromethane	0.42	U	**4.4**		**1.6**		0.42	U	**1.3**		0.42	UJ	**1.4**		0.42	U	NA		NA	
Cis-1,2-Dichloroethene	0.81	U	0.81	U	0.81	U	0.81	U	**1.7**		**720**		0.81	U	0.81	U	NA		NA	
Cyclohexane	0.7	U	**12**		0.7	U	**1.2**		0.7	U	**1.7**	J	0.7	U	**8.6**		**0.27**		**0.44**	
Dichlorodifluoromethane	**2.4**		**2.3**		**2.3**		**2.3**		**2.5**		**2.5**	J	**2.5**		**2.5**		NA		NA	
Ethanol	NA		NA		NA		NA		NA		NA		NA		NA		**17**	J	**64**	J
Ethyl acetate	NA		NA		NA		NA		NA		NA		NA		NA		**0.44**		**0.56**	
Ethyl benzene	0.88	U	0.88	U	0.88	U	0.88	U	0.88	U	**1.5**	J	0.88	U	**7.4**		**0.16**		**0.22**	
Heptane	0.83	U	**1.2**		0.83	U	**2.9**		0.83	U	**4.7**	J	**0.87**		**20**		**0.64**		**1.9**	
Hexane	0.72	U	**7.8**		0.72	U	**2.1**		0.72	U	**3.5**	J	**0.86**		**13**		**0.5**		**0.53**	
Methylene chloride	0.71	U	0.71	U	0.71	U	0.71	U	0.71	U	0.71	UJ	**1.2**		0.71	U	NA		NA	
Propylbenzene	NA		NA		NA		NA		NA		NA		NA		NA		0.087	U	**0.095**	
Styrene	1.3	U	0.87	U	1.3	U	0.87	U	1.3	U	**0.87**	J	1.3	U	**8.9**		**0.13**	J	**0.3**	J
Tetrachloroethene	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	**650**	J	1.4	U	**3.8**		0.084	U	0.084	U
Tetrahydrofuran	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	UJ	0.6	U	0.6	U	NA		NA	
Toluene	**3.5**		**2.3**		**2.9**		**19**		**2**		**46**	J	**2.6**		**360**		**0.94**		**1.4**	
trans-1,2-Dichloroethene	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	**6.9**	J	0.81	U	0.81	U	NA		NA	
Trichloroethene	0.22	U	1.1	U	0.22	U	1.1	U	**0.93**		**400**		0.22	U	1.1	U	0.072	U	**0.082**	
Trichlorofluoromethane	**1.4**		**1.1**		**3.7**		**2.5**		1.1	U	**1.3**	J	**1.4**		**1.3**		NA		NA	
Vinyl chloride	0.52	U	**1.4**		0.52	U	0.52	U	0.52	U	**1.8**	J	0.52	U	0.52	U	NA		NA	
Xylene, o	0.88	U	0.88	U	0.88	U	**1.3**		0.88	U	**1.6**	J	0.88	U	**5.7**		**0.2**		**0.29**	
Xylenes (m&p)	2.6	U	0.88	U	2.6	U	**4.1**		2.6	U	**6**	J	2.6	U	**24**		**0.39**		**0.59**	

Notes:
SVI = Soil Vapor Intrusion
VOCs = volatile organic compounds
Samples analyzed by EPA Method TO-15
(IA-6A and 6B analyzed by Method TO-17)
Results in micrograms per cubic meter (µg/m3
Detected compounds shown in **bold.**
Qualifiers
U = not detected at the reporting limit
J = estimated concentration
QC Code
FS = Field Sample
FD = Field Duplicate Sample
NA = not analyzed; requested method did not include the target analyte

Table 4.7: Soil Vapor and Indoor Air VOC Results

Structure ID	Structure 12				Structure 13						Structure 14				Structure 15	
Location Type	Residential				Residential						Commercial				Residential	
Location ID	IA-12		SS-12		IA-13		IA-13 (1st floor)		SS-13		IA-14		SS-14		IA-15	
Field Sample Date	3/16/2011		3/16/2011		3/16/2011		4/28/2011		3/16/2011		3/24/2011		3/24/2011		4/28/2011	
Field Sample ID	828131A-IA1202		828131A-SS1202		828131A-IA1302		828131A-IA1303		828131A-SS1302		828131A-IA1402		828131A-SS1402		828131A-IA1503	
QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Parameter Name	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1-Trichloroethane	**1.6**	J	1.1	U	1.1	U	1.1	U	1.1	U	**3.4**		**2.7**		1.1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.6	U	1.6	U	**1.6**		1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
1,1-Dichloroethene	0.81	U	**30**		0.81	U	0.81	U	**130**		0.81	U	0.81	U	0.81	U
1,2,4-Trimethylbenzene	1.5	UJ	**2.3**	J	1.5	UJ	**5.3**		**2.1**	J	1.5	UJ	**1**	J	1.5	U
1,2-Dichloroethane	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	**1.1**	
1,3,5-Trimethylbenzene	1	UJ	**5.8**	J	**1.3**	J	**25**		**4.7**	J	**1.1**	J	**2**	J	**1.6**	
1,4-Dichlorobenzene	**3.3**	J	1.2	UJ	**170**	J	1.2	U	**5.4**	J	**2.1**	J	**2.6**	J	1.2	U
2-Butanone	**2.6**	J	**2.1**	J	**3.4**	J	**5.6**	J	**3.8**	J	0.6	UJ	**4.2**	J	**2.8**	J
2-Propanol	**13**		**5.8**	J	**32**		5	U	5	U	**12**		**23**		**8.8**	
4-Ethyltoluene	1	UJ	**2.1**	J	**1.1**	J	**24**		**2.4**	J	1	UJ	**1.5**	J	**1.3**	
4-Methyl-2-pentanone	0.83	UJ	0.83	UJ	**0.96**	J	0.83	UJ	0.83	UJ	0.83	UJ	0.83	UJ	0.83	UJ
Acetone	**27**		**16**		**22**		**41**	J	**18**		**16**		**16**		**27**	J
Benzene	**1**		**1.6**		**1.2**		**29**		**3.6**		**0.94**		**1.1**		**1.2**	
Benzyl chloride	1.1	UJ	1.1	UJ	**1.1**	J	1.1	U	1.1	UJ	1.1	UJ	1.1	UJ	1.1	U
Carbon disulfide	0.63	U	**1.9**		0.63	U	0.63	UJ	**5**		0.63	U	**1.4**		0.63	UJ
Carbon tetrachloride	0.26	U	1.3	U	**1.3**		**0.77**		1.3	U	0.26	U	0.26	U	**0.83**	
Chlorobenzene	0.94	U	0.94	U	0.94	U	0.94	U	**1.3**		0.94	U	0.94	U	0.94	U
Chloroform	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U
Chloromethane	**1.2**		0.42	U	**1.2**		0.42	U	0.42	U	0.42	U	0.42	U	**1.6**	
Cis-1,2-Dichloroethene	**12**		**8800**		**43**		0.81	U	**22000**		0.81	U	**17**		**17**	
Cyclohexane	0.7	U	**1.5**		0.7	U	0.7	U	**5.9**		**8.7**		**1.2**		0.7	U
Dichlorodifluoromethane	**2.5**		**3.8**		**2.7**		**2.6**		**10**		1	U	**46**		**2.5**	
Ethanol	NA		NA		NA		NA		NA		NA		NA		NA	
Ethyl acetate	NA		NA		NA		NA		NA		NA		NA		NA	
Ethyl benzene	**1.9**		**1.4**	J	**1.4**	J	**25**		**4.1**	J	0.88	U	0.88	U	**1.2**	
Heptane	**2.2**		**4.1**		**1.7**	J	0.83	UJ	**14**		**3.2**		**2.6**		0.83	UJ
Hexane	0.72	U	**3**		0.72	U	**23**		**11**		**5.7**		**2.2**		0.72	U
Methylene chloride	0.71	U	0.71	U	**1**	J	**2.5**	J	0.71	U	**0.99**	J	0.71	U	**0.95**	J
Propylbenzene	NA		NA		NA		NA		NA		NA		NA		NA	
Styrene	1.3	U	0.87	U	**1.3**		1.3	U	**1.3**		1.3	U	1.3	U	1.3	U
Tetrachloroethene	**6.2**	J	**610**	J	**29**	J	1.4	U	**21000**	J	1.4	UJ	**16**	J	**5.8**	
Tetrahydrofuran	0.6	U	0.6	U	**0.69**		**1**	J	0.6	U	0.6	U	0.6	U	0.6	UJ
Toluene	**15**		**6.9**		**6.7**		**130**		**35**	J	**61**		**5.4**		**7**	
trans-1,2-Dichloroethene	0.81	U	**110**		0.81	U	0.81	U	**260**		0.81	U	0.81	U	0.81	U
Trichloroethene	**7.9**	J	**3000**	J	**42**	J	0.22	U	**28000**	J	0.22	UJ	**17**	J	**20**	
Trichlorofluoromethane	**1.5**		**1.4**		**2**		**1.5**		**1.6**		**1.7**		**1.5**		**1.4**	
Vinyl chloride	**0.86**		**410**		**2.1**		0.52	UJ	**2000**		0.52	U	**1.9**		**8.5**	J
Xylene, o	**1.5**	J	**2**		**1.1**	J	**31**		**3.5**		**0.88**	J	**1.2**	J	**1.2**	
Xylenes (m&p)	**4.6**		**5.6**		**2.7**		**87**		**11**		2.6	U	**3.7**		**3.2**	

Notes:
SVI = Soil Vapor Intrusion
VOCs = volatile organic compounds
Samples analyzed by EPA Method TO-15
(IA-6A and 6B analyzed by Method TO-17)
Results in micrograms per cubic meter (µg/m3
Detected compounds shown in **bold.**
Qualifiers
U = not detected at the reporting limit
J = estimated concentration
QC Code
FS = Field Sample
FD = Field Duplicate Sample
NA = not analyzed; requested method
did not include the target analyte

Table 5.1: Select Chlorinated VOC Results Over Time

	Location Name	MW-2		MW-2		MW-2		MW-2		MW-2		MW-2 (dup)	
	Sample Date	11/2/2005		11/21/2005		3/3/2008		11/16/2010		8/2/2011		8/2/2011	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Tetrachloroethene	5	**2500**		**1900**		**1400**		**760**	JD	**1300**	DJ	**1300**	DJ
Trichloroethene	5	**1200**		**900**		**260**		**410**	JD	**660**	D	**680**	D
Cis-1,2-Dichloroethene	5	**2100**		**1400**		**810**		**1300**	JD	**1400**	D	**1500**	D
trans-1,2-Dichloroethene	5	**16**		**10**		50	U	**14**		**47**		**31**	
1,1-Dichloroethene	5	**3.6**		**2.7**		50	U	**2.1**		**2.5**		**3.2**	
Vinyl chloride	2	**25**		**21**		**31**	J	**83**		**63**		**71**	

Notes:
Samples analyzed for VOCs by EPA Method SW8260B
(dup) = duplicate sample
VOC = volatile organic compound
Results reported in micrograms per liter (µg/L)
Detected compounds shown in **bold**.
ft bgs = feet below ground surface
Highlighted results exceed criteria
Criteria = Groundwater guidance or standard values from Technical and Operational Guidance Series (TOGS) 1.1.1, "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (*NYSDEC, 1998*).

Qualifiers:
U = Not detected greater than the reporting limit
D = Result is reported from a dilution
J = Estimated value

2005, 2006, and 2008 data as reported by Labella Associates, P.C.
(Labella, 2009a and Labella, 2009b)

Table 5.1: Select Chlorinated VOC Results Over Time

	Location Name	MW-5		MW-5		MW-5		MW-5		MW-5	
	Sample Date	11/2/2005		11/21/2005		3/3/2008		11/16/2010		8/2/2011	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Tetrachloroethene	5	**2.1**		**1.9**		**2.4**	J	**35**	J	**14**	J
Trichloroethene	5	**1.2**		**1.1**		5	U	**2.2**		**1.9**	
Cis-1,2-Dichloroethene	5	**2.5**		**2.2**		**1.6**	J	**1.1**	J	**0.81**	J
trans-1,2-Dichloroethene	5	1	U	1	U	5	U	1	U	1	U
1,1-Dichloroethene	5	1	U	1	U	5	U	1	U	1	U
Vinyl chloride	2	**1.1**		**1.4**		**1.2**	J	1	U	1	U

Notes:
Samples analyzed for VOCs by EPA Method SW8260B
(dup) = duplicate sample
VOC = volatile organic compound
Results reported in micrograms per liter (µg/L)
Detected compounds shown in **bold**.
ft bgs = feet below ground surface
Highlighted results exceed criteria
Criteria = Groundwater guidance or standard values from Technical and Operational Guidance Series (TOGS) 1.1.1, "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (*NYSDEC, 1998*).

Qualifiers:
U = Not detected greater than the reporting limit
D = Result is reported from a dilution
J = Estimated value

2005, 2006, and 2008 data as reported by Labella Associates, P.C.
(Labella, 2009a and Labella, 2009b)

Table 5.1: Select Chlorinated VOC Results Over Time

	Location Name	MW-6D		MW-6D		MW-6D (dup)		MW-6M		MW-6M		MW-6M	
	Sample Date	3/13/2006		11/15/2010		11/15/2010		3/13/2006		11/15/2010		8/2/2011	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Tetrachloroethene	5	**46**		**30**		**19**		**19**		**27**		1	U
Trichloroethene	5	**2.3**		**2**		**1.5**		**2.3**		**1.2**		**0.67**	J
Cis-1,2-Dichloroethene	5	**4.4**		**31**		**22**		**4.4**		**1.9**		1	U
trans-1,2-Dichloroethene	5	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethene	5	1	U	1	U	1	U	1	U	1	U	1	U
Vinyl chloride	2	1	U	1	U	1	U	1	U	1	U	1	UJ

Notes:
Samples analyzed for VOCs by EPA Method SW8260B
(dup) = duplicate sample
VOC = volatile organic compound
Results reported in micrograms per liter (µg/L)
Detected compounds shown in **bold**.
ft bgs = feet below ground surface
Highlighted results exceed criteria
Criteria = Groundwater guidance or standard values from Technical and Operational Guidance Series (TOGS) 1.1.1, "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (*NYSDEC, 1998*).

Qualifiers:
U = Not detected greater than the reporting limit
D = Result is reported from a dilution
J = Estimated value

2005, 2006, and 2008 data as reported by Labella Associates, P.C.
(Labella, 2009a and Labella, 2009b)

Table 5.1: Select Chlorinated VOC Results Over Time

	Location Name	MW-7		MW-7		MW-7	
	Sample Date	4/5/2006		11/15/2010		8/2/2011	
Parameter Name	**Criteria**	Result	Qualifier	Result	Qualifier	Result	Qualifier
Tetrachloroethene	5	1	U	**8**		**11**	J
Trichloroethene	5	**5.3**		**32**		**78**	
Cis-1,2-Dichloroethene	5	**800**		**1100**	D	**2500**	DJ
trans-1,2-Dichloroethene	5	**12**		**25**		**32**	
1,1-Dichloroethene	5	**1.7**		**5.3**		**7.6**	
Vinyl chloride	2	**130**		**150**		**89**	

Notes:
Samples analyzed for VOCs by EPA Method SW8260B
(dup) = duplicate sample
VOC = volatile organic compound
Results reported in micrograms per liter (µg/L)
Detected compounds shown in **bold**.
ft bgs = feet below ground surface
Highlighted results exceed criteria
Criteria = Groundwater guidance or standard values from Technical and Operational Guidance Series (TOGS) 1.1.1, "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (*NYSDEC, 1998*).

Qualifiers:
U = Not detected greater than the reporting limit
D = Result is reported from a dilution
J = Estimated value

2005, 2006, and 2008 data as reported by Labella Associates, P.C.
(Labella, 2009a and Labella, 2009b)

APPENDIX A

SITE PHOTOGRAPHS

APPENDIX A:

PHOTOGRAPHIC DOCUMENTATION OF THE OFF-SITE CARRIAGE CLEANERS RI

Site property, view looking to the west.

Site property, view looking to the south.

APPENDIX A:

PHOTOGRAPHIC DOCUMENTATION OF THE OFF-SITE CARRIAGE CLEANERS RI

Former Site building, view looking to the north.

Pore water sample location PS-03 at Irondequoit Creek, view looking north.

APPENDIX A:

PHOTOGRAPHIC DOCUMENTATION OF THE OFF-SITE CARRIAGE CLEANERS RI

Conducting helium leak testing at Structure 09.

Conducting helium leak testing at Structure 08.

APPENDIX A:

PHOTOGRAPHIC DOCUMENTATION OF THE OFF-SITE CARRIAGE CLEANERS RI

Sampling sub-slab soil vapor at Structure 06.

Installing monitoring well MW-11.

APPENDIX B

SITE SURVEY

CARRIAGE	*CLEANERS*		PENFIELD, NY
1600 PENFIELD	ROAD	LU #36418	2/2/2011
HORIZONTAL	DATUM	NYSP 1983	WEST ZONE 3102
VERTICAL	DATUM	NAVD 1988	
Description	Northing (ft)	Easting (ft)	Elevation (ft)
DP 23			
ground			264.29
rim			264.28
riser	1145143.156	1437526.181	263.89
DP 27			
ground			266.18
rim			266.32
riser	1145633.093	1437261.896	265.91
DP 22			
ground			266.66
rim			266.71
riser	1145299.481	1437649.187	266.55
BRIDGE POINT	1144464.615	1437843.816	277.62
DP 13			
ground	1144549.005	1437917.391	267.30
DP 15			
ground			264.24
rim			264.22
riser	1144661.879	1438060.782	263.83
DP 06			
ground			268.26
rim			268.33
riser	1144251.052	1438065.202	267.85
DP 07			
ground	1144316.249	1438096.564	267.88
DP 10			
ground			267.57
rim			267.58
riser	1144452.473	1438293.115	267.14
DP 11			
ground	1144526.822	1438314.505	266.96

CARRIAGE	*CLEANERS*		PENFIELD, NY
1600 PENFIELD	ROAD	LU #36418	2/2/2011
HORIZONTAL	DATUM	NYSP 1983	WEST ZONE 3102
VERTICAL	DATUM	NAVD 1988	
Description	Northing (ft)	Easting (ft)	Elevation (ft)
DP 12			
ground			267.18
rim			267.19
riser	1144596.758	1438352.500	266.76
MW 05			
ground			269.35
rim			269.34
riser	1144285.345	1438634.106	269.11
MW 06			
ground			269.10
rim			269.15
riser 6M	1144351.711	1438612.045	268.78
riser 6D	1144351.694	1438611.943	268.90
MW 02			
ground			269.21
rim			269.24
riser	1144357.243	1438575.489	268.84
MW 07			
ground			268.99
rim			269.02
riser	1144313.802	1438549.540	268.79
MW 04			
ground			266.78
rim			266.78
riser	1144381.661	1438670.624	266.44
DP 28			
ground			268.42
rim			268.62
riser	1145033.933	1437792.854	268.37

CARRIAGE	*CLEANERS*		PENFIELD, NY
1600 PENFIELD	ROAD	LU #36418	7/13/2011
HORIZONTAL	DATUM	NYSP 1983	WEST ZONE 3102
VERTICAL	DATUM	NAVD 1988	
Description	Northing (ft)	Easting (ft)	Elevation (ft)
DP 34			
ground			263.52
riser	1145901.892	1437318.571	263.97
DP 33			
ground			265.91
riser	1146030.199	1437483.341	266.54
TOP PIPE IN CREEK	1145931.560	1437416.509	261.52
TOP OF WATER			258.59
TOP OF STEEL ON SOUTH SIDE OF POND	1145999.485	1437340.477	262.16
TOP OF WATER			256.11
MW-11			
GROUN/RIM			267.67
PVC RISER LOCATED 8-1-11	1144448.222	1438290.021	267.32
MW-12			
GROUND/RIM			264.31
PVC RISER LOCATED 8-1-11	1145136.763	1437524.205	264.02

APPENDIX C

FIELD DATA RECORDS

APPENDIX C-1

DIRECT PUSH GROUNDWATER DATA RECORDS

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	Off-Site Carriage Cleaners
PROJECT NUMBER	3612102168
SAMPLE ID	828131A-DP01-0X
SAMPLE TIME	1230
SAMPLE LOCATION	DP-01
DATE	11-15-2010
START TIME	1220
END TIME	1250
SITE NAME/NUMBER	828131A
PAGE	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER ____

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER ____

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER ____

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (ags)

WELL INTEGRITY

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
OTHER	—	—	—

BT

INITIAL DTW (BMP)	8 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	~20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	<0.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	1.2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1224	BEGIN PURGING									
1230	Collected gw Sample @ DP-01								~10'	
1235	—	400	15.23	0.835	7.05	0.74	—	-40.3	↓	PID headspace: 87 ppb.
	BT									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED grey CLOUDY ✓ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER ____
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [✓] TEFLON BLADDER
- [ ] OTHER none
- [ ] OTHER ____
- [ ] OTHER ____

EQUIPMENT USED
- [✓] WATER LEVEL METER
- [✓] PID ppb Rae
- [✓] WQ METER YSI
- [✓] TURB. METER
- [✓] PUMP geopump
- [ ] OTHER ____
- FILTERS NO. NA TYPE ____

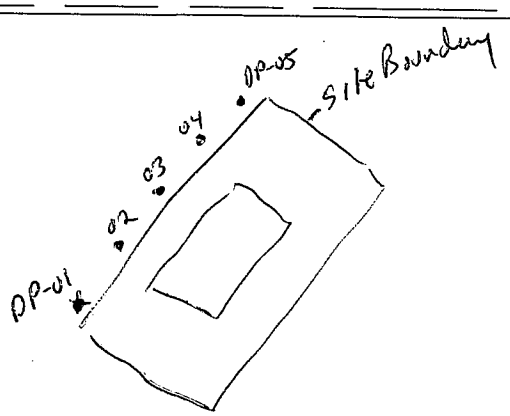
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES

- Screening interval from 8' to 12' bgs
- screen was a 1" slotted Arc
- PID headspace: 87 ppb

SKETCH



PURGE OBSERVATIONS

BT

	YES	NO	
PURGE WATER CONTAINERIZED	[X]	[✓]	NUMBER OF GALLONS GENERATED ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-01	11-15-2010
PROJECT NUMBER		**START TIME**	**END TIME**
3612102168		1155	1220
SAMPLE ID	**SAMPLE TIME**	**SITE NAME/NUMBER**	**PAGE**
828131A-DP0120X	1215	828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER ____

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER ____

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER ____

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

DA

INITIAL DTW (BMP)	~8' FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20. FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	— PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	1.2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1204	BEGIN PURGING									
1210	—	400	15.92	1.988	7.09	0.35	—	-102.1	≈19'	PID = 130 ppb
1215	collected gw	sample	@ DP-	01						
1218	—	100	16.05	1.986	6.97	1.69	—	-50.9	≈19'	PID = 121 ppb

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt grey CLOUDY ✓ TURBID ____ ODOR ____ OTHER (see notes) fine sand

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[✓] PID ppb Rae
[ ] BLADDER ____	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[ ] GEOPROBE SCREEN	[✓] WQ METER YSI
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[ ] TURB. METER
[ ] OTHER ____	[ ] HEXANE	[X] LDPE TUBING	[✓] OTHER none	[✓] PUMP geo pump
[ ] OTHER ____	[ ] METHANOL	[ ] OTHER ____	[ ] OTHER ____	[ ] OTHER ____
	[ ] OTHER ____	[ ] OTHER ____	[ ] OTHER ____	[ ] FILTERS NO. ____ TYPE ____

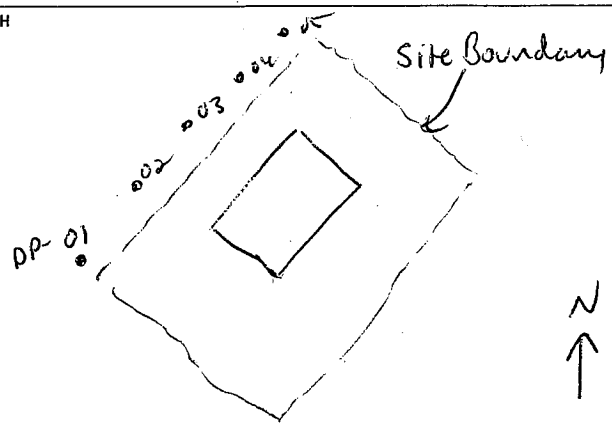
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		see above

NOTES

- screening interval from 16' to 20' bgs
- screen was a 1" slotted pvc
- PID headspace
- disposed of purge water on ground surface

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[✓]	[ ]	NUMBER OF GALLONS GENERATED ≈ 2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

DA

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	
Off-Site Carriage Cleaners	
PROJECT NUMBER	
3612102168	
SAMPLE ID	SAMPLE TIME
828131A - DP02702	1140.

SAMPLE LOCATION	DATE
DP-2	11-15-2010
START TIME	END TIME
1125	1150.
SITE NAME/NUMBER	PAGE
828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER ____

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER ____

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER ____

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

INITIAL DTW (BMP)	6.5' FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	~12 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	20.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	— GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1129	BEGIN PURGING									
1134	—	400.	15-70	1.575	7.03	0.23	—	-123.1	~10'	PID = 4.8 ppm
1140	collected gw	sample @ DP-2								

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ____ CLOUDY ✓ TURBID ✓ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER ____ [ ] WATTERA [ ] OTHER ____ [ ] OTHER ____

DECON FLUIDS USED: [X] LIQUINOX [X] DEIONIZED WATER [ ] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS: [X] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [ ] HDPE TUBING [X] LDPE TUBING [ ] OTHER ____ [ ] OTHER ____

[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [✓] OTHER none [ ] OTHER ____ [ ] OTHER ____

EQUIPMENT USED: [ ] WATER LEVEL METER [✓] PID pink Rae [✓] WQ METER YSI [ ] TURB. METER [✓] PUMP geopump [ ] OTHER ____ [ ] FILTERS NO. ____ TYPE ____

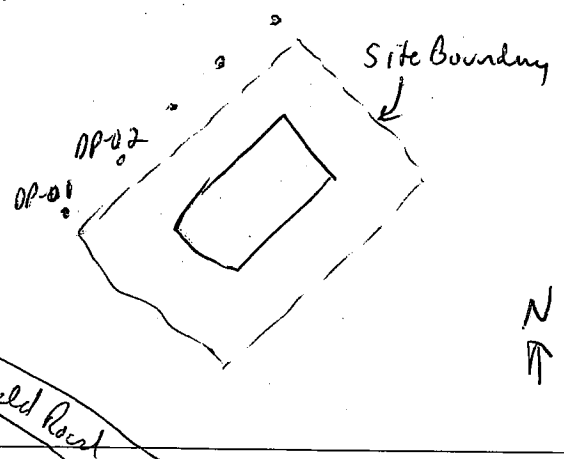
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES

contaminated purge water
- using 4" pvc 1" slotted screen
- screening interval from 12' to 8' bgs
- DTW ~ 6.5' bgs

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	✓		NUMBER OF GALLONS GENERATED ~2
NO-PURGE METHOD UTILIZED		✓	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-2	11-15-2010
PROJECT NUMBER		START TIME	END TIME
3612102168		1050	1125
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP02X	1115	828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER
WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER
TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER
MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY (YES / NO / N/A)
CAP — — N/A
CASING — — —
LOCKED — — —
COLLAR — — —

INITIAL DTW (BMP)	~6.5' FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20' FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	6.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1106	BEGIN PURGING									
1113	—	~400	16.51	1.864	7.11	0.97	—	-39.1	~19'	PID: 29.8 ppm
1115	Collected grv sample @ DP-2									
1117	pump off									

SAMPLE OBSERVATIONS: CLEAR ___ COLORED ___ CLOUDY ___ TURBID ✓ ODOR ___ OTHER (see notes) ___

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
[X] PERISTALTIC
[ ] SUBMERSIBLE
[ ] BLADDER
[ ] WATTERA
[ ] OTHER
[ ] OTHER

DECON FLUIDS USED
[X] LIQUINOX
[X] DEIONIZED WATER
[ ] POTABLE WATER
[ ] NITRIC ACID
[ ] HEXANE
[ ] METHANOL
[ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
[X] SILICON TUBING
[ ] TEFLON TUBING
[ ] TEFLON LINED TUBING
[ ] HDPE TUBING
[X] LDPE TUBING
[ ] OTHER
[ ] OTHER

[ ] S. STEEL PUMP MATERIAL
[ ] PVC PUMP MATERIAL
[ ] GEOPROBE SCREEN
[ ] TEFLON BLADDER
[ ] OTHER
[ ] OTHER
[ ] OTHER

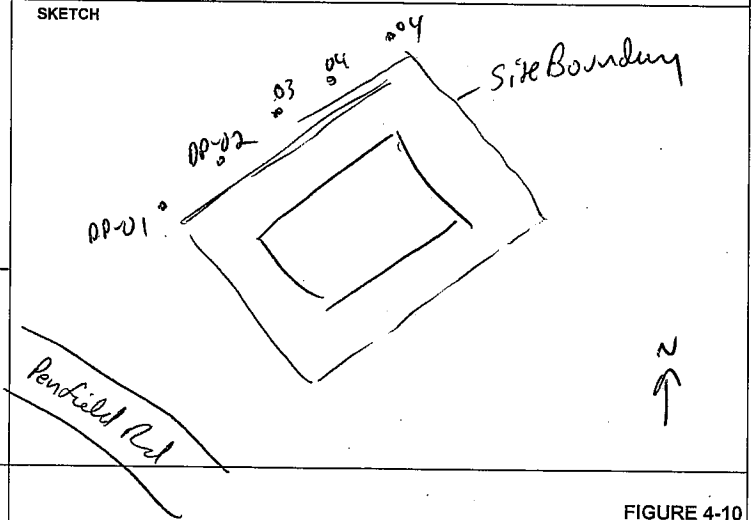
EQUIPMENT USED
[ ] WATER LEVEL METER
[✓] PID ppb Rae
[✓] WQ METER YSI
[ ] TURB. METER
[✓] PUMP geopump
[ ] OTHER
[ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	3 x 40 mL	✓		See Above

NOTES
Screening interval @ 16' to 20' bgs
DTW @ ~6.5' bgs
Screen used is a 1" pre slotted

SKETCH



PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED	YES ✓ NO	NUMBER OF GALLONS GENERATED	~2
NO-PURGE METHOD UTILIZED	YES NO ✓	If yes, purged approximately 1 standing volume prior to sampling or N/A mL for this sample location.	

Sampler Signature: [signature] Print Name: Brandon Shaw
Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	
Off-Site Carriage Cleaners	
PROJECT NUMBER	
3612102168	
SAMPLE ID: 828131A-DP0310X	SAMPLE TIME: 1355

SAMPLE LOCATION	DATE
DP-03	11-15-2010
START TIME: 1345	END TIME: 1410
SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	~6.5' FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20' FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	0.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1345	BEGIN PURGING									
1350	—	400	14.60	—	—	—	—	—	~10'	PID = 54.8 ppm
1355	collected gw	sample	@ DP-03							
	BAS									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Reddish Brown CLOUDY ____ TURBID ✓ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX [X] DEIONIZED WATER [ ] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [X] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [ ] HDPE TUBING [X] LDPE TUBING [ ] OTHER [ ] OTHER

[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [✓] OTHER none [ ] OTHER [ ] OTHER

EQUIPMENT USED: [ ] WATER LEVEL METER [✓] PID ppb Rae [✓] WQ METER YSI [✓] TURB. METER [✓] PUMP geopump [ ] OTHER [ ] FILTERS NO. ____ TYPE ____

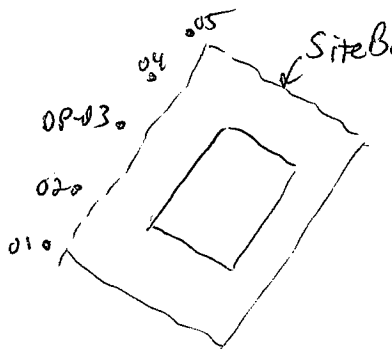
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		see Above

NOTES

Screening interval: 8' to 12' bgs
- PID headspace: 54.8 ppm.
- Screen w/ 1" PVC slotted

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	✓		NUMBER OF GALLONS GENERATED: ~2
NO-PURGE METHOD UTILIZED		✓	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: Brandon Shaw Print Name:

Checked By: J. Rawcliffe Date: 11/23/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-03	11-15-2010
PROJECT NUMBER		START TIME	END TIME
3612102168		1305	1345.
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP032OX	1340	828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER
WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER
TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER
MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

INITIAL DTW (BMP)	— FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20' FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	20.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	1.2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1329	BEGIN PURGING									
1335	—	400	15.07	1.861	6.47	1.06	—	-51.6	~19'	PID = 170 ppb.
1340	collected gw sample @ DP-03									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt grey ✓ CLOUDY ____ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [✓] PID ppb Rae
- [✓] WQ METER YSI
- [ ] TURB. METER
- [✓] PUMP geopump
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

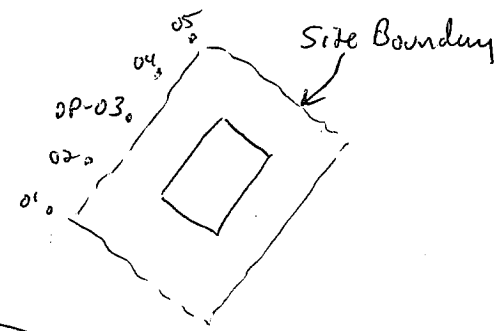
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See above

NOTES

Screening interval from 16' to 20' bgs
PID headspace = 170 ppb.

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: Brandon Shaw Print Name:

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-04	11-15-2010
PROJECT NUMBER		START TIME	END TIME
3612102168		1445	1500
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP0410X/D	1455	828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none - (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

BAS

INITIAL DTW (BMP)	~6.5 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	30 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	<0.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1445	BEGIN PURGING									
1450	—	400	15.61	1.612	6.96	0.80	—	-72.1	~10'	PID: 6.5 ppm
1455	Collected gw sample @DP-04									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ____ CLOUDY ____ TURBID ✓ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [ ] PID
- [ ] WQ METER
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE ___

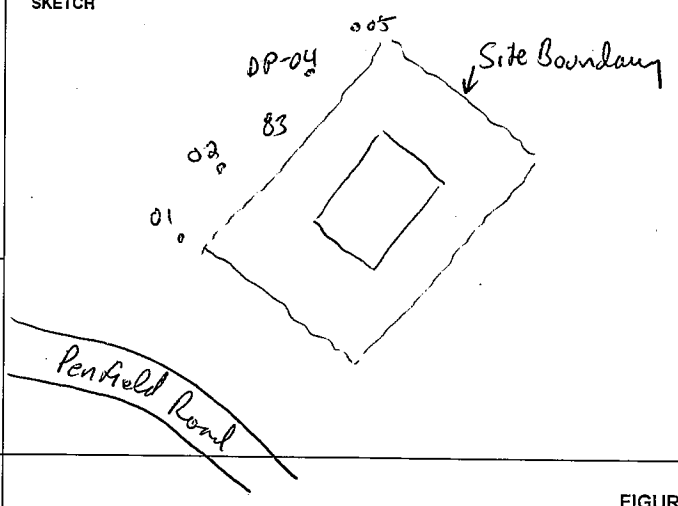
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓	✓	See Above

NOTES

Screening interval: 8' to 12'
- Duplicate collected here also.

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	✓		NUMBER OF GALLONS GENERATED: ~2
NO-PURGE METHOD UTILIZED		✓	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: [signature] Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

P:\Projects\nysdec1\qapp\2010 Revised Figures\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-04	11-15-2010
PROJECT NUMBER		START TIME	END TIME
3612102168		1430	1445
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP0420X	1440	828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER
WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER
TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER
MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER None (bgs).

WELL INTEGRITY

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

BAT

INITIAL DTW (BMP)	~6.5 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	30 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	0.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1430	BEGIN PURGING									
1435	—	400	16.05	1.848	7.02	0.20	—	-115.7	~19'	PID: 586 ppb
1440	Collected gw sample @ DP-04									

PAS

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt. grey CLOUDY ____ TURBID ✓ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

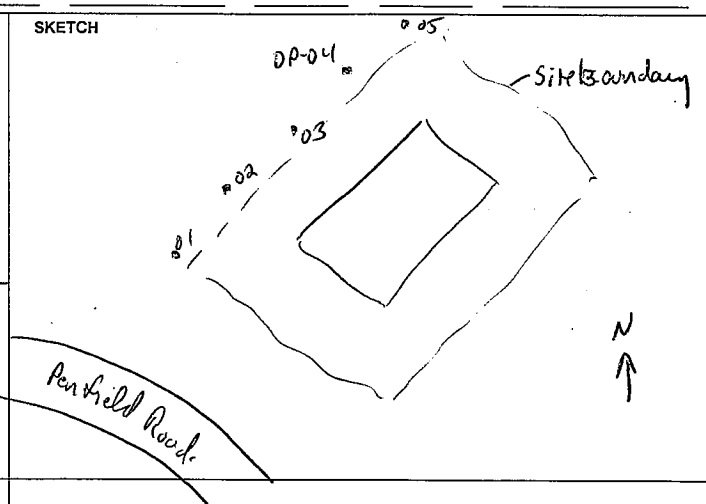
TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED	
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER	
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[✓] PID	ppb Rae
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[ ] GEOPROBE SCREEN	[✓] WQ METER	Y/N
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[ ] TURB. METER	
[ ] OTHER	[ ] HEXANE	[X] LDPE TUBING	[ ] OTHER	[ ] PUMP	
[ ] OTHER	[ ] METHANOL	[ ] OTHER	[ ] OTHER	[ ] OTHER	
	[ ] OTHER	[ ] OTHER	[ ] OTHER	[ ] FILTERS NO. ____	TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		see Above

NOTES
Screening interval: 16' to 20' bgs

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/23/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-04	11-15-2010
PROJECT NUMBER		START TIME	END TIME
3612102168		1410	1425
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131 4-DP04 30 X	1420	828131 A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER ____

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER ____

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER ____

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER ____

WELL INTEGRITY

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

BAS

INITIAL DTW (BMP)	~6.5 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	30 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	40.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	— GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1410	BEGIN PURGING									
1415	—	400.	15.10	1.687	7.02	0.25	—	-81.0	~29'	PID = 125 ppb
1420	Collected	gw	sample	@DP-04						

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt brown CLOUDY ____ TURBID ✓ (silty) ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____
- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [✓] OTHER none
- [ ] OTHER ____
- [ ] OTHER ____

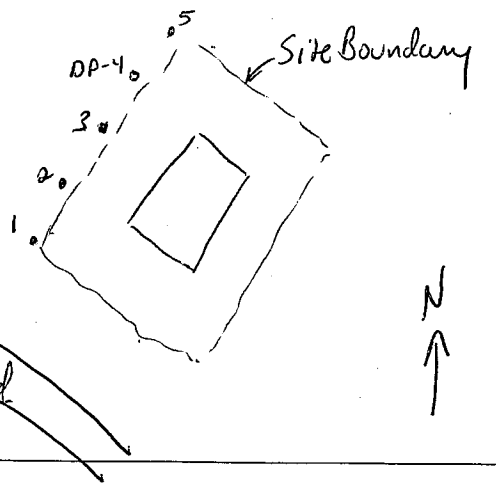
EQUIPMENT USED
- [ ] WATER LEVEL METER
- [✓] PID ppb Rae
- [✓] WQ METER YSI
- [ ] TURB. METER ____
- [ ] PUMP ____
- [ ] OTHER ____
- [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES
Screening interval = 26' to 30' bgs
PID headspace = 125 ppb

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: [signature] Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-05	11-15-2010
PROJECT NUMBER		START TIME	END TIME
3612102168		1540	1600
SAMPLE ID: 828131A-DP0510X	SAMPLE TIME: 1550	SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER None (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

BY

INITIAL DTW (BMP)	~7' FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	20.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	≈1.1 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1540	BEGIN PURGING									
1545	—	400	15.27	1.442	7.07	0.01	—	-77.1	~10'	PID: 190 ppb
1550	Collected gw sample @ DP-05									

BY

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ____ CLOUDY ____ TURBID ✓ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER ____
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [✓] OTHER: None
- [ ] OTHER ____
- [ ] OTHER ____

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [✓] PID ppb Rae
- [✓] WQ METER YSI
- [ ] TURB. METER ____
- [ ] PUMP ____
- [ ] OTHER ____
- [ ] FILTERS NO. ____ TYPE ____

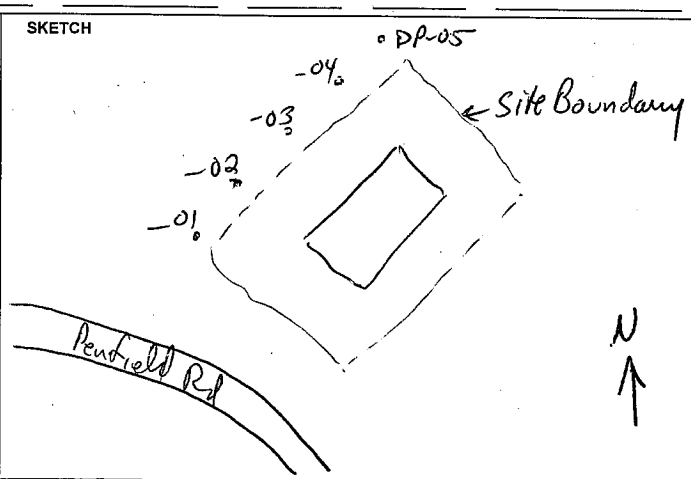
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES

Screening interval: 8' to 12' bgs

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

P:\Projects\nysdec1\qapp\2010 Revised Figures\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-05 / DATE: 11-15-2010
PROJECT NUMBER: 3612102168	START TIME: 1510 / END TIME: 1540.
SAMPLE ID: 828131A-DP0520X / SAMPLE TIME: 1535	SITE NAME/NUMBER: 828131 A / PAGE: 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED COLLAR	—	—	—

BAT

INITIAL DTW (BMP)	~7' FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	20.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1527	BEGIN PURGING									
1532	—	400	15.15	1.271	7.18	0.53	—	-103.8	~19	PID: 100 ppb
1535	Collected gw sample @ DP-05									

Bag

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt grey CLOUDY ____ TURBID ✓ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER
- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [✓] OTHER none
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [✓] WATER LEVEL METER
- [✓] PID ppb-Rae
- [✓] WQ METER YSI
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

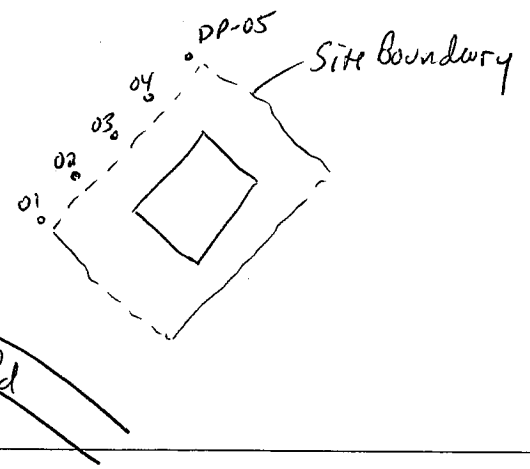
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		see Above

NOTES

Screening interval: 11' to 20' bgs

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or N/A mL for this sample location.

Sampler Signature: Brandon Shaw Print Name:

Checked By: J. Rawcliffe Date: 11/23/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-06	11-16-2010
PROJECT NUMBER		START TIME	END TIME
3612102168		1000	1015
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP06 10X	1010	828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER ____

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER ____

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER ____

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

DA

INITIAL DTW (BMP)	~8.5 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	20.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1000	BEGIN PURGING									
1005	—	400	14.84	1.719	6.99	0.96	—	-100.9	~10'	PID: 35 ppb
1010	Collected gw sample @DP-06									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Reddish Brown CLOUDY ____ TURBID ✓ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [✓] OTHER none
- [ ] OTHER ____
- [ ] OTHER ____

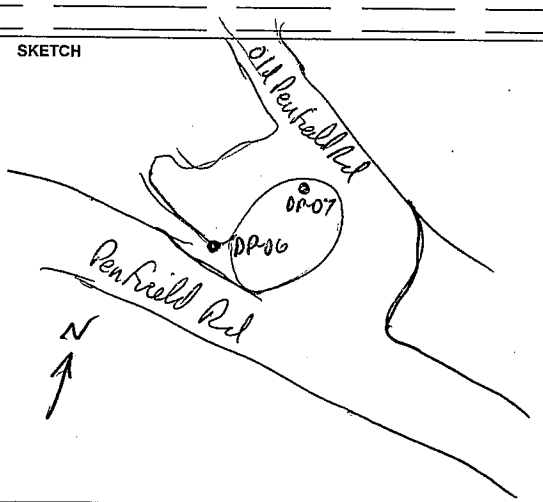
EQUIPMENT USED
- [✓] WATER LEVEL METER
- [✓] PID PPB Rae
- [✓] WQ METER YSI
- [ ] TURB. METER ____
- [ ] PUMP ____
- [ ] OTHER ____
- [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		see above

NOTES
- Screening interval: 8' to 12' bgs
- stainless steel screen

SKETCH



PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[ ]	[✓]
NO-PURGE METHOD UTILIZED	[ ]	[✓]

NUMBER OF GALLONS GENERATED: ~2

If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	
PROJECT NUMBER: 3612102168	
SAMPLE ID: 828131A-DP0620X	SAMPLE TIME: 1955
SAMPLE LOCATION: DP-06	DATE: 11-16-2010
START TIME: 0940	END TIME: 1000
SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs).

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			BA
LOCKED			
COLLAR			

INITIAL DTW (BMP)	8.5 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	<0.1 PPM
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—

TOC/TOR DIFFERENCE	— FT
REFILL TIMER SETTING	— SEC
DISCHARGE TIMER SETTING	— SEC
PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0945	BEGIN PURGING									
0952	—	400	14.65	3.204	6.98	0.82	—	-82.4	~19'	PID = 140 ppb
0955	Collected gw	Sample								
	BA									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt grey CLOUDY ✓ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [✓] OTHER none
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [✓] PID ppb Rae
- [ ] WQ METER YSI
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE ___

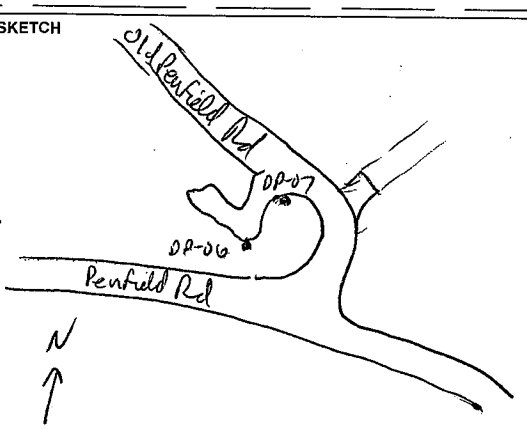
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See above

NOTES

- Screening interval: 16' to 20' bgs
- stainless steel wirewrapped screen (~4').
- PID headspace = 140 ppb;
  → disposed of gw on ground surface

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: Brandon Shaw Print Name:

Checked By: T. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

P:\Projects\nysdec1\qapp\2010 Revised Figures\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	
Off-Site Carriage Cleaners	
PROJECT NUMBER	
3612102168	
SAMPLE ID: 828131A-DP0710X	SAMPLE TIME: 1345

SAMPLE LOCATION: DP-07	DATE: 11-16-2010
START TIME: 1335	END TIME: 1400.
SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [ ] 1 [ ] 2 [✓] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP	—	—	BAS
CASING	—	—	—
LOCKED COLLAR	—	—	—

INITIAL DTW (BMP)	~8 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	20.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1336	BEGIN PURGING									
1340	—	400.	15.44	2.792	7.07	0.10	7100	-115.1	~10'	PID = 19 ppb.
1345	—	Collected gw Sample @ DP-07								

SAMPLE OBSERVATIONS: CLEAR ____ COLORED DF gray ____ CLOUDY ____ TURBID ✓ ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [✓] OTHER none
- [ ] OTHER ____
- [ ] OTHER ____

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [✓] PID ppb Rae
- [✓] WQ METER YSI
- [ ] TURB. METER ✓
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

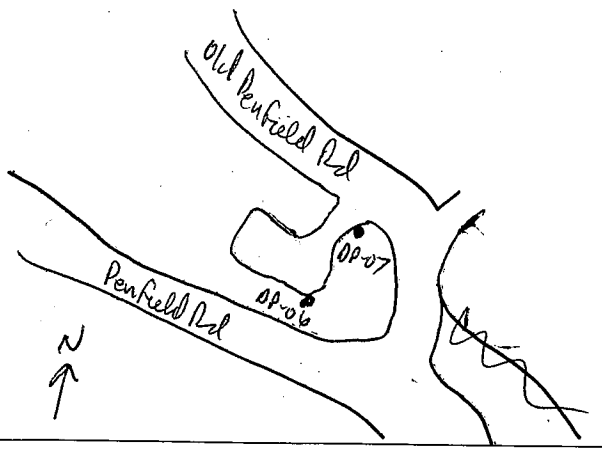
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See above

NOTES

-Screening interval: 8' to 12' bgs

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw.

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	
PROJECT NUMBER: 3612102168	
SAMPLE ID: S26131A-DP0720X	SAMPLE TIME: 1335
SAMPLE LOCATION: DP-07	DATE: 11-16-2010
START TIME: 1315	END TIME: 1335
SITE NAME/NUMBER: S26131A	PAGE: 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs).

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED COLLAR			

INITIAL DTW (BMP)	~8 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	20.1 PPM
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—

TOC/TOR DIFFERENCE	— FT
REFILL TIMER SETTING	— SEC
DISCHARGE TIMER SETTING	— SEC
PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1325	BEGIN PURGING									
1330	—	400	15.09	2.308	7.21	1.06	240	-32.2	~19'	PID: 11 ppb
1335	Collected gw	sample	@ DP-07							
	BAS									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt grey CLOUDY ✓ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [✓] OTHER none
- [ ] OTHER
- [ ] OTHER

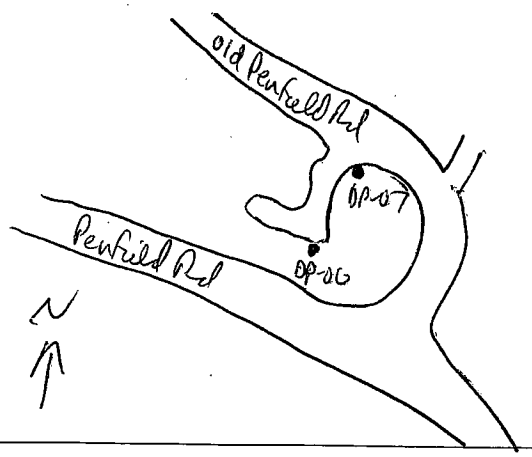
EQUIPMENT USED
- [ ] WATER LEVEL METER
- [✓] PID OVA Rae
- [✓] WQ METER YSI
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		see above

NOTES
screening interval = 16' to 20' bgs

SKETCH



PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[ ]	[✓]
NO-PURGE METHOD UTILIZED	[ ]	[✓]

NUMBER OF GALLONS GENERATED: ~2

If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: [signature] Print Name: Brandon Stern

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-08	11-16-2010
PROJECT NUMBER		START TIME	END TIME
3612102168		1400	1430
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
S28131A-DP0820X	1425	S28131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER ____

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER ____

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER ____

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER None (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED COLLAR	—	—	—

BAS

INITIAL DTW (BMP)	~8 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	<0.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1416	BEGIN PURGING									
1420	—	400	15.02	4.044	7.09	4.56	124	-53.9	~19'	PID=100 ppb
1425	Collected gw sample @ DP-08									
	BAS									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ____ CLOUDY ✓ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [✓] OTHER None
- [ ] OTHER ____
- [ ] OTHER ____

EQUIPMENT USED
- [✓] WATER LEVEL METER
- [✓] PID ppb Rae
- [✓] WQ METER YSI
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

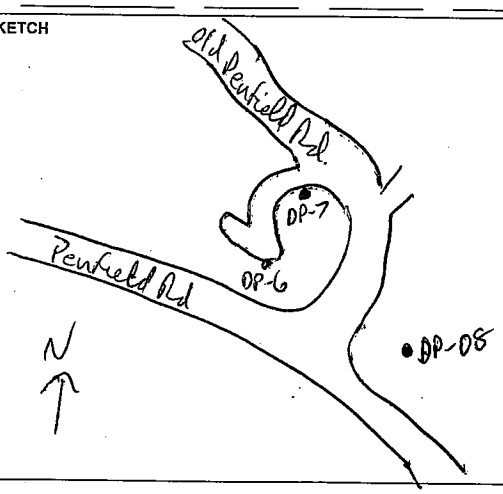
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See above.

NOTES

Screening interval: 16' to 20' bgs

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or ~~NA~~ ____ mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-09	11-16-10
PROJECT NUMBER		START TIME	END TIME
3612102168		1540	1600
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP09(0X) MS+MSD	1550	828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER: none (bgs).

WELL INTEGRITY

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

BAS

INITIAL DTW (BMP)	8 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	<0.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1540.	BEGIN PURGING									
1545	—	400	13.90.	2.043	7.01	0.87	71008	-90.7	~10'	PID = 3.5 ppm.
1550	Collected GW	Sample	@ DP-09							
	BAS									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt Olive CLOUDY ____ TURBID ✓ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [✓] TEFLON BLADDER
- [ ] OTHER none
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [✓] PID PPB Rae
- [✓] WQ METER YSI
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

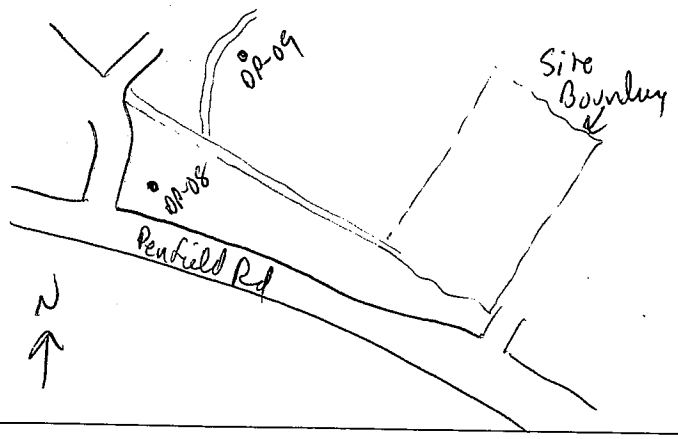
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓	✓	see above

NOTES

Screening interval: 8' to 12' bgs
- collected MS/MSD here

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

P:\Projects\nysdec1\qapp\2010 Revised Figures\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	
Off-Site Carriage Cleaners	
PROJECT NUMBER	
3612102168	
SAMPLE ID: 828131A-DP0920X	SAMPLE TIME: 1535

SAMPLE LOCATION	DATE
DP-09	11-16-2010
START TIME: 1520	END TIME: 1540
SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED COLLAR			

RA

INITIAL DTW (BMP)	— FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	20.1 PPM
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~1 GAL	DRAWDOWN/ TOTAL PURGED	—

TOC/TOR DIFFERENCE	— FT
REFILL TIMER SETTING	— SEC
DISCHARGE TIMER SETTING	— SEC
PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1527	BEGIN PURGING									
1532	—	200	14.65	2.244	7.39	4.33	247	-79.1	~19	PID: 4.9 ppm
1535	collected gw	sample	@ DP-09							

RA

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ____ CLOUDY ✓ TURBID ✓ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER ____
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [✓] OTHER none
- [ ] OTHER ____
- [ ] OTHER ____

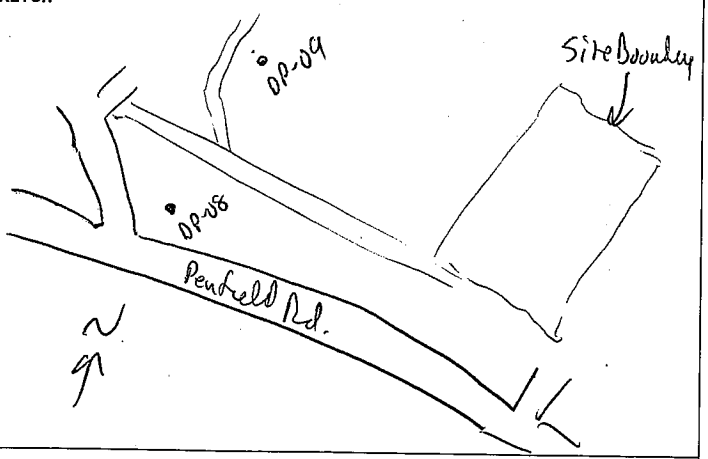
EQUIPMENT USED
- [✓] WATER LEVEL METER
- [✓] PID PPB Rae
- [✓] WQ METER YSI
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		see Above

NOTES
Screening interval: 16' to 20' bgs

SKETCH



PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[ ]	[✓]
NO-PURGE METHOD UTILIZED	[ ]	[✓]

NUMBER OF GALLONS GENERATED: ~1

If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: [signature] Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners		SAMPLE LOCATION: DP-10	DATE: 11-17-2010
PROJECT NUMBER: 3612102168		START TIME: 0800.	END TIME: 0815
SAMPLE ID: 828131A-DP1010X/Dup	SAMPLE TIME: 0810	SITE NAME/NUMBER: 828131A	PAGE 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER ______

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER ______

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER ______

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY (YES / NO / N/A): CAP, CASING, LOCKED, COLLAR — crossed out, BAS

INITIAL DTW (BMP): ~8 FT	FINAL DTW (BMP): — FT	PROT. CASING STICKUP (AGS): — FT	TOC/TOR DIFFERENCE: — FT
WELL DEPTH (BMP): 20. FT	SCREEN LENGTH: 4 FT	PID AMBIENT AIR: 0.1 PPM	REFILL TIMER SETTING: — SEC
WATER COLUMN: — FT	DRAWDOWN VOLUME: — GAL (initial DTW- final DTW X well diam. squared X 0.041)	PID WELL MOUTH: — PPM	DISCHARGE TIMER SETTING: — SEC
CALCULATED GAL/VOL: — GAL (column X well diameter squared X 0.041)	TOTAL VOL. PURGED: ~2 GAL (mL per minute X total minutes X 0.00026 gal/mL)	DRAWDOWN/ TOTAL PURGED: —	PRESSURE TO PUMP: — PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0800	BEGIN PURGING									
0805	—	400	14.38	1.706	6.99	0.31	>1000	-79.9	~10'	PID: 10.2 ppm
0810	Collected gw sample @ DP-10									
BAS										

SAMPLE OBSERVATIONS: CLEAR ______ COLORED Dk grey CLOUDY ______ TURBID ✓ (Silty) ODOR ______ OTHER (see notes) ______

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX [X] DEIONIZED WATER [ ] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [X] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [ ] HDPE TUBING [X] LDPE TUBING [ ] OTHER [ ] OTHER; [ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [✓] GEOPROBE SCREEN [✓] TEFLON BLADDER [ ] OTHER none [ ] OTHER [ ] OTHER

EQUIPMENT USED: [ ] WATER LEVEL METER [✓] PID ppb Rae [✓] WQ METER YSI [ ] TURB. METER [ ] PUMP [ ] OTHER [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compound	8620B	HCl	2/3 x 40 mL	✓	✓	See Above

NOTES

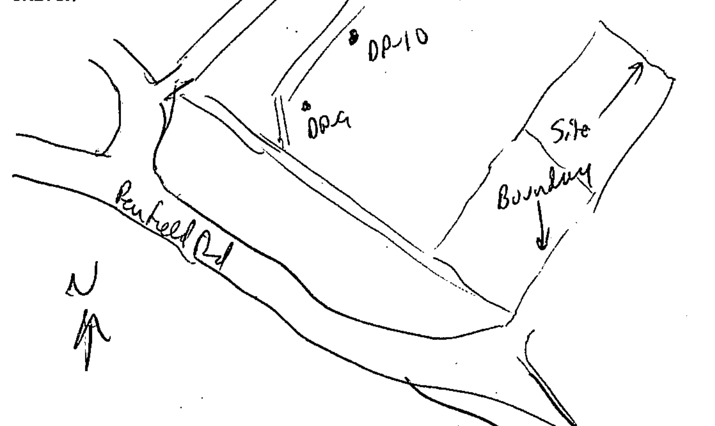
PVC screen from 8' to 12' bgs

PID headspace = 10.2 ppm.

- stainless steel 4' screen

- Duplicate collected here AISO

SKETCH



PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES [✓] NO [ ] — NUMBER OF GALLONS GENERATED: ~2

NO-PURGE METHOD UTILIZED: YES [ ] NO [✓] — If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: [signature] Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

P:\Projects\nysdec1\qapp\2010 Revised Figures\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-10
PROJECT NUMBER: 3612102168	DATE: 11-16-2010
SAMPLE ID: 828131A-DP1020	START TIME: 0735 (DAS 1600)
SAMPLE TIME: 0800	END TIME: 0800
SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY (YES / NO / N/A): CAP, CASING, LOCKED, COLLAR — DAS

INITIAL DTW (BMP)	~8 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20. FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	0.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~1.5 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0748	BEGIN PURGING									
0755	—	~250	14.87	1.902	7.10	4.65	—	-57.9	~19'	PID = 18.9 ppm
0800	Collected gw Sample @ DP-10									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ✓ CLOUDY ____ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC; [ ] SUBMERSIBLE; [ ] BLADDER; [ ] WATTERA; [ ] OTHER; [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX; [X] DEIONIZED WATER; [ ] POTABLE WATER; [ ] NITRIC ACID; [ ] HEXANE; [ ] METHANOL; [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [X] SILICON TUBING; [ ] TEFLON TUBING; [ ] TEFLON LINED TUBING; [ ] HDPE TUBING; [X] LDPE TUBING; [ ] OTHER; [ ] OTHER — [ ] S. STEEL PUMP MATERIAL; [ ] PVC PUMP MATERIAL; [✓] GEOPROBE SCREEN; [✓] TEFLON BLADDER; [✓] OTHER none; [ ] OTHER; [ ] OTHER

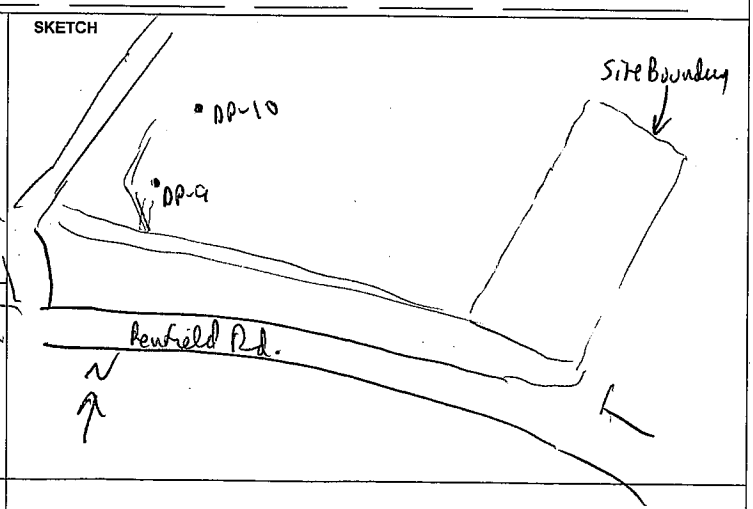
EQUIPMENT USED: [✓] WATER LEVEL METER; [✓] PID PID Rae; [✓] WQ METER YSI; [ ] TURB. METER; [ ] PUMP; [ ] OTHER; [ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		see Above

NOTES: stainless steel screen from 16' to 20' bgs
- PID = 18.9 ppm.

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	✓		NUMBER OF GALLONS GENERATED: ~1.5
NO-PURGE METHOD UTILIZED		✓	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: Brandon Shaw Print Name:

Checked By: J. Rawcliffe Date: 11/23/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

P:\Projects\nysdec1\qapp\2010 Revised Figures\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-10	11-17-10
PROJECT NUMBER		START TIME	END TIME
3612102168		1345	1425
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP1045X	1425	828131A	1 OF 1

SAMPLE TYPE: [ ] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER None (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	~8 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	— GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1415	BEGIN PURGING									
1420	—	~200	13.93	1.766	7.81	0.01	71000	-219.3	~45'	PID: 0.6 ppm
1425	Collected gas sample @ DP-10									
BAD										

SAMPLE OBSERVATIONS: CLEAR ____ COLORED DK grey CLOUDY ____ TURBID V. Silty ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [✓] OTHER PID Screen
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [✓] PID ppm Thermo ORMS
- [ ] WQ METER
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

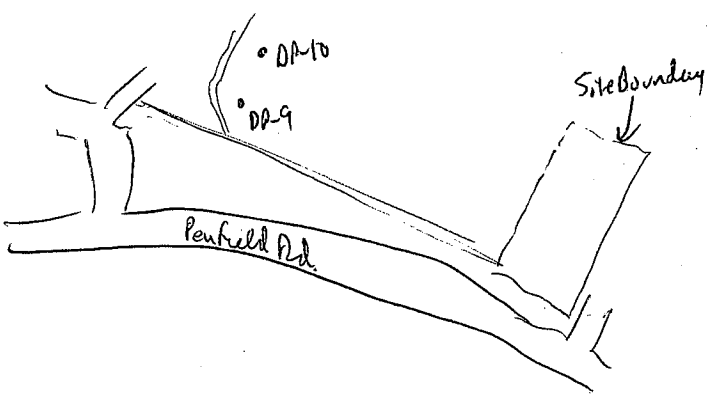
	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES

Screening Interval: 45 to 47' bgs

PID headspace = 0.6 ppm

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: n/a
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/23/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

P:\Projects\nysdec1\qapp\2010 Revised Figures\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	
Off-Site Carriage Cleaners	
PROJECT NUMBER	
3612102168	
SAMPLE ID: 828131A - DP1035X	SAMPLE TIME: 1440

SAMPLE LOCATION	DATE
DP-10	11-17-2010
START TIME: 1425	END TIME: 1440
SITE NAME/NUMBER: 828131A	PAGE 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER ______

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER ______

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER ______

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY (YES / NO / N/A): CAP, CASING, LOCKED, COLLAR — (struck through) NA

INITIAL DTW (BMP)	~8 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~1 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1428	BEGIN PURGING									
1435	—	400±	12.91	1.783	7.64	0.09	>1000	-225.1	~35	PID ~ 0.8 ppm
1440	collected gw sample @ DP-10									
BA										

SAMPLE OBSERVATIONS: CLEAR ______ COLORED Dk grey CLOUDY ______ TURBID V. Silty ODOR ______ OTHER (see notes) ______

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[✓] PID 580 B
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[ ] GEOPROBE SCREEN	[✓] WQ METER YSI
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[ ] TURB. METER
[ ] OTHER	[ ] HEXANE	[X] LDPE TUBING	[✓] OTHER PVC Screen	[ ] PUMP
[ ] OTHER	[ ] METHANOL	[ ] OTHER	[ ] OTHER	[ ] OTHER
	[ ] OTHER	[ ] OTHER	[ ] OTHER	FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

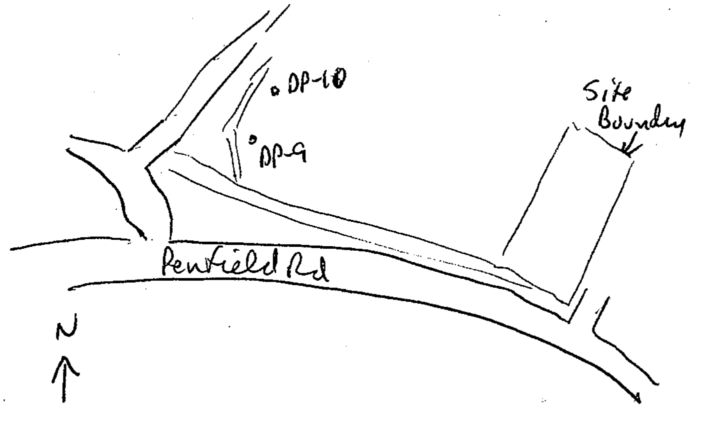
	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES

screening interval: 35 to 31' bgs

PID headspace: 0.8 ppm

SKETCH



PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES [ ] NO [ ]

NUMBER OF GALLONS GENERATED: ~1

NO-PURGE METHOD UTILIZED: YES [ ] NO [✓]

If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ______ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

P:\Projects\nysdec1\qapp\2010 Revised Figures\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	
Off-Site Carriage Cleaners	
PROJECT NUMBER	
3612102168	
SAMPLE ID	SAMPLE TIME
828131A-DP1025X	1450

SAMPLE LOCATION	DATE
DP-10	11-17-10
START TIME	END TIME
1440	1500
SITE NAME/NUMBER	PAGE
828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bags)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED COLLAR			

INITIAL DTW (BMP)	~8 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	45 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	0.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1441	BEGIN PURGING									
1446	—	400	13.05	2.009	7.23	0.09	71000	-159	~25'	PID: 29.8 ppm
1450	Collected gw sample @ DP-10									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt Brown CLOUDY ____ TURBID V. Sandy ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [✓] OTHER pvc screen
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [✓] WATER LEVEL METER
- [✓] PID 580B
- [✓] WQ METER YSI
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

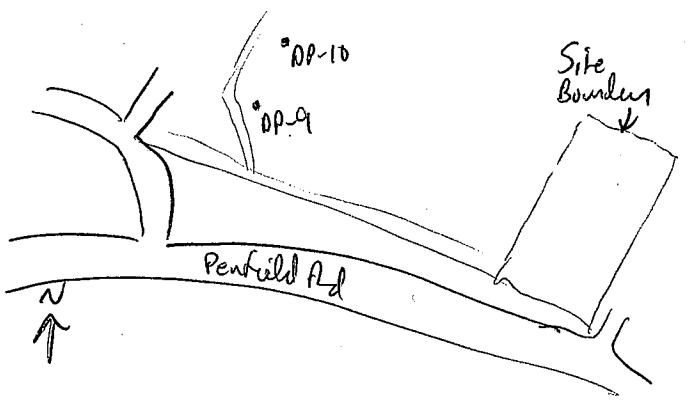
	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES

screening interval: 25 to 27 bgs

PID headspace: 29.8 ppm

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	✓		NUMBER OF GALLONS GENERATED ~2
NO-PURGE METHOD UTILIZED		✓	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shand

Checked By: J. Rawcliffe Date: 11/23/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-11 / DATE: 11-17-2010
PROJECT NUMBER: 3612102168	START TIME: 1055 / END TIME: 1110
SAMPLE ID: 828131A-DP1110X / SAMPLE TIME: 1105	SITE NAME/NUMBER: 828131A / PAGE: 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

BA

INITIAL DTW (BMP)	~8 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	<0.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1056	BEGIN PURGING									
1102	—	~400	13.42	1.727	7.10	0.30	—	-70.9	~10'	PID: 3400 ppb
1105	Collected gw sample @DP-11									

BA

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ____ CLOUDY ____ TURBID ✓ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [✓] TEFLON BLADDER
- [ ] OTHER none
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [✓] PID ppb Rae
- [✓] WQ METER YSI
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

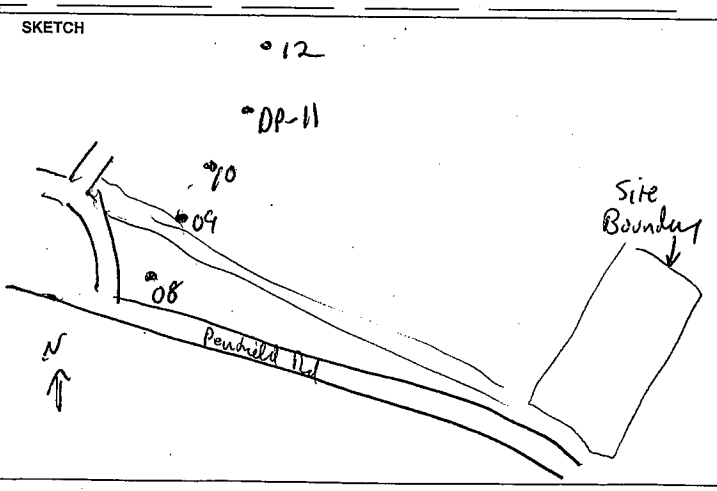
NOTES

Screening interval: 8' to 12' bgs

PID: 3.4 ppm.

- using stainless steel screen

SKETCH



PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[ ]	[✓]
NO-PURGE METHOD UTILIZED	[ ]	[✓]

NUMBER OF GALLONS GENERATED: ~2

If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: [signature] Print Name: Brandon Straw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	
Off-Site Carriage Cleaners	
PROJECT NUMBER	
3612102168	
SAMPLE ID	SAMPLE TIME
828134-DP1120X	1055

SAMPLE LOCATION	DATE
DP-11	11-17-2010
START TIME	END TIME
1035	1055
SITE NAME/NUMBER	PAGE
828134	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs).

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	8 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	— GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1044	BEGIN PURGING									
1052	—	400	13.04	1.848	7.29	4.39	—	-61.9	~19'	PID headspace = 1250 ppb
1055	collected gw sample @ DP-11									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ____ CLOUDY ✓ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [✓] TEFLON BLADDER
- [ ] OTHER none
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [✓] PID 11.6 Rae
- [ ] WQ METER
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		see Above

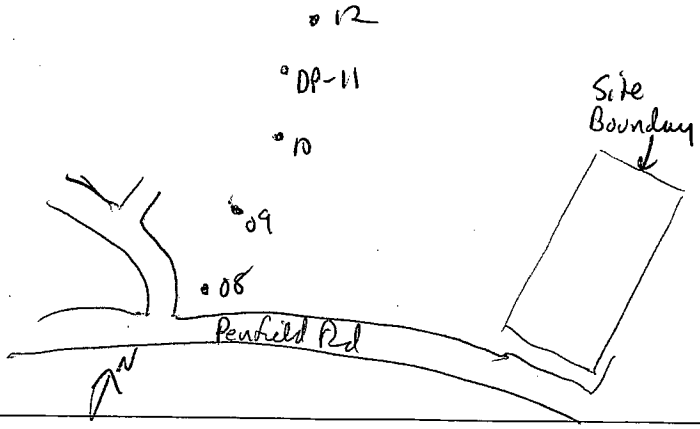
NOTES

Screening interval from: 16' to 20' bgs

PID headspace = 1250 ppb

- using stainless steel screen

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: 12
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: Brandon Shaw Print Name:

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-12	11-17-2010
PROJECT NUMBER		START TIME	END TIME
3612102168		1125	1145
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP1210X (worked)	1135	828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER ____

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER ____

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER ____

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

BAP

INITIAL DTW (BMP)	~8 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	2.0 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1127	BEGIN PURGING									
1133	—	400	12.44	1.499	7.23	0.10	—	-116.1	~10'	PID: 450 ppb
1135	Collected gw sample @ DP-12									
	BAP									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED DK grey CLOUDY ____ TURBID ✓ Sandy ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [✓] OTHER none
- [ ] OTHER ____
- [ ] OTHER ____

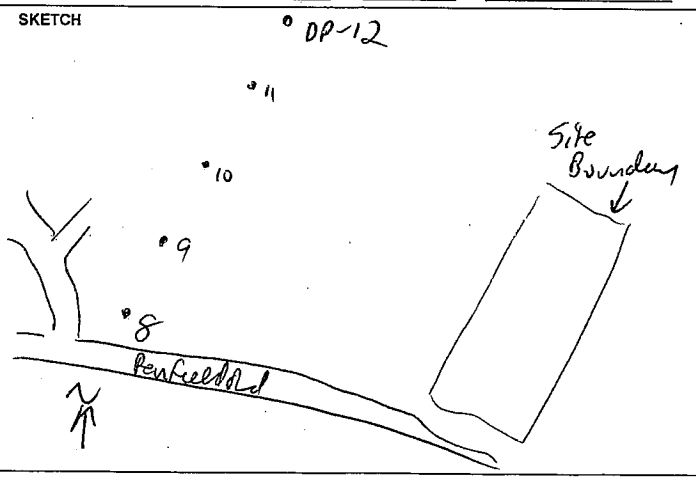
EQUIPMENT USED
- [ ] WATER LEVEL METER
- [✓] PID PPB Rae
- [✓] WQ METER YSI
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compound	8620B	HCl	3 x 40 mL	✓	✓	See Attached

NOTES
screening interval: 8' to 12' bgs
- using a 3/4" PVC screen
- PID headspace: 450 ppb

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-12	11-17-2010
PROJECT NUMBER		START TIME	END TIME
3612102168		1110	1125
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP1220X	1125	828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED COLLAR			NA

INITIAL DTW (BMP)	18 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	2.0 PPM
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~1 GAL	DRAWDOWN/ TOTAL PURGED	—

TOC/TOR DIFFERENCE	— FT
REFILL TIMER SETTING	— SEC
DISCHARGE TIMER SETTING	— SEC
PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1115	BEGIN PURGING									
1120	—	~200	12.89	1.401	7.20	0.50	—	-99.4	~19	PID = 70 ppb
1125	Collected gw sample @ DP-12									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ____ CLOUDY ✓ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [✓] OTHER none
- [ ] OTHER
- [ ] OTHER

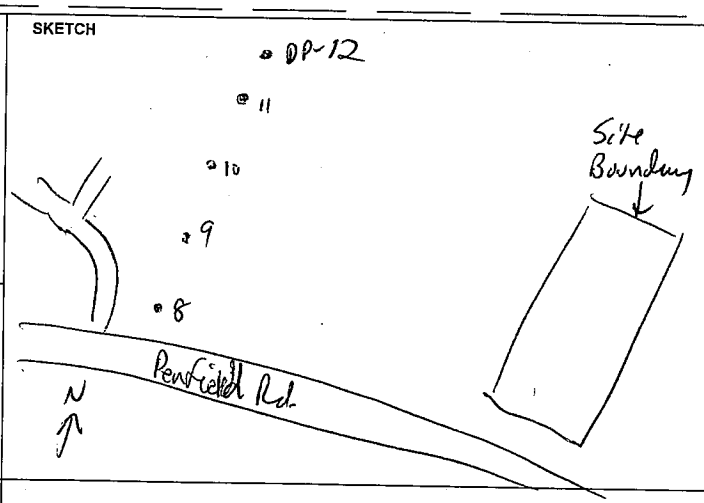
EQUIPMENT USED
- [✓] WATER LEVEL METER
- [✓] PID PPB Rae
- [ ] WQ METER
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES
Screening interval: 16' to 20' bgs
- using 3/4" PVC screen
PID headspace: 70 ppb

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: ~1
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: Brandon Shaw Print Name:

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	
PROJECT NUMBER: 3612102168	
SAMPLE ID: 828131A-DP13loX	SAMPLE TIME: 1545
SAMPLE LOCATION: DP-13	DATE: 11-17-2010
START TIME: 1535	END TIME: 1600
SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			BAS
LOCKED			
COLLAR			

INITIAL DTW (BMP)	~6 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	20.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1536	BEGIN PURGING									
1540	—	400	13.47	2.667	7.19	0.69	>1000	-106.7	~10'	PID: 0.1 ppm
1545	collected grab Sample @ DP-13									
	BAS									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt Brown CLOUDY ____ TURBID ✓ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [✓] OTHER PVC Screen
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [✓] PID 580 B
- [✓] WQ METER YSI
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

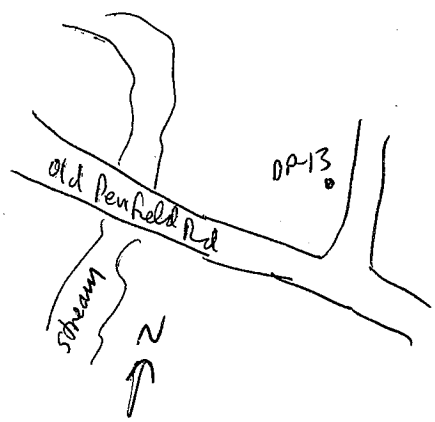
	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES

Screening interval: 8' to 12'

PID headspace: 0.1 ppm

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: [signature] Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-13	11-17-2010
PROJECT NUMBER		START TIME	END TIME
3612102168		1510	1535
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP1320X	1535	828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER none (bgs).

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	~6 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	2.0 PPM
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—

TOC/TOR DIFFERENCE	— FT
REFILL TIMER SETTING	— SEC
DISCHARGE TIMER SETTING	— SEC
PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1524	BEGIN PURGING									
(1531)	—	900	13.40	2.655	7.22	0.70	7,000	-117.0	~19'	PID = 0.0 ppm
1535	Collected gw sample									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt Brown CLOUDY ____ TURBID ✓ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [✓] OTHER piescreen
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [✓] WATER LEVEL METER
- [✓] PID 3800
- [✓] WQ METER YSI
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

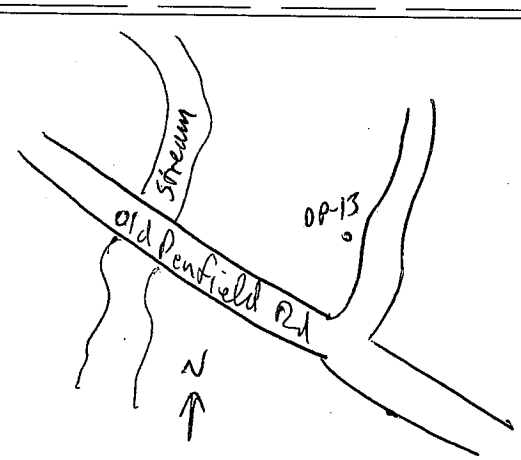
	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES

Screening interval: 16' to 20'

PID headspace: 0.0 ppm

SKETCH



PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[ ]	[✓]
NO-PURGE METHOD UTILIZED	[ ]	[✓]

NUMBER OF GALLONS GENERATED: ~2

If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: [signature]

Print Name: Brandon Shaw

Checked By: J. Rawcliffe

Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-14	11-17-2010
PROJECT NUMBER		START TIME	END TIME
3612102168		1620	1645
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP1410X	1635	828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER ____

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER ____

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER ____

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	— FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	40.1 PPM
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—

TOC/TOR DIFFERENCE	— FT
REFILL TIMER SETTING	— SEC
DISCHARGE TIMER SETTING	— SEC
PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1621	BEGIN PURGING									
1627	—	400	12.27	1.824	7.15	1.12	7,000	-30.1	~10'	PID: 0.6 ppm
1635	Collected GW sample @ DP-14									
	BA									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED brown CLOUDY ____ TURBID ✓ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [✓] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER ____
- [ ] OTHER ____
- [ ] OTHER ____

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [✓] PID OVM 580 B
- [ ] WQ METER
- [ ] TURB. METER ____
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

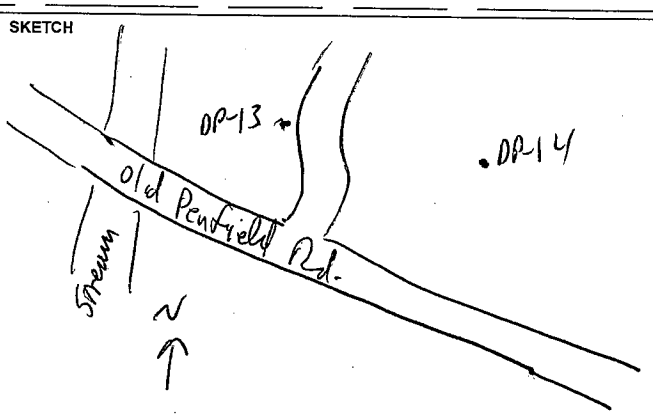
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	3 x 40 mL	✓		See Above

NOTES

Screening interval: 8' to 12' bgs
PID: 0.6 ppm

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Straw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	Off-Site Carriage Cleaners
PROJECT NUMBER	3612102168
SAMPLE ID	828131A-DP1420X
SAMPLE TIME	1620
SAMPLE LOCATION	DP-14
DATE	11-17-2010
START TIME	1600
END TIME	1620
SITE NAME/NUMBER	828131A
PAGE	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [ ] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER None (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	~7 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	0.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~1 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1611	BEGIN PURGING									
1617	—	~200	12.30	2.212	7.31	3.51	121	-69.1	~14'	PID > 3.5 ppm
1620	Collected gw sample @ DP-14									

BAS

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ____ CLOUDY ✓ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [✓] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [✓] PID ORM 580 B
- [ ] WQ METER
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE ___

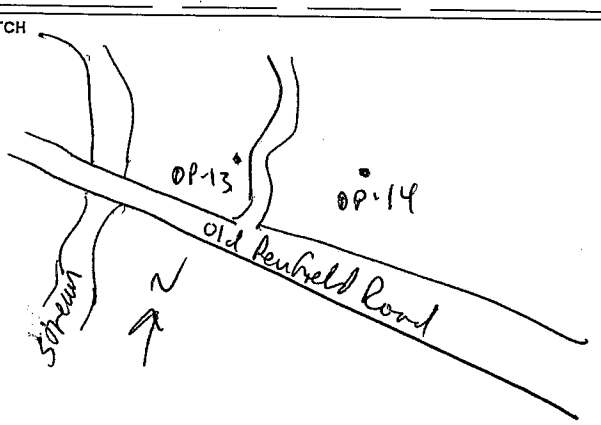
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	4 x 40 mL	✓		See Above

NOTES

Screening Interval: 16' to 20' bgs
PID Headspace > 3.5 ppm

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED ~1
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: [signature] Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners		SAMPLE LOCATION: DP-15	DATE: 11-18-2010
PROJECT NUMBER: 3612102168		START TIME: 0750	END TIME: 0805
SAMPLE ID: 828131A-DP1520X	SAMPLE TIME: 0805	SITE NAME/NUMBER: 828131A	PAGE 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER ______

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER ______

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER ______

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER None (bgs)

WELL INTEGRITY (YES / NO / N/A): CAP, CASING, LOCKED, COLLAR — crossed out, BAS

INITIAL DTW (BMP)	— FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	20.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~1.5 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0755	BEGIN PURGING									
0800	—	300	13.26	1.941	7.20	1.90	>1000	-99.1	~19'	PID: 14.9 ppm
0805	collected gw sample @ DP-15									
BAS										

SAMPLE OBSERVATIONS: CLEAR ______ COLORED lt greyish brown CLOUDY ______ TURBID ✓ ODOR ______ OTHER (see notes) ______

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[✓] PID 580B
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[✓] GEOPROBE SCREEN	[✓] WQ METER YSI
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[✓] TURB. METER
[ ] OTHER	[ ] HEXANE	[X] LDPE TUBING	[ ] OTHER	[ ] PUMP
[ ] OTHER	[ ] METHANOL	[ ] OTHER	[ ] OTHER	[ ] OTHER
	[ ] OTHER	[ ] OTHER	[ ] OTHER	[ ] FILTERS NO. ___ TYPE ___

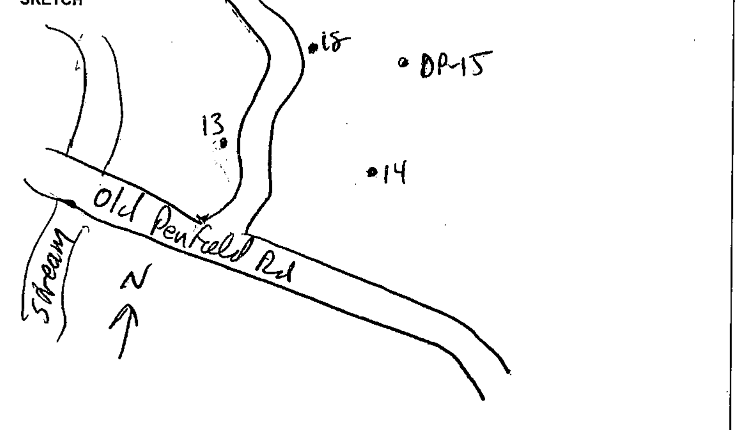
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES

Screening intervals:
PID headspace: 14.9 ppm

SKETCH



PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES [✓] NO [ ]

NUMBER OF GALLONS GENERATED: ~1.5

NO-PURGE METHOD UTILIZED: YES [ ] NO [✓]

If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: [signature] Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

P:\Projects\nysdec1\qapp\2010 Revised Figures\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-15	11-18-2010
PROJECT NUMBER		START TIME	END TIME
3612102168		0805	0820
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP1510X	0815	828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	— FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT
WELL DEPTH (BMP)	~10 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	20.1 PPM
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—

TOC/TOR DIFFERENCE	— FT
REFILL TIMER SETTING	— SEC
DISCHARGE TIMER SETTING	— SEC
PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0806	BEGIN PURGING									
0810	—	400	11.79	1.783	7.35	6.85	42.3	-70.9	~10'	PID: 15.3 ppm
0815	collected gw sample @ DP-15									
	DRY									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ____ CLOUDY ✓ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [✓] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER ____
- [ ] OTHER ____
- [ ] OTHER ____

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [1] PID SW 13
- [1] WQ METER YSI
- [1] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

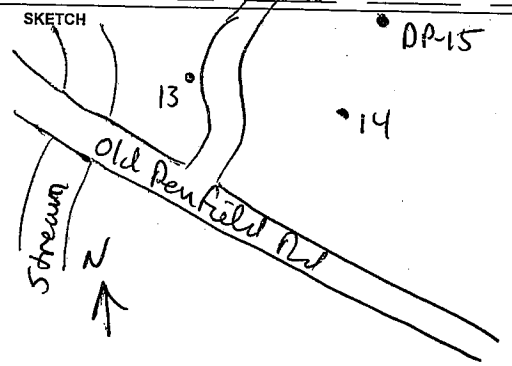
	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		see above

NOTES

Screening interval: 8'-12' bgs

PID headspace = 15.3 ppm

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	✓		NUMBER OF GALLONS GENERATED ~2
NO-PURGE METHOD UTILIZED		✓	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Snead

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

P:\Projects\nysdec1\qapp\2010 Revised Figures\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-16	11-18-2010
PROJECT NUMBER		START TIME	END TIME
3612102168		0915	0925
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP1625X	0925	828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

DRY

INITIAL DTW (BMP)	~7 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	2.0 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~1.5 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0917	BEGIN PURGING									
0923	—	400.	13.47	1.545	7.31	0.37	71000	-129.1	~19'	PID: 1.6 ppm
0925	Collected gw	sample	@ DP-16							

SAMPLE OBSERVATIONS: CLEAR ____ COLORED greyish brown CLOUDY ____ TURBID ✓ (silty) ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER ____
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [✓] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER ____
- [ ] OTHER ____
- [ ] OTHER ____

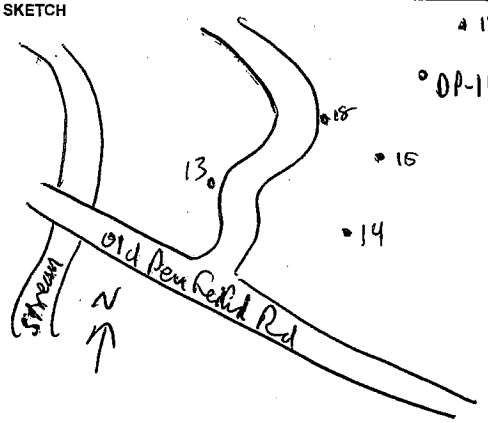
EQUIPMENT USED
- [ ] WATER LEVEL METER
- [✓] PID 580 B
- [✓] WQ METER YSI
- [✓] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2/3 x 40 mL	✓		See above

NOTES
Screening interval: 16' to 20' bgs
PID headspace: 1.6 ppm

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED ~1.5
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: Brandon Shaw Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	
PROJECT NUMBER: 3612102168	
SAMPLE ID: 828131A-DP1610X	SAMPLE TIME: 0935
SAMPLE LOCATION: DP-16	DATE: 11-18-2010
START TIME: 0925	END TIME: 0945
SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			BAS
CASING			
LOCKED COLLAR			

INITIAL DTW (BMP)	~7 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	40.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	— GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0927	BEGIN PURGING									
0933	—	~400	13.28	1.381	7.17	0.82	71000	-69.6	~10'	PID: 2.5 ppm
0935	collected GW		sample	@ DP-16						
	BAS									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt grey CLOUDY ✓ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER ____
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [✓] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER ____
- [ ] OTHER ____
- [ ] OTHER ____

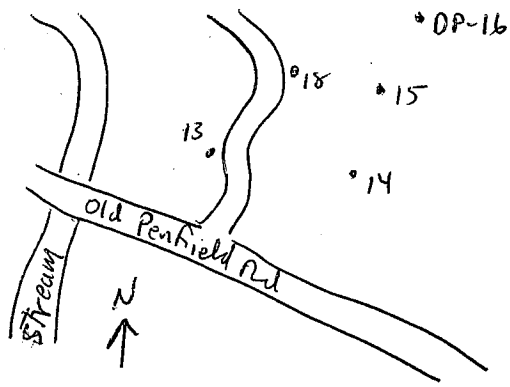
EQUIPMENT USED
- [✓] WATER LEVEL METER
- [ ] PID S8UB
- [✓] WQ METER YSI
- [✓] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	3 x 40 mL	✓		See Above
							017

NOTES
Screening interval: 8' to 12' bgs
PID readspace = 2.5 ppm.

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: Brandon Shaw Print Name:

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-17	11-18-2010
PROJECT NUMBER		START TIME	END TIME
3612102168		1015	0925
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP1720A	1025	828131A	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER None (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

134

INITIAL DTW (BMP)	~8 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	4.0-1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~1 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1017	BEGIN PURGING									
1023	—	200	13.27	1.386	7.39	4.05	275	-91.8	~19'	PID = 0.6 ppm
1025	Collected GW Sample @ DP-17									
	DAC									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ____ CLOUDY ✓ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [✓] PVC PUMP MATERIAL
- [✓] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER ____
- [ ] OTHER ____
- [ ] OTHER ____

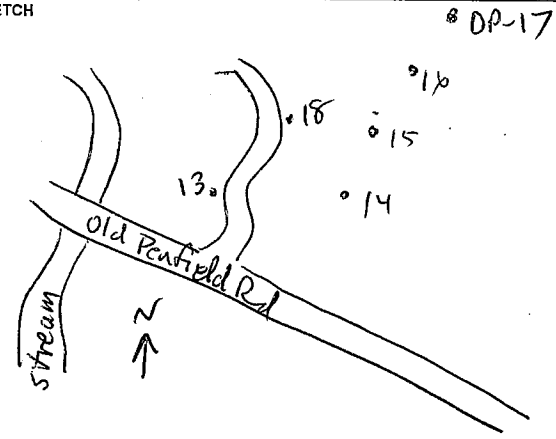
EQUIPMENT USED
- [✓] WATER LEVEL METER
- [✓] PID 580 B
- [✓] WQ METER YSI
- [✓] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES
Screening Interval = 16' to 20'
PID headspace = 0.6 ppm

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED ~1
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	
PROJECT NUMBER: 3612102168	
SAMPLE ID: 828131A-DP710X	SAMPLE TIME: 1035
SAMPLE LOCATION: DP-17	DATE: 11-18-2010
START TIME: 1625	END TIME: 1045
SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

BA

INITIAL DTW (BMP)	~8 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	40.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1026	BEGIN PURGING									
1033	—	400.	13.14	2.081	7.04	0.47	7100.	-92.2	~10'	PID: <0.1 ppm
1035	Collected gw	sample	@ DP-17							
	BA									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED DK grey CLOUDY ____ TURBID ✓ (V.S.Tf) ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [✓] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [✓] WATER LEVEL METER
- [✓] PID 580B
- [✓] WQ METER YSI
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

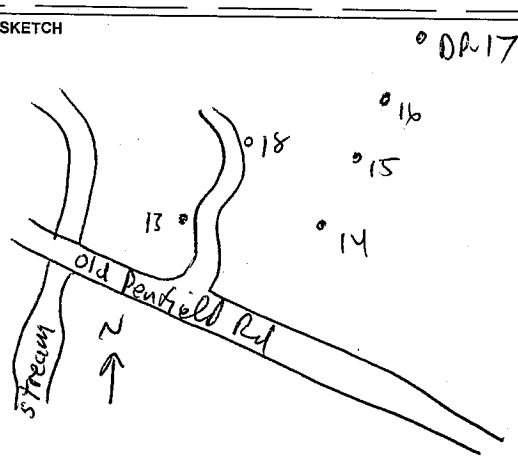
	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		see above

NOTES

Screening interval: 8' to 12' bgs

Headspace: <0.1 ppm

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: [signature] Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/23/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

P:\Projects\nysdec1\qapp\2010 Revised Figures\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	
Off-Site Carriage Cleaners	
PROJECT NUMBER	
3612102168	
SAMPLE ID: 828131A-DP1820X	SAMPLE TIME: 1100

SAMPLE LOCATION: DP-18	DATE: 11-18-2010
START TIME: 1050	END TIME: 1100
SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [ ] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER None (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

BJT

INITIAL DTW (BMP)	FT	FINAL DTW (BMP)	FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	60 GAL

PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
PID AMBIENT AIR	<0.1 PPM	REFILL TIMER SETTING	— SEC
PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1050	BEGIN PURGING									
1055	—	260	12.87	1.924	7.43	4.76	71000	-89.7	~19	PID = 13.3 ppm
1100	Collected gw Sample @ DP-18									
	BAS									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Ltgrey CLOUDY ✓ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [✓] PVC PUMP MATERIAL
- [✓] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

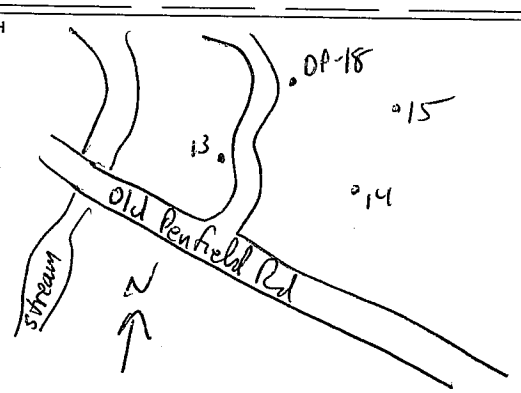
EQUIPMENT USED
- [✓] WATER LEVEL METER
- [✓] PID 580
- [✓] WQ METER
- [✓] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES
Screening Interval: 16' to 20' bgs
PID headspace: 13.3 ppm

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	✓	✗	NUMBER OF GALLONS GENERATED: ≈1
NO-PURGE METHOD UTILIZED		✓	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	
Off-Site Carriage Cleaners	
PROJECT NUMBER	
3612102168	
SAMPLE ID 828131A-DP18(0)	SAMPLE TIME 1110

SAMPLE LOCATION	DATE
DP-18	11-18-10
START TIME 1100	END TIME 1120
SITE NAME/NUMBER 828131A	PAGE 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	~7 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	20.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~1 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1101	BEGIN PURGING									
1107	—	200	13.95	1.433	7.99	0.76	71000	-97.6	~10'	PID ~12.2 ppm
1110	Collected gw sample @ DP-18									
	BA									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt grey brown CLOUDY ____ TURBID ✓ (SLIT) ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [ ] S. STEEL PUMP MATERIAL
- [✓] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [✓] WATER LEVEL METER
- [✓] PID 580 B
- [✓] WQ METER YSI
- [✓] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

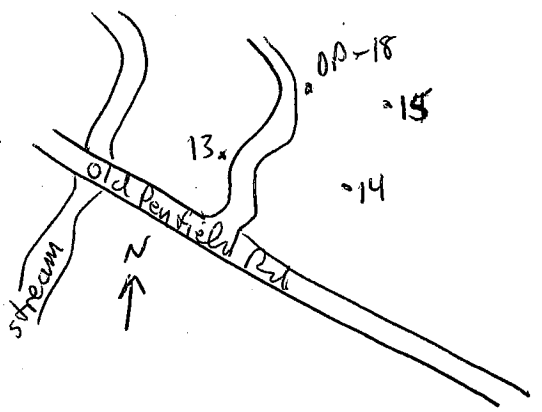
	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		see above

NOTES

Screening interval: 8' to 12' bgs

PID headspace: 12.2 ppm

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	✓		NUMBER OF GALLONS GENERATED: ~1
NO-PURGE METHOD UTILIZED		✓	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/22/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	Off-Site Carriage Cleaners
PROJECT NUMBER	3612102168
SAMPLE ID	82513 1A-DP1920X
SAMPLE TIME	1155
SAMPLE LOCATION	DP-19
DATE	11-18-10
START TIME	1140
END TIME	1155
SITE NAME/NUMBER	F25131A
PAGE	1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	~8' FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	<0.1 PPM
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	≈2 GAL	DRAWDOWN/ TOTAL PURGED	—

TOC/TOR DIFFERENCE	— FT
REFILL TIMER SETTING	— SEC
DISCHARGE TIMER SETTING	— SEC
PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1147	BEGIN PURGING									
1154	—	400.	14.81	1.958	7.36	0.30	7.000	-106.1	~19'	PID: 1.2 ppm
1155	Collected GW	Sample	@	DP-19						

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Reddish Brown CLOUDY ____ TURBID ✓ Sandy ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER
- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [✓] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [✓] WATER LEVEL METER
- [✓] PID 580 B
- [ ] WQ METER YSI
- [✓] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE ____

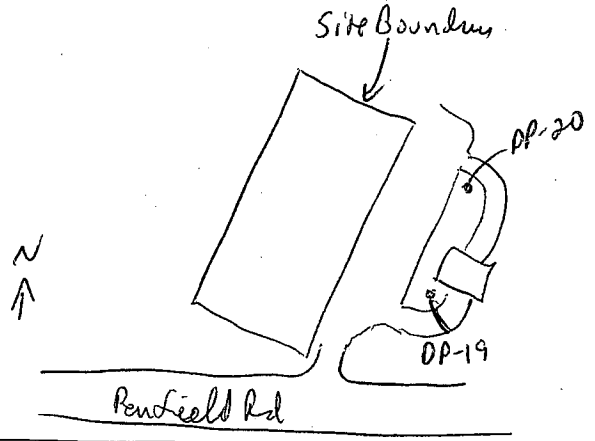
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES

Screening interval: 16' to 20' bgs
PID headspace: 1.2 ppm.

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: ≈2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/23/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	
Off-Site Carriage Cleaners	
PROJECT NUMBER	
3612102168	
SAMPLE ID: 828131A-DP19 20X	SAMPLE TIME: 1205

SAMPLE LOCATION: DP-19	DATE: 11-18-2010
START TIME: 1155	END TIME: 1205
SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (BGS)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

N/A

INITIAL DTW (BMP)	~8' FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	2.0-1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~7 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1156	BEGIN PURGING									
1203	—	400	14.01	2.11	7.23	0.11	7/600	-93.0	~10'	PID: 1.9 ppm
1205	Collected GW sample @ DP-19									
	RA									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Brown CLOUDY ____ TURBID ✓ Sandy ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [✓] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER ____
- [ ] OTHER ____
- [ ] OTHER ____

EQUIPMENT USED
- [✓] WATER LEVEL METER
- [✓] PID S30 B
- [✓] WQ METER YSI
- [✓] TURB. METER
- [ ] PUMP
- [ ] OTHER
- FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

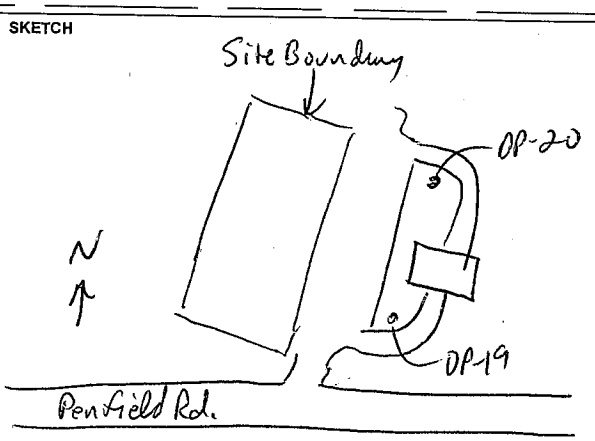
	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL			See Above

NOTES

Screening interval: 8' to 12' bgs

PID: 1.9 ppm

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/23/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	
Off-Site Carriage Cleaners	
PROJECT NUMBER	
3612102168	
SAMPLE ID: 828131A-DP2020X	SAMPLE TIME: 1220

SAMPLE LOCATION: DP-20	DATE: 11-18-10
START TIME: 1210	END TIME: 1220
SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [✓] GRAB [ ] WELL/PIEZOMETER [✓] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none (bgs)

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

bgs

INITIAL DTW (BMP)	~8 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	20 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	20.1 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	— FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	— GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1210	BEGIN PURGING									
1215	—	400.	15.12	1.933	7.21	0.51	71000	-88.1	-19	PID: 0.3 ppm
1220	Collected gw sample @ DP-20									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Reddish orange CLOUDY ____ TURBID ✓ (Sandy) ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX [X] DEIONIZED WATER [ ] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [X] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [ ] HDPE TUBING [X] LDPE TUBING [ ] OTHER [ ] OTHER; [ ] S. STEEL PUMP MATERIAL [✓] PVC PUMP MATERIAL [✓] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER [ ] OTHER [ ] OTHER

EQUIPMENT USED: [✓] WATER LEVEL METER [✓] PID 58013 [✓] WQ METER YSI [✓] TURB. METER [ ] PUMP [ ] OTHER [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

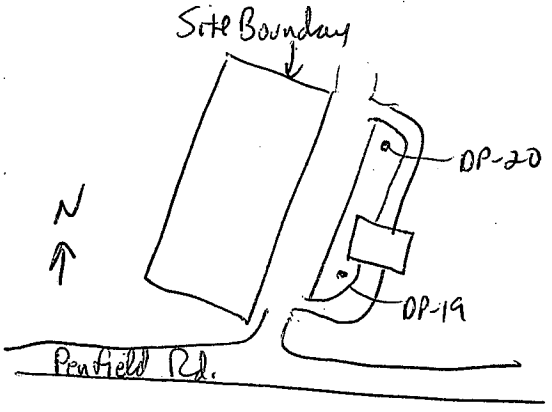
	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES

Screening Interval: 16' to 20' bgs

PID headspace: 0.3 ppm

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: ~2
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: J. Rawcliffe Date: 11/23/10

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

P:\Projects\nysdec1\qapp\2010 Revised Figures\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-21	1/20/11
PROJECT NUMBER		START TIME	END TIME
3612102168/02.02		0949	1005
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP2110X	1003	828131A	1 OF 1

SAMPLE TYPE [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY

	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	7.5 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	10 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0950	BEGIN PURGING									Pump On
0957	\	~250	7.29	1.788	7.23	0.80	>1000	-53.1	~9'	
1003	Samples Collected						|		|	
			RCM 1/20/11				|		|	
							|		|	
							|		V	

SAMPLE OBSERVATIONS: CLEAR ___ COLORED ✓ Brown CLOUDY ✓ TURBID Silty ODOR — OTHER (see notes) ___

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
[X] PERISTALTIC
[ ] SUBMERSIBLE
[ ] BLADDER
[ ] WATTERA
[ ] OTHER
[ ] OTHER

DECON FLUIDS USED
[X] LIQUINOX
[X] DEIONIZED WATER
[ ] POTABLE WATER
[ ] NITRIC ACID
[ ] HEXANE
[ ] METHANOL
[ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
[X] SILICON TUBING
[ ] TEFLON TUBING
[ ] TEFLON LINED TUBING
[ ] HDPE TUBING
[X] LDPE TUBING
[ ] OTHER
[ ] OTHER
[ ] S. STEEL PUMP MATERIAL
[ ] PVC PUMP MATERIAL
[X] GEOPROBE SCREEN PVC
[ ] TEFLON BLADDER
[X] OTHER none
[ ] OTHER
[ ] OTHER

EQUIPMENT USED
[ ] WATER LEVEL METER
[X] PID ppb ThermoOVM 580B
[X] WQ METER YSI 556
[ ] TURB. METER
[X] PUMP Geopump
[ ] OTHER
[ ] FILTERS NO. NA TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above
	/ RCM						

NOTES
PID = 0.8 ppm
Screen Interval = 7'-11'

SKETCH
See updated Figure/map RCM

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED — YES [ ] NO [X]

NUMBER OF GALLONS GENERATED ~1.1 gal

NO-PURGE METHOD UTILIZED — YES [ ] NO [X]

If yes, purged approximately 1 standing volume prior to sampling or ____NA______mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski

Checked By: Brandon Shaw Date: 02-28-2011.

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

C:\Documents and Settings\RCMANKOWSKI\Desktop\NYSDEC 2010 Revised Forms\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-21	1/20/11
PROJECT NUMBER		**START TIME**	**END TIME**
3612102168/02.02		0927	0948
SAMPLE ID	**SAMPLE TIME**	**SITE NAME/NUMBER**	**PAGE**
828131A-DP2120X	0947	828131A	1 OF 1

SAMPLE TYPE [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY

	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	12.5 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	22.3 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0930	BEGIN PURGING									Pump ON
0940	~	~375	9.05	1.928	7.25	1.00	>1000	-100's	~22'	
0947	Sampling Completed									
				Run						
				1/20/11						

SAMPLE OBSERVATIONS: CLEAR ____ COLORED BROWN CLOUDY ✓ TURBID 5.1 NTU ODOR ~ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [X] GEOPROBE SCREEN PVC
- [ ] TEFLON BLADDER
- [X] OTHER none
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [X] PID ppb ThermoOVM 580B
- [X] WQ METER YSI 556
- [ ] TURB. METER
- [X] PUMP Geopump
- [ ] OTHER
- [ ] FILTERS NO. NA TYPE

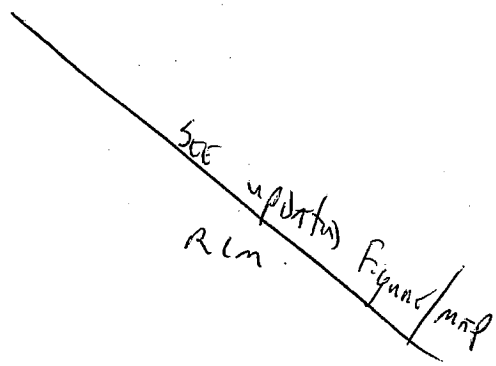
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above

NOTES

PID = 0.2 ppm
Screening Interval = 18'-22'

SKETCH



PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED		X
NO-PURGE METHOD UTILIZED		X

NUMBER OF GALLONS GENERATED: ~1.0 gal

If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: Ryn Mankowski Print Name: Ryn Mankowski

Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

C:\Documents and Settings\RCMANKOWSKI\Desktop\NYSDEC 2010 Revised Forms\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-22	01/17/11
PROJECT NUMBER		START TIME	END TIME
3612102168/02.02		1610	1645
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-DP2207	1642	828131A	1 OF 1

SAMPLE TYPE [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	>7 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	~22' FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~1.5 GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1615	BEGIN PURGING									→ Pump On
1625	Purging									→ Purging
1635		~225	6.64	1.085	7.29	3.23	>1000	-42.6	~11'	
1642	Collected	Sample								
				RCM						
						1/17/11				

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Brownish Black CLOUDY ✓ TURBID Silty ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID ppb ThermoOVM 580B
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[✓] GEOPROBE SCREEN PVC	[X] WQ METER YSI 556
[ ]	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[ ] TURB. METER
[ ] WATTERA	[ ] HEXANE	[X] LDPE TUBING	[X] OTHER none	[X] PUMP Geopump
[ ] OTHER	[ ] METHANOL	[ ] OTHER	[ ] OTHER	[ ] OTHER
[ ] OTHER	[ ] OTHER	[ ] OTHER	[ ] OTHER	[ ] FILTERS NO. NA TYPE

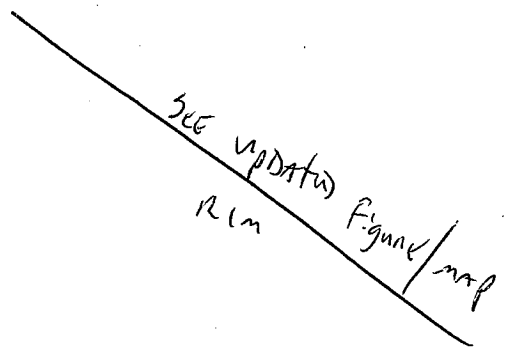
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓		See Above
	/						
	/ BTEX						

NOTES

Screening Interval = 7' to 11' bgs
PID Headspace = 2300 ppb

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED ~1.5
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ____NA____ mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski

Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

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GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-22 / DATE: 01-17-11
PROJECT NUMBER: 3612102168/02.02	START TIME: 1400. / END TIME: 1440
SAMPLE ID: 828131A-DP220X / SAMPLE TIME: 1430	SITE NAME/NUMBER: 828131A / PAGE: 1 OF 1

SAMPLE TYPE: [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY

	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	11.1 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	~22' FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1412	BEGIN PURGING									Pump On
1425	—	300	10.99	2.22	7.30	1.07	>1000	-1.6	~20	
1430	collected GW	Simple					>1000			
			11	2.23	7.3	1.1	>1000	-1.6		Rcn 2/4/11
				Rcn 1/28/11						

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt Brown CLOUDY ____ TURBID Silty ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [X] GEOPROBE SCREEN — PVC
- [ ] TEFLON BLADDER
- [X] OTHER none
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [X] PID ppb ThermoOVM 580B
- [X] WQ METER YSI 556
- [ ] TURB. METER
- [X] PUMP Geopump
- [ ] OTHER
- [ ] FILTERS NO. NA TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above

NA

NOTES

PID headspace: 3200 ppb

Screening interval: 18' to 22' bgs

DTW = 11.1'

SKETCH

Rcn 1/28/11

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED ≈ 1.2 gal
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shand

Checked By: Rcn Date: 1/28/11

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

C:\Documents and Settings\RCMANKOWSKI\Desktop\NYSDEC 2010 Revised Forms\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-23 / DATE: 1/18/11
PROJECT NUMBER: 3612102168/02.02	START TIME: 0950 1035 / END TIME: 1045
SAMPLE ID: 828131A-DP2307X / SAMPLE TIME: 1043	SITE NAME/NUMBER: 828131A / PAGE: 1 OF 1

SAMPLE TYPE [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY

	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	≈7.35 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	≈23' FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1036	BEGIN PURGING →									Pump On
1041	↓	275	9.22	0.748	7.27	2.15	>1000	17.7		
1043	Samples Collected						↓	↓		

RCM 1/18/11

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Grayish CLOUDY ✓ TURBID Silty ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [X] GEOPROBE SCREEN - PVC
- [ ] TEFLON BLADDER
- [X] OTHER none
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [X] PID ppb ThermoOVM 580B
- [X] WQ METER YSI 556
- [ ] TURB. METER
- [X] PUMP Geopump
- [ ] OTHER
- [ ] FILTERS NO. NA TYPE

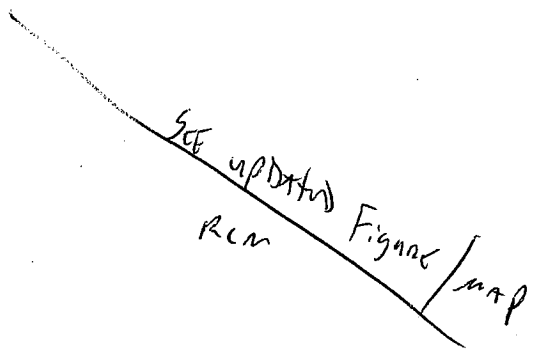
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above

NOTES

PID = 348 ppb
Screening Interval = 7'-11'

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED		X	NUMBER OF GALLONS GENERATED: ≈1.0 gal
NO-PURGE METHOD UTILIZED		X	If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski

Checked By: Brandon Straw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-23	1/18/11
PROJECT NUMBER		**START TIME**	**END TIME**
3612102168/02.02		1010	1035
SAMPLE ID	**SAMPLE TIME**	**SITE NAME/NUMBER**	**PAGE**
SZ8131A-DP2320X	1026	828131A	1 OF 1

SAMPLE TYPE [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	~7.35 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	~23 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	~~16.4~~ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1016	BEGIN PURGING									Pump On
1023		~375	10.48	1.737	7.03	1.65	>1000	17.0	~21'	
1026	Samples Collected									
			RCM							
			1/18/11							

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Grayish ____ CLOUDY ✓ ____ TURBID 5.14 ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

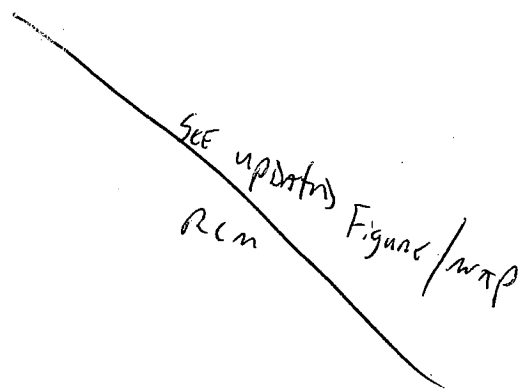
TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID ppb ThermoOVM 580B
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[X] GEOPROBE SCREEN PVC	[X] WQ METER YSI 556
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[ ] TURB. METER
[ ] OTHER	[ ] HEXANE	[X] LDPE TUBING	[X] OTHER none	[X] PUMP Geopump
[ ] OTHER	[ ] METHANOL	[ ] OTHER	[ ] OTHER	[ ] OTHER
	[ ] OTHER	[ ] OTHER	[ ] OTHER	[ ] FILTERS NO. NA TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	←	See Above

NOTES
PID = 16.4 ppm
Screening Interval = 18'-28'

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED ~1.0 gal
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski

Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-24
PROJECT NUMBER: 3612102168/02.02	DATE: 1/18/11
SAMPLE ID: 828131A-DP2407X (Dup)	SAMPLE TIME: 1425
START TIME: 1411	END TIME: 1437
SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY

	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	10.0 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	10.5 FT	SCREEN LENGTH	4' FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1415	BEGIN PURGING →									Pump On
1420	10.0	175	9.82	1.310	7.07	3.97	>1000	17.8	^	
1425	Sampling Collected									
			RCM		1/18/11					

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Brownish CLOUDY ✓ TURBID Silty ODOR none OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER ____
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [X] GEOPROBE SCREEN PVC
- [ ] TEFLON BLADDER
- [X] OTHER none
- [ ] OTHER ____
- [ ] OTHER ____

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [X] PID ppb ThermoOVM 580B
- [X] WQ METER YSI 556
- [ ] TURB. METER ____
- [X] PUMP Geopump
- [ ] OTHER ____
- [ ] FILTERS NO. NA TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	✓	See Above

PAS

NOTES
PID = 1.0 ppm
Screening Interval = 7'-11'

SKETCH
See Updated Figure Map
RCM

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED ~0.5 gal
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski

Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-24	1/18/11
PROJECT NUMBER		**START TIME**	**END TIME**
3612102168/02.02		1352	1410
SAMPLE ID	**SAMPLE TIME**	**SITE NAME/NUMBER**	**PAGE**
828131A-DP24-20K	1400	828131A	1 OF 1

SAMPLE TYPE [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	11.1 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	22 FT	SCREEN LENGTH	4' FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1355	BEGIN PURGING									Pump On
1400	11.1	~375	13.77	1.596	7.03	1.20	>1000	141.9	~21.5	
1400	Sample Collection									
				RCM	1/18/11					

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Brownish CLOUDY ✓ TURBID Slight ODOR none OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [X] GEOPROBE SCREEN PVC
- [ ] TEFLON BLADDER
- [X] OTHER none
- [ ] OTHER ____
- [ ] OTHER ____

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [X] PID ppb ThermoOVM 580B
- [X] WQ METER YSI 556
- [ ] TURB. METER
- [X] PUMP Geopump
- [ ] OTHER ____
- [ ] FILTERS NO. NA TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above

NOTES

PID = 1.9 ppm
Screening Interval = 18' to 22'

SKETCH

See updated Figure/map
RCM

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED ~1.0 gal
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski
Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

C:\Documents and Settings\RCMANKOWSKI\Desktop\NYSDEC 2010 Revised Forms\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-25 / DATE: 1/18/11
PROJECT NUMBER: 3612102168/02.02	START TIME: 1515 / END TIME: 1540
SAMPLE ID: 828131A-DP2507X / SAMPLE TIME: 1535	SITE NAME/NUMBER: 828131A / PAGE: 1 OF 1

SAMPLE TYPE: [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	9.31 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	11.5 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1520	BEGIN PURGING									Pump On
1525	\	220	8.98	0.979	7.29	2.25	>1000	15.3		
1535	Samples Collected									
				RCM						
					1/18/11					

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Brwish CLOUDY ✓ TURBID Silty ODOR — OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID ppb ThermoOVM 580B
[ ] BLADDER ____	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[X] GEOPROBE SCREEN PVC	[X] WQ METER YSI 556
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[ ] TURB. METER ____
[ ] OTHER ____	[ ] HEXANE	[X] LDPE TUBING	[X] OTHER none	[X] PUMP Geopump
[ ] OTHER ____	[ ] METHANOL	[ ] OTHER ____	[ ] OTHER ____	[ ] OTHER ____
	[ ] OTHER ____	[ ] OTHER ____	[ ] OTHER ____	[ ] FILTERS NO. NA TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above
	BTS						

NOTES

PID= ~~0.5ppm~~ RM 1/18/11 → 0.5ppm

Screening Interval: 7'-11'

- Low Spot in Parking Lot
→ pooling water

SKETCH

See updated Figure/map
RCM

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED ~1.2 gal
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ___NA___ mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski

Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	
Off-Site Carriage Cleaners	
PROJECT NUMBER	
3612102168/02.02	
SAMPLE ID	SAMPLE TIME
828131A-DP2520	1511

SAMPLE LOCATION	DATE
DP-25	1/18/11
START TIME	END TIME
1456	1515
SITE NAME/NUMBER	PAGE
828131A	1 OF 1

SAMPLE TYPE [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	15.1 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	~21 FT	SCREEN LENGTH	4' FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1500	BEGIN PURGING									Pump On
1505	~	325	11.36	1.213	7.56	0.91	>1000	10.2	~21	
1511	Sampling Collected									
				RLM	1/18/11					

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Brownish CLOUDY ✓ TURBID Silty ODOR ~ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER ____
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN PVC
- [ ] TEFLON BLADDER
- [X] OTHER none
- [ ] OTHER ____
- [ ] OTHER ____

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [X] PID ppb ThermoOVM 580B
- [X] WQ METER YSI 556
- [ ] TURB. METER ____
- [X] PUMP Geopump
- [ ] OTHER ____
- [ ] FILTERS NO. NA TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	~	See Above
	NA						

NOTES

PID = 0.5ppm
Screening Interval = 16'-22'
-Low Spot in Parking Lot

SKETCH

See updated Figure/map
RLM

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[ ]	[X]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED ~1.0 gal

If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski

Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-26 / DATE: 1/18/11
PROJECT NUMBER: 3612102168/02.02	START TIME: 1621 / END TIME: 1645
SAMPLE ID: 828131A-DPZ607X / SAMPLE TIME	SITE NAME/NUMBER: 828131A / PAGE: 1 OF 1

SAMPLE TYPE: [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	9.95 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	≈10.7 FT	SCREEN LENGTH	4' FT	PID AMBIENT AIR	\ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1626	BEGIN PURGING →									Pump On
1632	~	≈120	10.00	1.889	7.14	1.85	>1000	10.9	≈10'	
1640	Samples Collected									
				Rem	1/18/11					

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Brownish CLOUDY ✓ TURBID Silty ODOR — OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID ppb ThermoOVM 580B
[ ] BLADDER ____	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[X] GEOPROBE SCREEN PVC	[X] WQ METER YSI 556
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[ ] TURB. METER
[ ] OTHER ____	[ ] HEXANE	[X] LDPE TUBING	[X] OTHER none	[X] PUMP Geopump
[ ] OTHER ____	[ ] METHANOL	[ ] OTHER ____	[ ] OTHER ____	[ ] OTHER
	[ ] OTHER ____	[ ] OTHER ____	[ ] OTHER ____	[ ] FILTERS NO. NA TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above

NOTES: PID = 580 ppb
Screening Interval = 7'-11'

SKETCH: See updated Figure/MP

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED: ≈0.5 gal
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski
Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-26 / DATE: 1/18/11
PROJECT NUMBER: 3612102168/02.02	START TIME: 1600 / END TIME: 1620
SAMPLE ID: S28131A-DP-2620X / SAMPLE TIME: 1616	SITE NAME/NUMBER: 828131A / PAGE: 1 OF 1

SAMPLE TYPE: [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	19.3 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	22 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	~ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1605	BEGIN PURGING									Pump On
1612	~	375	12.79	1.694	7.21	2.19	>1000	-6.4	~19'	
1616	Samples Collected									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Tanish ____ CLOUDY ✓ ____ TURBID Silty ____ ODOR — ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID ppb ThermoOVM 580B
[ ] BLADDER ____	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[>] GEOPROBE SCREEN PVC	[X] WQ METER YSI 556
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[ ] TURB. METER ____
[ ] OTHER ____	[ ] HEXANE	[X] LDPE TUBING	[X] OTHER none	[X] PUMP Geopump
[ ] OTHER ____	[ ] METHANOL	[ ] OTHER ____	[ ] OTHER ____	[ ] OTHER ____
	[ ] OTHER ____	[ ] OTHER ____	[ ] OTHER ____	[ ] FILTERS NO. NA TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above

DA 1/18

NOTES

PID = 1.2 ppm
Screening Interval = 18' - 22'

SKETCH

See updated Figure Map

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED ~1.0 gal
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski

Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-27
PROJECT NUMBER: 3612102168/02.02	DATE: 1/19/11
SAMPLE ID: 828131A-DP2707	SAMPLE TIME: 0825
START TIME: 0811	END TIME: 0830
SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY

	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	9.3 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	10.4 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0814	BEGIN PURGING									pump on
0818		↑200	8.25	1.020	7.10	1.15	>1000	-59.8	↓10'	
0825	Samples Collected									
			RCM		1/19/11					

SAMPLE OBSERVATIONS: CLEAR ___ COLORED Brown CLOUDY ✓ TURBID Silty ODOR ___ OTHER (see notes) ___

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID ppb ThermoOVM 580B
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[X] GEOPROBE SCREEN 1"VL	[X] WQ METER YSI 556
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[ ] TURB. METER
[ ] OTHER	[ ] HEXANE	[X] LDPE TUBING	[X] OTHER none	[X] PUMP Geopump
[ ] OTHER	[ ] METHANOL	[ ] OTHER	[ ] OTHER	[ ] OTHER
	[ ] OTHER	[ ] OTHER	[ ] OTHER	[ ] FILTERS NO. NA TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above
	DP						

NOTES
PID = 850 ppb
Screening Interval = 7 - 11'

SKETCH
See updated map / Figure
RCM

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED ≈ 10 gal
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ___NA___ mL for this sample location.

Sampler Signature: Ryan Mankowski Print Name: Ryan Mankowski
Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-27	1/19/11
PROJECT NUMBER		**START TIME** 0755 0720	**END TIME** 0811
3612102168/02.02		**SITE NAME/NUMBER** 828131A 1/19/11	**PAGE** 1 OF 1
SAMPLE ID S25 131A-DP-2720X 0510	**SAMPLE TIME**		

SAMPLE TYPE [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	19.3 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	22.3 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0758	BEGIN PURGING									Pump on
0805	\	~300	8.75	0.948	7.20	1.31	>1000	-77.9	~22'	
0810	Samples Collected									
				RCM						
					1/19/11					

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Brown CLOUDY ✓ TURBID Silty ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID ppb ThermoOVM 580B
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[X] GEOPROBE SCREEN PVC	[X] WQ METER YSI 556
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[ ] TURB. METER
[ ] OTHER	[ ] HEXANE	[X] LDPE TUBING	[X] OTHER none	[X] PUMP Geopump
[ ] OTHER	[ ] METHANOL	[ ] OTHER	[ ] OTHER	[ ] OTHER
	[ ] OTHER	[ ] OTHER	[ ] OTHER	[ ] FILTERS NO. NA TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above

NOTES

PID = 650 ppb

Screening Interval = 18'-22'

SKETCH

See updated Figure/map

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED		X	NUMBER OF GALLONS GENERATED ~10 gal
NO-PURGE METHOD UTILIZED		X	If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski

Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

C:\Documents and Settings\RCMANKOWSKI\Desktop\NYSDEC 2010 Revised Forms\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-28	1/19/11
PROJECT NUMBER		**START TIME**	**END TIME**
3612102168/02.02		1145	1230
SAMPLE ID	**SAMPLE TIME**	**SITE NAME/NUMBER**	**PAGE**
828131A-DP2807X DP2807X Dup	1210	828131A	1 OF 1

SAMPLE TYPE [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	10.7 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	11 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1150	BEGIN PURGING →									Pump On
1157	↓	200					>1000	—	≈10.9	
1210	Samples Collected						↓		↓	

RCM 1/19/11

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Brown CLOUDY ✓ TURBID ✓ Settling ODOR — OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID ppb ThermoOVM 580B
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[X] GEOPROBE SCREEN PVC	[X] WQ METER YSI 556
[ ] ____	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[ ] TURB. METER
[ ] WATTERA	[ ] HEXANE	[X] LDPE TUBING	[X] OTHER none	[X] PUMP Geopump
[ ] OTHER	[ ] METHANOL	[ ] OTHER	[ ] OTHER	[ ] OTHER
[ ] OTHER	[ ] OTHER	[ ] OTHER	[ ] OTHER	[ ] FILTERS NO. NA TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	✓	See Above
	PAHs						

NOTES

PID = DID not get PID Ready
Screening Interval = 7' - 11'
- DID not produce much H_2O
  - Very little water
  - DID not get groundwater Ready

SKETCH

See updated Map/Figure
RCM

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED ≈0.3gal
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ____NA____ mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski

Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-28 / DATE: 1/19/11
PROJECT NUMBER: 3612102168/02.02	START TIME: 1055 / END TIME: 1120
SAMPLE ID: 828131A-DP2820X / SAMPLE TIME: 1115	SITE NAME/NUMBER: 828131A / PAGE: 1 OF 1

SAMPLE TYPE: [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	10.8 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	22 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1100	BEGIN PURGING →									Pump On
1107	\	~350	10.65	1.605	7.17	1.56	21000	-25.2	~21.7	
1115	Samples Collected									
			RCM							
				1/19/11						

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Grayish CLOUDY ✓ TURBID Silty ODOR — OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID ppb ThermoOVM 580B
[ ] BLADDER ____	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[>] GEOPROBE SCREEN PVC	[X] WQ METER YSI 556
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[ ] TURB. METER
[ ] OTHER ____	[ ] HEXANE	[X] LDPE TUBING	[X] OTHER none	[X] PUMP Geopump
[ ] OTHER ____	[ ] METHANOL	[ ] OTHER ____	[ ] OTHER ____	[ ] OTHER
	[ ] OTHER ____	[ ] OTHER ____	[ ] OTHER ____	[ ] FILTERS NO. NA TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above

NOTES

PID = 1.1 ppm
Screening Interval = 18'-22'

SKETCH

See updated Figure/map
RCM

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED ~1.0 gal
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Markowski

Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-29
PROJECT NUMBER: 3612102168/02.02	DATE: 1/19/11
SAMPLE ID: 828131A-DP29-07X (MS/MSD)	SAMPLE TIME: 1515
SITE NAME/NUMBER: 828131A	START TIME: 1457
PAGE: 1 OF 1	END TIME: 1525

SAMPLE TYPE: [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY

	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	6.8 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	10.5 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1500										
1455		BEGIN PURGING								Pump On
1507	—	≈225	5.94	3.535	7.19	1.20	>1000	-61.7	≈10'	
1515	Samples Collected									

RCM 1/19/11

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Brown CLOUDY ✓ TURBID Silty ODOR — OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID ppb ThermoOVM 580B
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[X] GEOPROBE SCREEN PVC	[X] WQ METER YSI 556
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[ ] TURB. METER
[ ] OTHER	[ ] HEXANE	[X] LDPE TUBING	[X] OTHER none	[X] PUMP Geopump
[ ] OTHER	[ ] METHANOL	[ ] OTHER	[ ] OTHER	[ ] OTHER
	[ ] OTHER	[ ] OTHER	[ ] OTHER	[ ] FILTERS NO. NA TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	✓	See Above

NOTES

PID = 550 ppb

Screening Interval = 7'-11'

SKETCH

See updated figure/map RCM

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED ≈ 1.0 gal
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski

Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

C:\Documents and Settings\RCMANKOWSKI\Desktop\NYSDEC 2010 Revised Forms\Figure 4-10 Geoprobe GW Grab,Pore Water.xlsx

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-29 / DATE: 1/19/11
PROJECT NUMBER: 3612102168/02.02	START TIME: 1432 / END TIME: 1455
SAMPLE ID: 828131A-DP2920x / SAMPLE TIME: 1453	SITE NAME/NUMBER: 828131A / PAGE: 1 OF 1

SAMPLE TYPE: [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER ____

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER ____

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER ____

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY

	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	11.4 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	21.6 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	1 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1436	BEGIN PURGING									Pump On
1447		≈375	8.73	1.612	7.75	1.13	>1000	-78.4	≈21'	
1453	Samples Collected									
				RCM						
					1/19/11					

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Brown CLOUDY ✓ TURBID Silty ODOR — OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER ____
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [X] GEOPROBE SCREEN PVC
- [ ] TEFLON BLADDER
- [X] OTHER none
- [ ] OTHER ____
- [ ] OTHER ____

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [X] PID ppb ThermoOVM 580B
- [X] WQ METER YSI 556
- [ ] TURB. METER ____
- [X] PUMP Geopump
- [ ] OTHER ____
- [ ] FILTERS NO. NA TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above

NOTES: PID = 900ppb
Screening Interval = 18'-22'

SKETCH: See updated Figure/map RCM

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED		X	NUMBER OF GALLONS GENERATED: ≈1.0gal
NO-PURGE METHOD UTILIZED		X	If yes, purged approximately 1 standing volume prior to sampling or ___NA___mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski

Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		DP-30	1/20/11
PROJECT NUMBER		START TIME 1211	END TIME 1235
3612102168/02.02		SITE NAME/NUMBER 828131A	PAGE 1 OF 1
SAMPLE ID 828131A-DP3007X	SAMPLE TIME 1220		

SAMPLE TYPE [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	9.1 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	11 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	0.2 GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1212	BEGIN PURGING									→ Pump On
1217	9.1	200	9.85	1.465	7.23	0.70	71000	-73.7	~10'	
1220	Collected GW Sample									
			10	1.47	7.2	0.7	>1000	-73.7		RCM 2/4/11
	BAS									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Brown CLOUDY ✓ TURBID Slty ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [X] GEOPROBE SCREEN PVC
- [ ] TEFLON BLADDER
- [X] OTHER none
- [ ] OTHER
- [ ] OTHER

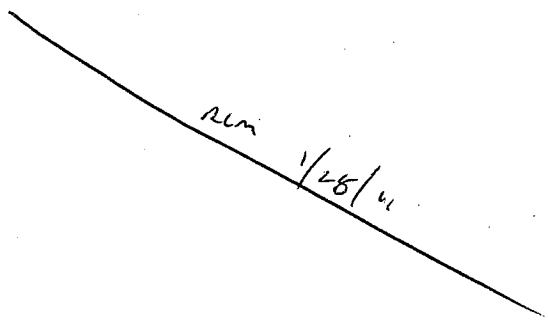
EQUIPMENT USED
- [ ] WATER LEVEL METER
- [X] PID ppb ThermoOVM 580B
- [X] WQ METER YSI 556
- [ ] TURB. METER
- [X] PUMP Geopump
- [ ] OTHER
- [ ] FILTERS NO. NA TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above
	BAS						

NOTES
PID = 1004 ppb
Screening Interval = 7' to 11'

SKETCH



PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[ ]	[X]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED ~0.2 gal

If yes, purged approximately 1 standing volume prior to sampling or ___NA___ mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski

Checked By: RCM Date: 1/28/11

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-30
PROJECT NUMBER: 3612102168/02.02	DATE: 1/20/11
SAMPLE ID: 828131A-DP3020X	SAMPLE TIME: 1135
START TIME: 1115	END TIME: 1140
SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER ____

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER ____

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER ____

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY

	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	9.1 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	22' FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	— GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1124	BEGIN PURGING									Pump On
1133	9.1	350	11.43	1.430	7.24	1.01	71000	-46.2	~21'	
1135	Collected GW sample @ DP-30									
			11	1.43	7.3	1.0	71000	-46.2		RCM 2/4/11

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt grey CLOUDY ✓ TURBID silty ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER ____
- [ ] OTHER ____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [X] GEOPROBE SCREEN PVC
- [ ] TEFLON BLADDER
- [X] OTHER none
- [ ] OTHER ____
- [ ] OTHER ____

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [X] PID ppb ThermoOVM 580B
- [X] WQ METER YSI 556
- [ ] TURB. METER ____
- [X] PUMP Geopump
- [ ] OTHER ____
- [ ] FILTERS NO. NA TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	~	See Above

NOTES

PID = RCM

Screening Interval = 22' to 18' bgs

SKETCH

RCM 1/28/11

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[ ]	[X]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED: ≈ 1 gal

If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski/B Shaw

Checked By: RCM Date: 1/28/11

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-31 / DATE: 01-20-2011
PROJECT NUMBER: 3612102168/02.02	START TIME: 1235 / END TIME: 1255
SAMPLE ID: 828131A-DP3120X / SAMPLE TIME: 1255	SITE NAME/NUMBER: 828131A / PAGE: 1 OF 1

SAMPLE TYPE: [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY

	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	13.1 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	22 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	0.1 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.000026 gal/mL)	~ GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1244	BEGIN PURGING									
1253	13.1	350	11.14	1.558	7.13	1.04	>1000	-40.2	22	
1255	Collected gw sample @ DP-31									
			11	1.56	7.1	1.0	>1000	-40.2		RCM 2/4/11
	BA									

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Lt grey/Brown CLOUDY ____ TURBID X ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID ppb ThermoOVM 580B
[ ] BLADDER ____	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[ ] GEOPROBE SCREEN	[X] WQ METER YSI 556
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[X] TURB. METER Dine
[ ] OTHER ____	[ ] HEXANE	[X] LDPE TUBING	[X] OTHER none	[X] PUMP Geopump
[ ] OTHER ____	[ ] METHANOL	[ ] OTHER ____	[ ] OTHER ____	[ ] OTHER
	[ ] OTHER	[ ] OTHER ____	[ ] OTHER ____	[ ] FILTERS NO. NA TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓		See Above
	BA						

NOTES

PID: 0.7 ppm
Screening interval: 18' to 22' bgs

SKETCH

RCM 1/28/11

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED: 1
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: ____ Print Name: Brandon Shaw

Checked By: RCM Date: 1/28/11

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: DP-32 / DATE: 01-20-11
PROJECT NUMBER: 3612102168/02.02	START TIME: 1400 / END TIME: 1450
SAMPLE ID: 828131A-DP-3215X / SAMPLE TIME: 1440	SITE NAME/NUMBER: 828131A / PAGE: 1 OF 1

SAMPLE TYPE [X] GRAB [ ] WELL/PIEZOMETER [X] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [ ] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [X] OTHER None

WELL INTEGRITY

	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	9.5 FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	15 FT	SCREEN LENGTH	4 FT	PID AMBIENT AIR	PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1428	BEGIN PURGING									
1439	9.5	350	10.51	0.411	7.83	1.14	>1000	-37.4	15'	
1440	Collected grab Sample									
			11	0.411	7.8	1.1	>1000	-37.4		RCM 2/4/11

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Greyish brown CLOUDY ____ TURBID Silty ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID ppb ThermoOVM 580B
[ ] BLADDER ____	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[ ] GEOPROBE SCREEN	[X] WQ METER YSI 556
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[ ] TURB. METER ____
[ ] OTHER ____	[ ] HEXANE	[X] LDPE TUBING	[X] OTHER none	[X] PUMP Geopump
[ ] OTHER ____	[ ] METHANOL	[ ] OTHER ____	[ ] OTHER ____	[ ] OTHER
	[ ] OTHER ____	[ ] OTHER ____	[ ] OTHER ____	[ ] FILTERS NO. NA TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above
	DA 1/28/11						

NOTES

PID: 3.9 DP=

Screen: 11 to 15'

SKETCH

RCM 1/28/11

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED: 43
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: Brandon Slaw Print Name: Brandon Slaw

Checked By: RCM Date: 1/28/11

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

JOB NUMBER: 3612102168-02.1

PROJECT: NYSDEC Off Site Carriage Cleaners

FIELD SAMPLE NUMBER: 828131A-DP3325X

SITE ID: 828131A/ DP/PZ-33 / Dolomite Group Property

SITE TYPE: WELL

DATE: 7/13/11

ACTIVITY: START 1350 END 1430

SAMPLE TIME: 1415

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING

INITIAL DEPTH TO WATER: 9.68 FT

FINAL DEPTH TO WATER: 8.02 FT

DRAWDOWN VOLUME: .00288 GAL
(initial - final x 0.16 {2-inch} or x 0.65 {4-inch})

TOTAL VOL. PURGED: 5-6 GAL
(purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)

WELL DEPTH (TOR): ≈28' FT

SCREEN LENGTH: 5 FT

RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME PURGED: .00048

PROTECTIVE CASING STICKUP (FROM GROUND): NA FT

PID AMBIENT AIR: 0.8 PPM

PID WELL MOUTH: 0.8 PPM

PRESSURE TO PUMP: — PSI

REFILL SETTING: —

CASING / WELL DIFFER.: NA FT

WELL DIAM.: 1 IN

WELL INTERGRITY: YES NO N/A
- CAP: Temporary
- CASING: —
- LOCKED COLLAR: Piezometer

DISCHARGE SETTING: —

PURGE DATA

TIME	DEPTH TO WATER (ft)	PURGE RATE (ml/m)	TEMP. (deg. c)	SPECIFIC CONDUCTANCE (mS/cm)	pH (units)	DISS. O2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	COMMENTS
1330	Purged ≈ 3 gallons	Prior to collected	low flow parameters						
1340	8.23	200	14.3	1.258	7.2	0.23	>1000	-110	
1345	8.16	↓	14.5	1.257	7.2	0.14	>1000	-122	
1352	8.10	200	14.6	1.254	7.2	0.12	>1000	-135	
1400	8.05	↓	14.4	1.253	7.2	0.10	>1000	-138	
1405	8.03	↓	14.5	1.252	7.2	0.09	>1000	-141	
1410	8.02	200	14.6	1.250	7.2	0.10	>1000	-137	
1415	Sample Time								
	828131A-DP3325X								

RCM

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] GEOPUMP (peristaltic)
- [ ] QED BLADDER

TYPE OF TUBING
- [ ] HIGH DENSITY POLYETHYLENE
- [X] OTHER LDPE

TYPE OF PUMP MATERIAL
- [ ] STAINLESS STEEL
- [ ] OTHER ______

TYPE OF BLADDER MATERIAL
- [ ] TEFLON
- [ ] OTHER ______

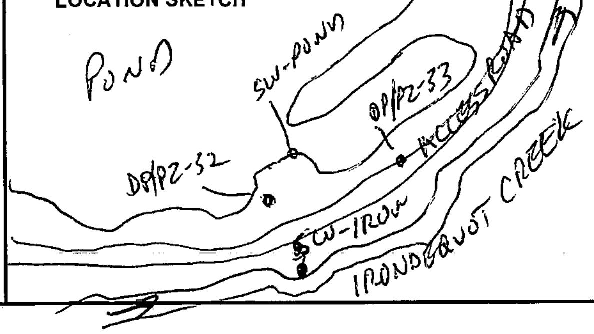
ANALYTICAL PARAMETERS

	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED
[X] VOC	USEPA-8260B	HCL / 4 DEG. C	3 X 40 ML	[X]

NOTES:

Checked by: RCM 7/18/11

LOCATION SKETCH



SIGNATURE: [signature]

MACTEC

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

JOB NUMBER: 3612102168-02.1

PROJECT: NYSDEC Off Site Carriage Cleaners (Rev)
FIELD SAMPLE NUMBER: 828131A-DP3225X
SITE ID: 828131A / DP/PZ-32 (34) / Dolomite Corp Property
SITE TYPE: WELL
DATE: 7/13/11
ACTIVITY: START 1200 END 1240
SAMPLE TIME: 1235

WATER LEVEL / PUMP SETTINGS

INITIAL DEPTH TO WATER: 5.79 FT
FINAL DEPTH TO WATER: 5.86 FT
DRAWDOWN VOLUME: .002 GAL
(initial - final x 0.16 {2-inch} or x 0.65 {4-inch})
TOTAL VOL. PURGED: ≈5 GAL
(purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING

WELL DEPTH (TOR): 29.4 FT
SCREEN LENGTH: 5 FT
RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME PURGED: .0004

PROTECTIVE CASING STICKUP (FROM GROUND): 0.5 FT
PID AMBIENT AIR: 0 PPM
PID WELL MOUTH: 0 PPM
PRESSURE TO PUMP: — PSI
REFILL SETTING: —

CASING / WELL DIFFER.: NA FT
WELL DIAM.: 1" IN
DISCHARGE SETTING: —

WELL INTERGRITY:

	YES	NO	N/A
CAP			
CASING	Temporary		
LOCKED COLLAR		Piezometer	

PURGE DATA

TIME	DEPTH TO WATER (ft)	PURGE RATE (ml/m)	TEMP. (deg. c)	SPECIFIC CONDUCTANCE (mS/cm)	pH (units)	DISS. O2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	COMMENTS
	Purged ≈ 3 gallons prior to collecting Low Flow Parameters →								
1205	5.91	250	15.4	1.202	7.1	0.48	>1000	14	
1211	5.90	↓	15.3	1.194	7.1	0.40	>1000	-34	
1216	5.89	↓	14.9	1.186	7.2	0.40	>1000	-67	
1220	5.89	250	14.7	1.182	7.2	0.30	—	-85	
1225	5.89	↓	14.5	1.181	7.2	0.29	>1000	-102	
1233	5.86	↓	14.3	1.175	7.2	0.26	>1000	-126	
1235	Sample time								
		828131A-DP3225X							

RCA

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [x] GEOPUMP (peristaltic)
- [ ] QED BLADDER

TYPE OF TUBING
- [ ] HIGH DENSITY POLYETHYLENE
- [x] OTHER LDPE

TYPE OF PUMP MATERIAL
- [ ] STAINLESS STEEL
- [ ] OTHER

TYPE OF BLADDER MATERIAL
- [ ] TEFLON
- [ ] OTHER

ANALYTICAL PARAMETERS

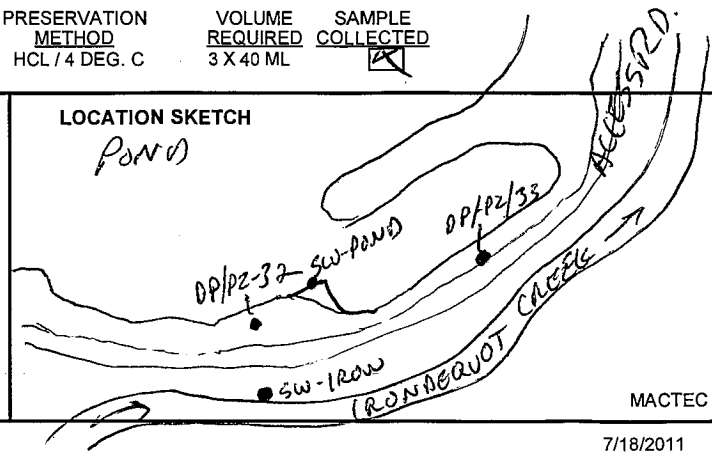
	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED
[x] VOC	USEPA-8260B	HCL / 4 DEG. C	3 X 40 ML	[x]

NOTES: Temporary piezometer DP/PZ/MW-32
Location ID = DP-34

checked by: RCA 7/18/11

SIGNATURE: Jerry Raab

LOCATION SKETCH



MACTEC

APPENDIX C-2

SOIL BORING LOGS

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: [redacted] OFF-SITE CARRIAGE CLEANERS			Boring ID: MW-11
Project Location: [redacted] Penfield, NY			Page No. 1
Project No.: 3612[redacted]102168	Client: NYSDEC		of: 2
Boring Location: Penn Lane Condo's	Refusal Depth: 61.4	Total Depth: 61.4	Bore Hole ID/OD: 8"
Weather: Partly cloudy 40's humid	Soil Drilled: 61.4	Method: HSA	Casing Size: 4 1/4" ID HSA
Subcontractor: Geologic NY	P.I.D (eV): 10.0	Protection Level: D	Sampler: Split Spoon
Driller: Dave Lyons	Date Started: 7/11/11	Date Completed: 7/12/11	Sampler ID/OD: 1.5"/2"
Rig Type/Model: ATV Mounted CME-45	Logged By: J. Rawcliffe	Checked By: RCR 7/18/11	Hammer Wt/Fall: 140/30"
Reference Elevation: 267.67' ground	Water Level: ≈7.4' BGS	Time: 7/11/11 1315	Hammer Type: Auto Hammer

Sample Information					Monitoring						
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	SPT Blows/6"	N Value	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0.0									0-≈1.0 Dark brown to very dark brown loamy topsoil	FILL	PID=0 ppm
									1-3.5 Brown to light brown fine to medium sand and silt (Fill).		
									3.5-6 Wood, brick, concrete in fine sand with a little medium to coarse sand and gravel, trace silt (Fill)	FILL	Fill to ≈6.5-7' BGS PID=0 ppm GWat 7.4' BGS
7									6' Encountered something hard (concrete/rock?) Broke through at ≈6.5' becomes soft - drilling smooth		
									Augers at 5' Drill cuttings brown to light brown fine sand with some to a little silt wet.	SM	Brown fine sand and silt wet. (SM) PID=0 ppm
15									15-20' Cuttings similar to 10-15 but with some to a little medium to coarse sand and gravel. Becoming grayish brown.		PID=0
20											
25	S1	24-24 2.0/0.3	5/3/3/8	6	0	—	1900 TOC		Piece of brick came in plugged end of spoon very little recovery. No sample collected Grayish brown fine to medium sand with a little coarse sand and gravel.		PID=0
30	S2	2.0/1.8	4/6/5/6	11	0	—	1930 TOC		Starting to get sand coming into augers can't really get a sample of native material below augers		PID=0 7/11/11
	29 1 37								Gray to grayish brown fine to coarse sand with a little gravel and a trace of silt wet, massive.		7/12/11
35	S3	0500 2.0/0.9	9/2/2/3	4	0	—	NA		Gray to grayish brown fine to coarse sand with a little gravel. Wet massive.		PID=0
	34 1 36										

NOTES: ≈6' from DP-10

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: [redacted] OFF-SITE CARRIAGE CLEANERS			Boring ID: MW-11
Project Location: [redacted] Penfield, NY			Page No. 2
Project No.: 3612[redacted]102168	Client: NYSDEC		of: 2
Boring Location: Pennhaven Condo's	Refusal Depth: 61.4	Total Depth: 61.4	Bore Hole ID/(OD) 8"
Weather: Partly cloudy 80-90°, humid	Soil Drilled: 61.4	Method: HSA	Casing Size: 4 1/4" ID
Subcontractor: Geologic, NY	P.I.D (eV): 10.0	Protection Level: D	Sampler: Split Spoon
Driller: Dave Lyons	Date Started: 7/11/11	Date Completed: 7/12/11	Sampler ID/OD: 1.5"/2"
Rig Type/Model: ATV mounted CME 45	Logged By: J. Rawcliffe	Checked By: RCM 7/18/11	Hammer Wt/Fall: 140/30"
Reference Elevation: 267.67' ground	Water Level: ≈7.4' BGS	Time: 7/11/11 1315	Hammer Type: Auto hammer

Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	SPT Blows/6"	N Value	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0.0											
40	S4 S9 1 41	0820 2.0 0.9	3 3 4 4	7	0	—	NA	NA	Gray to grayish brown fine to coarse sand and gravel. Wet, massive	SW/GW	PID = 0
45	S5 S9 1 46	0845 2.0 1.5	20 12 16 17	28	0	—	NA	NA	Gray to slightly reddish brown gray fine to coarse sand and gravel slight trace of silt. Wet massive, dense. Had ≈4' of blow in that took a while to clean out with split spoons.	GW/SW	PID = 0
50	S6 S9 1 51	0945 2.0 1.0	3 4 5 9	9	0	—	NA	NA	Gray fine to coarse sand with a little gravel and a slight trace of silt. Wet, massive.	SW	PID = 0
55	S7 S4 1 56	1025 2.0 1.1	3 6 8 8	9	0	—	NA	NA	Gray fine to coarse sand with a little gravel and a slight trace of silt. Wet. massive	SW	PID = 0
60	S8 59.5 1 61.4	1050 1.9 1.7	14 10 8 50/0.4	18	0	—	NA	NA	Gray with some slight reddish brown gray material. Fine to coarse sand with a little gravel slight trace of silt. Wet, Refusal with split spoon at 61.4' - likely on gravel or cobble. (No clay in shoe of spoon)	SW	PID = 0 Refusal with spoon at 61.4' BGS
									Auger to 59.5' BGS Split Spoon to 61.4' BGS Bottom of Boring = 61.4' BGS		

NOTES: ≈6' from DP-10

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: [redacted] OFF-SITE CARRIAGE CLEANERS			Boring ID: MW-12
Project Location: [redacted] Penfield, NY			Page No. 1
Project No.: 3612[redacted]102168	Client: NYSDEC		of: 2
Boring Location: Genesee Conservation Inc.	Refusal Depth: NA	Total Depth: 61'	Bore Hole ID/OD: 8"
Weather: Mostly sunny 70-80 hazy	Soil Drilled: 61'	Method: HSA	Casing Size: 8"
Subcontractor: Geologic, NY	P.I.D (eV): 10.0	Protection Level: Mod D	Sampler: Split Spoon
Driller: Dave Ingous	Date Started: 7/13/11	Date Completed: 7/13/11	Sampler ID/OD: 1.5"/2"
Rig Type/Model: ATV Mounted CME-45	Logged By: J. Rawcliffe	Checked By: RCA 7/18/11	Hammer Wt/Fall: 140/30
Reference Elevation: 264.31' grnd	Water Level: 5.27' TOR	Time: 7/15/11 0800	Hammer Type: Autohammer

Sample Information					Monitoring						
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	SPT Blows/6"	N Value	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0.0									Augers to 20' before collecting samples for stratigraphy see log of DP-23 logging cuttings only 0-20 at MW-11		
									0-4' Brown to light brown fine to coarse sand and gravel with traces of silt. moist.		PID=0
									4-8' Brown fine sand with some silt moist to wet.		PID=0
									8-10 Grey fine sand and silt wet.		
									10-15 Dark brown to grey fine sand and silt. Wet.		
									15-20 Grey fine to medium sand with a little coarse sand		
20		1655									
20	S1	2.0	3/3/2/2	6	0	-	TOC		Grey to dark grey fine to medium sand with traces of coarse sand and fine gravel. Wet, massive.		Runny sands
22	22	1.3									
24		1715									
26	S2	2.0	4/4/6/6	10	0	—	—	—	Grey to dark grey fine sand with some medium sand. Wet.		
25	27	0.4									
28											
30		1740									
30	S3	2.0	3/6/9/12	15	0	-	-	-	Grey to dark grey fine sand with some medium sand and traces of coarse sand and fine gravel (well rounded). Wet, massive.		Runny Sands
32	32	1.8									
34		1835									
36	S4	2.0	2/3/6/11	9	0	-	-	-	Grey to dark grey fine to coarse sand with some gravel and slight trace of silt Wet, massive.		
35	37	1.3									

NOTES: MW-12 ≈ 8' from DP-23

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Boring Location: Genesee Conservation League	Project Name: B[redacted] OFF-SITE CARRIAGE CLEANERS		Boring ID: MW-12
Weather: Mostly Sunny 70-80°, calm	Project Location: G[redacted] Penfield, NY		Page No. 2 of: 2
Subcontractor: Geologic, NY	Project No.: 3612[redacted]102168	Client: NYSDEC	Bore Hole ID/OD: 8"
Driller: Dave Lyons	Refusal Depth: NA	Total Depth: 61'	Casing Size: 4 1/4" ID
Rig Type/Model: ATV Mounted CME-45	Soil Drilled: 61'	Method: HSA	Sampler: Split Spoon
Reference Elevation: 264.31' ground	P.I.D (eV): 10.0	Protection Level: Mod D.	Sampler ID/OD: 1.5"/2"
	Date Started: 7/13/11	Date Completed: 7/13/11	Hammer Wt/Fall: 140/30
	Logged By: J. Rawcliffe	Checked By: RCM 7/18/11	Hammer Type: Autohammer
	Water Level: 5.27' TOR	Time: 7/15/11 0800	

Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	SPT Blows/6"	N Value	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
40	S5 40-42	0750 2.0/1.4	8/6/5/8	11	0	—	—	—	Gray to dark gray fine to coarse sand with some gravel (well rounded). Wet, well graded (not uniform), massive. Possible trace of silt.	SW/GW	Glaciofluvial. Still having trouble with sand in augers.
44											
46	S6 45-47	0830 2.0/0.7	3/4/4/5	8	0	—	—	—	Gray to dark gray medium to coarse sand with some gravel and fine sand. Wet massive, gravel is well rounded, well graded.	SW/GW	
48											
50	S7 50-52	0850 2.0/1.1	3/5/5/7	10	*1.4	—	—	—	Gray to dark gray medium to coarse sand with gravel and a little fine sand. Bottom 0.4 is very coarse (c sand + gravel). Wet, generally massive (coarser w depth) well rounded. some large pieces of gravel.	GW/SW	*Background has crept up from 0 to 2ppm±
54											
56	S8 55-57	0930 2.0/1.3	8/11/17/25	28	*0.7	—	—	—	Gray to dark gray to reddish gray fine to coarse sand and gravel with traces of silt. Wet, some fine (a grey reddish material). otherwise massive. well graded. Overdrilled to 61' and pulled back to clear augers.		
58											
60											
61									Bottom of boring = 61' BGS. No refusal.		

NOTES: MW-12 ≈ 8' from DP-23

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name:	Off-Site Carriage Cleaners		Boring ID: DP-06
Project Location:	Penfield, New York		Page No. 1
Project No.:	3612102168	Client: NYSDEC	of: 4
Boring Location:	Not site	Refusal Depth: NA.	Total Depth: 28
Weather:	42°F, sunny.	Soil Drilled: 28	Method: Direct Push
Subcontractor:	Nothnagle	P.I.D (eV): 10.8	Protection Level: D
Driller:	Jeff S.	Date Started: 11-16-2010	Date Completed: 11-16-2010
Rig Type/Model:	66 DT	Logged By: BAS	Checked By: BSS 11/24/10
Reference Elevation:	268.26	Water Level: 7.45 bgs	Time: — BSS

Sample Information			Monitoring							
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0.0									
1			Low				0-1 Brown silty loam; poorly graded; wet, NP, stiff, some grass roots	Fill	
2		1.3/4.0					1-4 Brown to olive Brown SILTY SAND with some course sand to fine gravel; well graded, Damp, SP, MDense		
3									
4									
5							4-8 Brown to grejish brown fine SAND with some SILT and fine gravel; well graded, damp to moist, mDense, NP to SP;	SM/SW.	
6		1.1/4.0	130 ppb						
7									
8									

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-06
Project Location: Penfield, New York			Page No. 2
Project No.: 3612102168	Client: NYSDEC		of: 4
Boring Location: East of site	Refusal Depth: NA	Total Depth: 28	Bore Hole ID/OD: ~2"
Weather: 42°F, sunny.	Soil Drilled: 28	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: BAS
Driller: Jeff Se	Date Started: 11-16-2010	Date Completed: 11-16-2010	Sampler ID/OD: —
Rig Type/Model: 6610 DT	Logged By: BAS	Checked By: BJS 11/24/10	Hammer Wt/Fall: —
Reference Elevation: 268.26	Water Level: 7.45 bgs	Time: — BJS	Hammer Type: —

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
9			Lo	.1			9-12 Dk grey SILT SAND with trace fine gravel, wet, well graded, NP to SP; Mdense; gravel is rounded to well rounded	SM/SW	
10		1.0/4.0							
11									
12									
13			Lo	.1			12-13 Lt olive brown coarse to fine SAND, poorly graded, saturated, loose	SP	
							13-14.5 Olive brown SILTY SAND, poorly graded, saturated, loose, SP	SM	
14		3.2/4.0					14.5-16 Brown SANDY GRAVEL / GRAVELLY SAND; little fines, saturated, m dense NP;	SW	
15									
16									

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name:	Off-Site Carriage Cleaners		Boring ID: DP-06
Project Location:	Penfield, New York		Page No. 3
Project No.:	3612102168	Client: NYSDEC	of: 4
Boring Location:	SW of site	Refusal Depth: NA.	Total Depth: 28
Weather:	42F, Sunny.	Soil Drilled: 28	Method: Direct Push
Subcontractor:	Nothnagle	P.I.D (eV): 10.8	Protection Level: D
Driller:	Jeff S.	Date Started: 11-16-10	Date Completed: 11-16-2010
Rig Type/Model:	6610 DT	Logged By: BAS	Checked By: BJS 11/24/10
Reference Elevation:	268.26	Water Level: 7.45 ft/s	Time: — BJS

Bore Hole ID/OD:	-2"
Casing Size:	NA
Sampler:	BAS
Sampler ID/OD:	—
Hammer Wt/Fall:	—
Hammer Type:	—

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
17		3.0/4.0	0.1				16-20 Lt Brown to grey/Bl brown SANDY GRAVEL with some SILT, Saturated, well graded, NP, MDense	SW	
18									
19									
1									
20									
21		3.2/4.0	0.1				20-20.5 same as 16-20 20.5-24 Ltgrey to grey MCoarse SAND with some SILT, poorly graded, Saturated, NP, MDense to loose,	SP/SM	
22									
23									
24									

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-06
Project Location: Penfield, New York			Page No. 4
Project No.: 3612102168	Client: NYSDEC		of: 4
Boring Location: SW of site	Refusal Depth: NA	Total Depth: 28	Bore Hole ID/OD: ~2"
Weather: 42°F, sunny.	Soil Drilled: 28	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: BAS
Driller: Jeff Sr	Date Started: 11-16-2010	Date Completed: 11-16-2010	Sampler ID/OD: —
Rig Type/Model: 6610 DT	Logged By: BAS	Checked By: BSS — 11/24/10	Hammer Wt/Fall: —
Reference Elevation: 268.26	Water Level: 7.45 bgs	Time: NA — BSS	Hammer Type: →

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
25		3.3/4.0	0.1				24-28 Brown mcoarse SAND with trace fines; clean fine SAND @ 24.5 lense, more fine sand from 27-28; poorly graded, saturated, NP, mDense.	SP	
26									
27									
28									

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-10
Project Location: Penfield, New York			Page No. 1
Project No.: 3612102168	Client: NYSDEC		of: 4
Boring Location: West of Site	Refusal Depth: NA	Total Depth: 28	Bore Hole ID/OD: ~2"
Weather: 50°F, raining	Soil Drilled: 28	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: BAS
Driller: Jeff Sr.	Date Started: 11-17-2010	Date Completed: 11-17-10	Sampler ID/OD: —
Rig Type/Model: 6610 DT	Logged By: BAS	Checked By: BJS 11/24/10	Hammer Wt/Fall: —
Reference Elevation: 267.57	Water Level: 6.7 bgs	Time: — BJS	Hammer Type: —

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
1		0.9/4.0	0.1				0-4 Brown silty loam FILL Saturated, brick pad @ ~4'; wood fragments, wet,	FILL	
2									
3									
4									
5		1.1/4.0	0.1				4-7 wood fragments and pieces of concrete 7-8 4 brown clean fine SAND, poorly graded, damp, moderse, SP, little fines	FILL SP	
6									
7									
8									

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name:	Off-Site Carriage Cleaners	Boring ID:	DP-10
Project Location:	Penfield, New York	Page No.	2
Project No.:	3612102168 Client: NYSDEC	of:	4
Boring Location:	West of site	Refusal Depth:	NA Total Depth: 28
Weather:	50'F, raining	Soil Drilled:	28 Method: Direct Push
Subcontractor:	Nothnagle	P.I.D (eV):	10.8 Protection Level: D
Driller:	Jeff, Sr.	Date Started:	11-17-2010 Date Completed: 11-17-10
Rig Type/Model:	6610 DT	Logged By:	BAS Checked By: BJS 1/24/10
Reference Elevation:	267.57	Water Level:	6.7 bgs Time: — BJS
Bore Hole ID/OD:	-2"		
Casing Size:	NA		
Sampler:	BAS		
Sampler ID/OD:	—		
Hammer Wt/Fall:	—		
Hammer Type:	—		

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
9		3.5 / 4.0	2.1				8-9 Brown clean fine SAND with some silt, saturated, NP|SP, poorly graded; 9-10 Brown to Reddish Brown to light grey, m coarse SAND, little SILT, poorly graded, wet, SP - tree root @ ~10.2'	SP	
10								SP	
11			50 ppb				10-12 grey to DK grey coarse SAND with some fine GRAVEL and trace SILT, well graded, SP to NP, wet, some saturated zones @ ~11.5	SW	
12			60 ppb						
13		2.0 / 4.0	110 ppb				12-14 Grey GRAVELLY SAND, with little SILT, well graded, saturated, m Dense SP to NP;	GW	
14			2200 ppb				14-16 grey clean coarse|m coarse SAND, loose poorly graded, NP, saturated, trace well rounded gravel (fine)	SP	
15			330 ppb						
16			500 ppb						

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name:	Off-Site Carriage Cleaners		Boring ID: DP-10
Project Location:	Penfield, New York		Page No. 3
Project No.:	3612102168	Client: NYSDEC	of: 4
Boring Location:	West of site	Refusal Depth: NA	Total Depth: 28
Weather:	50'F, raining	Soil Drilled: 28	Method: Direct Push
Subcontractor:	Nothnagle	P.I.D (eV): 10.8	Protection Level: D
Driller:	Jeff S.	Date Started: 11-17-2010	Date Completed: 11-17-2010
Rig Type/Model:	66 10 DT	Logged By: BAS	Checked By: BJS 11/24/10
Reference Elevation:	267.57	Water Level: 6.7 bgs	Time: — BJS
			Bore Hole ID/OD: -2"
			Casing Size: NA
			Sampler: BAS
			Sampler ID/OD: —
			Hammer Wt/Fall: — BJS
			Hammer Type: — BJS

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
17		2.9/4.0	150 ppb				16-18 DK grey to olive mcoarse SAND with some fine gravel and little SILT, saturated, well graded, NP, MDense	SW	
18			220 ppb				18-19 Grey/BL olive GRAVELLY SAND, well graded, saturated, NP, MDense		
19			450 ppb				19-20 olive grey Mcoarse SAND, little fine gravel to coarse SAND, Saturated, poorly graded, NP, MDense to Loose	SW/SP	
20			570 ppb					SP	
21			1200 ppb				20-24 Brown Mcoarse to coarse SAND with some fine gravel, poorly graded, saturated, NP, loose to MDense	SP	
22		2.6/4.0	3000 ppb						
23			4300 ppb						
24			3000 ppb						
			1900						
			6000						
			7000						
			10.1 ppm						
			8900						
			10.1 ppm						

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name:	Off-Site Carriage Cleaners		Boring ID: DP-10
Project Location:	Penfield, New York		Page No. 4
Project No.:	3612102168	Client: NYSDEC	of: 4
Boring Location:	West of site	Refusal Depth: NA	Total Depth: 28
Weather:	50°F, raining	Soil Drilled: 28	Method: Direct Push
Subcontractor:	Nothnagle	P.I.D (eV): 10.8	Protection Level: D
Driller:	Jeff Sr	Date Started: 11-17-2010	Date Completed: 11-17-10
Rig Type/Model:	6610DT	Logged By: BAS	Checked By: BJS 11/24/10
Reference Elevation:	267.57	Water Level: 6.7 bgs	Time: — BJS

Sample Information			Monitoring							
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
24		2.2/4.0	6000 ppb				24-28 Brown/grey Medium SAND with some coarse SAND and fine gravel, poorly graded, saturated loose to medium, NP.	SP	
26			5000 ppb						
28			12.5 ppm						
			5700 ppb						
			4200 ppb						
							BAS		

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name:	Off-Site Carriage Cleaners		Boring ID: DP-12
Project Location:	Penfield, New York		Page No. 1
Project No.:	3612102168	Client: NYSDEC	of: 4
Boring Location:	NW of Site	Refusal Depth: NA	Total Depth: 28	Bore Hole ID/OD: 2
Weather:	52°F, raining	Soil Drilled: 28	Method: Direct Push	Casing Size: NA
Subcontractor:	Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: BAS
Driller:	Jeff S.	Date Started: 11-17-10	Date Completed: 11-17-10	Sampler ID/OD: —
Rig Type/Model:	Geoprobe	Logged By: BAS	Checked By: BJS 11/24/10	Hammer Wt/Fall: —
Reference Elevation:	267.18	Water Level: 6.5 bgs	Time: BJS	Hammer Type: —

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
1		3.1 / 4.0	0.1				0-0.8 DK Brown silty loam fill. 0.8-1.5 Lt yellowish Brown fine SAND poorly graded, moderse, damp; SP 1.5-4 Reddish Brown to Brown clean fine SAND, damp, poorly graded, SP, little silt	Fill SP	
2									
3									
4									
5		3.9 / 4.0	0.1				4-5 same as 1.5-4 5-7 Lt Brown to Reddish Brown SILTY SAND, poorly graded, SP/SP, damp to moist, moderse to Dense, well drained - stratified 5-7 Lt greyish brown silty sand, poorly graded, damp to dry; Dense/stiff, MP	SP SM	
6									
7									
8									

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-12
Project Location: Penfield, New York			Page No. 2
Project No.: 3612102168	Client: NYSDEC		of: 4
Boring Location: NW of Site	Refusal Depth: NA	Total Depth: 28	Bore Hole ID/OD: ~2"
Weather: 52°F, raining	Soil Drilled: 28	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: BAS
Driller: Jeffs	Date Started: 11-17-10	Date Completed: 11-17-10	Sampler ID/OD: —
Rig Type/Model: Geoprobe	Logged By: BAS	Checked By: BJS 11/24/10	Hammer Wt/Fall: —
Reference Elevation: 267.18	Water Level: 6.15 bgs	Time: — BJS	Hammer Type: —

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
9		3.8/4.0	40.1				9-10.5 Reddish brown clean fine sand poorly graded, SP, damp, m Dense, some fines	SM	
10			70.1	ppb			10.5-11.5 Lt Brown to Reddish brown SILTY SAND; lenses of SILT @ ~11 and 11.7 (~0.1'), NP, wet, poorly graded,		
11							11.5-12 DK olive grey clean fine to m coarse sand, poorly graded, trace coarse sand, NP/SP, wet,	SM	
12			20	ppb				SP	
13		2.8/4.0	30	ppb			12-14.5 DK grey m coarse SAND, some coarse SAND, saturated, poorly graded, NP/SP, m dense	SP	
14			50	ppb			14.5-16 Grey m coarse to coarse SAND and fine GRAVEL, poorly graded, saturated, NP, loose to m Dense		
15			15	ppb				SP	
16									

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-12
Project Location: Penfield, New York			Page No. 3
Project No.: 3612102168	Client: NYSDEC		of: 4
Boring Location: NW of site	Refusal Depth: NA	Total Depth: 28	Bore Hole ID/OD: ~2"
Weather: 52°F, raining	Soil Drilled: 28	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: BAS
Driller: Jeff S.	Date Started: 11-17-10	Date Completed: 11-17-10	Sampler ID/OD: —
Rig Type/Model: Geo DT	Logged By: BAS	Checked By: BJS 11/24/10	Hammer Wt/Fall: —
Reference Elevation: 267.18	Water Level: 6.5 bgs	Time: — BJS	Hammer Type: —

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
17		2.0 / 4.0	(*)				16-19 Reddish/tan Brown SANDY GRAVEL with some fines, well graded saturated, NP, medium dense to loose 19-20 Brown/greyish Brown fine Sand, poorly graded, saturated, NP, medium	GW/GP SP	
21		3.2 / 4.0	(*)				20-22 Same as 19-20 22-24 greyish Brown clean Mcoarse Sand, poorly graded, saturated NP, medium dense	SP SP	

NOTES:
(*) PID not working

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name:	Off-Site Carriage Cleaners	Boring ID:	DP-12
Project Location:	Penfield, New York	Page No.	1
Project No.:	3612102168 Client: NYSDEC	of:	1
Boring Location:	NW of Site	Refusal Depth:	NA
Weather:	50°F, raining	Soil Drilled:	28
Subcontractor:	Nothnagle	P.I.D (eV):	10.8
Driller:	Jeff S	Date Started:	11-17-10
Rig Type/Model:	6610DT	Logged By:	BAS
Reference Elevation:	267.18	Water Level:	6.5 ftgs
Total Depth:	28	Method:	Direct Push
Protection Level:	D	Date Completed:	11-17-10
Checked By:	BJS 11/24/10	Time:	— BJS
Bore Hole ID/OD:	4.25"		
Casing Size:	NA		
Sampler:	BAS		
Sampler ID/OD:	—		
Hammer Wt/Fall:	—		
Hammer Type:	—		

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
25		3.9/4.0	(*)				24-27 grey/brown coarse sand, poorly graded, some M coarse SAND, Saturated, NP, M Dense	SP	
26									
27							27-28 grey coarse SANDY GRAVEL poorly graded, saturated, loose to M dense, NP.	GP	
28									

BAS

NOTES:

(*) PID not working.

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name:	Off-Site Carriage Cleaners		Boring ID: DP-15
Project Location:	Penfield, New York		Page No. 1
Project No.:	3612102168	Client: NYSDEC	of: 3
Boring Location:	West of Site	Refusal Depth: NA	Total Depth: 20
Weather:	42°F, raining	Soil Drilled: 20	Method: Direct Push
Subcontractor:	Nothnagle	P.I.D (eV): 10.8	Protection Level: D
Driller:	Jeff S.	Date Started: 11-18-10	Date Completed: 11-18-10
Rig Type/Model:	66110T	Logged By: BAS	Checked By: BSS 11/24/10
Reference Elevation:	264.24	Water Level: 4' bgs	Time: ——— BSS

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
1		2.9/4.0	20.1				0-2 Brown SILTY Loam, poorly graded, SP/MP, mstiff, damp. 2-4 Lt Reddish Brown SANDY SILT, poorly graded, mp, damp to moist	Fill SM	
5		2.7/4.0					4-4.2 Same as 2-4 4.2-6.5 Reddish Brown SILTY SAND, poorly graded, wet, SP, m Dense 6.5-7.5 Lt to Dark grey SILTY SAND with little coarse SAND, poorly graded, wet to saturated, SP, 7.5-8 Grey SILTY SAND and GRAVEL well graded, saturated, SP/NP, loose to m Dense	SM SM SW	

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-15
Project Location: Penfield, New York			Page No. 2
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: West of Site	Refusal Depth: NA	Total Depth: 20	Bore Hole ID/OD: -2"
Weather: 42°F, Raining	Soil Drilled: 20	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: BAS
Driller: Jeff S.	Date Started: 11-18-10	Date Completed: 11-18-10	Sampler ID/OD: —
Rig Type/Model: 6610 DT	Logged By: BAS	Checked By: BJS 11/24/10	Hammer Wt/Fall: —
Reference Elevation: 264.24	Water Level: 4' bgs	Time: — BSS	Hammer Type: —

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
9		1.9/4.0	Le 1				8-12 Brown to Lt tan, m coarse to coarse SAND, poorly graded, more coarse sand @ 11-12', saturated, NP, m dense	SP	
10									
11									
12									
13		3.0/4.0	0.0 ppm				12-13.5 Same as 8-12, but 2 SILT LAMINATIONS @ 12.2 and 13.0' (~0.1") Saturated NP to mp.	SP/SM	
14			1.6				13.5-15.5 DK grey m coarse SAND with little fine gravel, well graded, Saturated, NP, m dense	SP/SW	
15			3.8				15.5-16 grey SANDY GRAVEL, well graded Saturated, NP,		
16			4.4 5.1					GW	

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name:	Off-Site Carriage Cleaners		Boring ID: DP-15
Project Location:	Penfield, New York		Page No. 3
Project No.:	3612102168	Client: NYSDEC	of: 3
Boring Location:	West of Site	Refusal Depth: NA	Total Depth: 20
Weather:	42°F, raining	Soil Drilled: 20	Method: Direct Push
Subcontractor:	Nothnagle	P.I.D (eV): 10.8	Protection Level: D
Driller:	Jeff S.	Date Started: 11-18-10	Date Completed: 11-18-10
Rig Type/Model:	Geo 10 DT	Logged By: BAS	Checked By: BSS 11/24/10
Reference Elevation:	264.24	Water Level: 4' bgs	Time: ——— BSS
			Bore Hole ID/OD: ~2"
			Casing Size: NA
			Sampler: BAS
			Sampler ID/OD: —
			Hammer Wt/Fall: —
			Hammer Type: —

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
17		21 / 9.0	2.9		ppm		16-20 Greyish brown GRAVELLY SAND well graded, little fines, saturated, medense to dense, NP,	SW	
			3.5						
18			5.1						
19			2.5						
20			2.9						
							BAS		

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-21
Project Location: Penfield, New York			Page No. 1
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: DP-21 → See Figure	Refusal Depth: NA	Total Depth: 20' BGS	Bore Hole ID/OD: 8¼" OD
Weather: ~150 F, Sunny, Slight Wind	Soil Drilled: 20'	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: RLM ~~BAS~~ MacLeod 4'
Driller: Merl Short	Date Started: 1/20/11	Date Completed: 1/20/11	Sampler ID/OD: 2¼" OD
Rig Type/Model: CME 55 Track Rig	Logged By: ~~BAS~~ RLM	Checked By: JR 7/6/11	Hammer Wt/Fall: NA
Reference Elevation: UNK	Water Level: ~7' BGS	Time: —	Hammer Type: NA

Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0.0				NA	NA	NA			
1		0.5 / 6"	0.5 ppm				0-0.5 → Dark Brown, Fine Sand, Trace/Few Silt, poorly graded, non-plastic, loose, Dry-Moist	SM	
		2.3 / 1'	2.3 ppm						
2		4.0 / 2.3					0.5-1 → Dark Brown, Fine Sand, Trace/Few Silt, Trace/Few gravel (Fine), loose, non plastic, Dry-Moist	SM	
3			<0.1				1-4 → Light Brown, Medium Sand, Few Fine-Coarse Gravel, loose, non plastic, Dry-Moist, Fluvial Deposits	SP	
4									
5			<0.1				4.0-5.0 → Light Brown w/ Redish tint, Medium Sand, Few Fine-Coarse Gravel, loose, non plastic, Dry-Moist, Fluvial Deposits	SP	
6		4.0 / 2.5					5.0-7.5 → Grayish Brown, Fine Sand, Trace/Few Silt, well graded, Low plasticity, Dry-Moist	SM	
7			<0.1				7.5-8.0 → Gray, ~~Medium Sand~~ (RM) Fine-Medium Sand, Few Fine-Coarse gravel, non plastic, Dry-Moist	SP	
8									

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-21
Project Location: Penfield, New York			Page No. 2
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: DP-21 → See Figure	Refusal Depth: NA	Total Depth: 20' BGS	Bore Hole ID/OD: 8¼" OD
Weather: ≈15°F, Sunny, Slight Wind	Soil Drilled: 20'	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: MacroCore RCM ~~BAS~~ 4'
Driller: Neal Short	Date Started: 1/20/11	Date Completed: 1/20/11	Sampler ID/OD: 2¼" OD
Rig Type/Model: CME 55 Track Rig	Logged By: ~~BAS~~ RCM	Checked By: JR 7/6/11	Hammer Wt/Fall: NA
Reference Elevation: UNK	Water Level: ≈ 7' Bgs	Time: —	Hammer Type: NA

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
				NA	NA	NA			
8							8-9.0 → Brownish gray, Fine-Medium SAND, TRACE-Few medium gravel, very loose, moist, non-plastic	~~SW~~ SP	
9		4.0/4.1	20.1						
10							9.0-11.5 → Gray, medium SAND, medium-coarse gravel, very loose, non-plastic, wet	SP	
11							11.5-12.0 → Gray, Fine SAND, TRACE-Few Silt, poorly graded, Loose, Low plastic, moist/wet	SM	
12			20.1						
13							12.0-16.0 → Brownish Gray, medium-coarse SAND, Few Fine-medium gravel, Loose, non-plastic, wet, Fluvial Deposits, well graded	SW	
14		4.0/3.0							
15									
16			20.1						

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-21
Project Location: Penfield, New York			Page No. 3
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: DP-21 → See Figure 5	Refusal Depth: NA	Total Depth: 20' BGS	Bore Hole ID/OD: 8¼" OD
Weather: 75°F, Sunny, Slight Wind	Soil Drilled: 20'	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: RCM MacroCore BAS 4'
Driller: Neal Shaw	Date Started: 1/20/11	Date Completed: 1/20/11	Sampler ID/OD: 2¼" OD
Rig Type/Model: CME 55 Track Rig	Logged By: BAS RCM	Checked By: JR 7/6/11	Hammer Wt/Fall: NA
Reference Elevation: UNK	Water Level: ~7' bgs	Time: —	Hammer Type: NA

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
				NA	NA	NA			
							16.0 - 20.0 → Same as above / Before	SW	
17		Coil							
18		4.0 / 3.5							
19									
		Coil							
20									
							Bottom of Boring = 20' BGS. No Refusal.		
21									
22									
23									
24									

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-22
Project Location: Penfield, New York			Page No. 1
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: East of site	Refusal Depth: NA	Total Depth: 20' BGS	Bore Hole ID/OD: 8 1/4" OD.
Weather: 34°F, overcast	Soil Drilled: 20'	Method: Direct Push / HSA	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: MacroCore (4') ~~BAS~~
Driller: Neil Shoot	Date Started: 01-18-2011	Date Completed: 1/18/11	Sampler ID/OD: 2 1/4" OD
Rig Type/Model: CME 55 Track Rig	Logged By: BAS	Checked By: RCM	Hammer Wt/Fall: NA
Reference Elevation: 266.7 ft	Water Level: ~ 6.5' BTOR	Time: —	Hammer Type: NA

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
1	S1	4.0 / 3.0	Lo 1 ppm	NA	NA	NA	0-0.5 snow. 0.5-2.5 DK Brown silty Loam, poorly graded, trace fine gravel, damp, SP, Dense 2.5-4 Olive brown silty F Sand, trace fine gravel, poorly graded, damp NP, Dense.	NA Fill SM	
5	S2	4.0 / 2.0	Lo 1 ppm				4-7 DK Brown F Sand, poorly graded M-Dense, damp, SP, trace organics, 7-8 Olive to Reddish Brown Silty Sand, well drained, poorly graded, Med. Stiff, NP, damp,	SP SM	

NOTES:

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FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-22
Project Location: Penfield, New York			Page No. 2
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: East of site	Refusal Depth: NA	Total Depth: 20' BGS	Bore Hole ID/OD: 8 1/4" OD
Weather: 34 F, Overcast	Soil Drilled: 20'	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: Macro 4' ~~BAS~~
Driller: Neil Short	Date Started: 01-18-2011	Date Completed: 1/18/11	Sampler ID/OD: 2 1/4" OD
Rig Type/Model: CME55 Track Rig	Logged By: BAS	Checked By: RCM	Hammer Wt/Fall: NA
Reference Elevation: 266.7	Water Level: ~6.8' BTOR	Time: —	Hammer Type: NA

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
9	S3 @ 815	4.0 / 2.7	0.1	NA	NA	NA	8-8.8 same as 7-8 8.8-10.5 olive to Reddish Brown to grey silty sand, poorly graded, mDense/ MStiff, moist to wet, NP. 10.5-12 Lt grey to dk grey, silty f sand, poorly graded, appears to have fluvial deposit, m Dense, Moist, SP/NP,	SM SM SM	
13	S4 @ 0820	4.0 / 1.5	0.1				12-14 Dk Brown m c sand, poorly graded, loose, moist to wet, NP 14-16 Dk grey sandy gravel with little silt, wet/saturated, well graded, loose/mDense, NP.	SP GW/SW	

NOTES:

BA

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-22
Project Location: Penfield, New York			Page No. 3
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: East of site	Refusal Depth: NA	Total Depth: 20' BGS	Bore Hole ID/OD: 8 1/4" OD
Weather: 34°F, overcast	Soil Drilled: 20'	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: MacroCore 4' ~~BAS~~
Driller: Neil Short	Date Started: 1/18/11	Date Completed: 1/18/11	Sampler ID/OD: 2 1/4"
Rig Type/Model: CME55 Track Rig	Logged By: BAS	Checked By: RCM	Hammer Wt/Fall: NA
Reference Elevation: 266.7	Water Level: ~6.5 BTOC	Time: —	Hammer Type: NA

Sample Information			Monitoring						
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0.0				NA	NA	NA	16-20 DK grey gravelly sand with some silt, well graded, M Dense, wet/saturated, NP/SP, silt laminations C~19°,	SW	
17									
18		4.0							
		13							
19								MH	
								SW	
20							Bottom of Boring = 20' BGS - No Refusal		

BAS

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-23
Project Location: Penfield, New York			Page No. 1
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: See updated Figure	Refusal Depth: NA	Total Depth: 24 BGS	Bore Hole ID/OD: 8 1/4" OD
Weather: ≈ 35°F, Cloudy	Soil Drilled: 24'	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: RCM ~~BAS~~ Macro Core 4'
Driller: Neal Short	Date Started: 1/18/11	Date Completed: 1/18/11	Sampler ID/OD: 2 1/4" OD
Rig Type/Model: CME55 Track Rig	Logged By: RCM ~~BAS~~	Checked By: DR 7/6/11	Hammer Wt/Fall: NA
Reference Elevation: ~ 264.3	Water Level: ~ 4.5' BTOR	Time: ——	Hammer Type: NA

Sample Information			Monitoring						
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0.0				NA	NA	NA			
1		4.0/2.2	0.1				0-0.5 → Dark Brown, Organic Matter / few Grasses, Loose, poorly graded		
2							0.5-1.5 → Dark Brown, Fine Sand, Trace Silt, Trace Medium gravel, Dry	GM	
3			0.1				1.5-3.0 → Light Brown, Medium Sand, poorly graded, Dry, non plastic	SP	
4							3.0-4.0 → Dark Brown, Fine-Medium Sand, Trace-Few Silt, Medium Dense, Low plasticity, moist	SM	
5		4.0/2.8	0.1				4.0-8.0 → Brownish Red, Fine-Medium Sand, well graded, SW moist, Fluvial Deposits, non plastic		
6									
7			0.1						
8			0.1						

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-23
Project Location: Penfield, New York			Page No. 2
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: See upstream Figure	Refusal Depth: NA	Total Depth: 24' BGS	Bore Hole ID/OD: 8¼" OD
Weather: ~35°F, Cloudy	Soil Drilled: 24'	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: ~~REM~~ MacroCore BAS 4'
Driller: Neal Short	Date Started: 1/15/11	Date Completed: 1/15/11	Sampler ID/OD: 2¼" OD
Rig Type/Model: CME55 Track Rig	Logged By: ~~REM~~ BAS	Checked By: SR 7/6/11	Hammer Wt/Fall: NA
Reference Elevation: ~264.3	Water Level: ~4.5' BTOR	Time: —	Hammer Type: NA

Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0.0				NA	NA	NA			
9		4.0/2.3					8.0-10.0 → Gray - Dark Gray, Fine - Medium SAND, Trace Medium (Gravel) - gravel, poorly graded, moist non-plastic	SP	
10							10.0-12.0 → Organic Tree Root/Branch		
11									
12									
13		4.0/3.0					12.0-16.0 → Grayish Tan, Medium - coarse SAND, Few - little fine gravel, moist, non-plastic, poorly graded	SP	
14									
15									
16									

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-23
Project Location: Penfield, New York			Page No. 3
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: See Updated Figure	Refusal Depth: NA	Total Depth: 24' BGS	Bore Hole ID/OD: 8¼" OD
Weather: ~35°F, Cloudy	Soil Drilled: 24	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: RCM/~~BAS~~ MacroCore 4'
Driller: Neal Short	Date Started: 1/18/11	Date Completed: 1/18/11	Sampler ID/OD: 2¼" OD
Rig Type/Model: CME 55 Track Rig	Logged By: ~~RCM BAS~~	Checked By: JR 5/6/11	Hammer Wt/Fall: NA
Reference Elevation: ~264.3	Water Level: ~4.5' BTOC	Time: —	Hammer Type: NA

Sample Information			Monitoring						
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0.0				NA	NA	NA			
17		4.0/2.3					16-20 → same as above/below	SP	
18									
19									
20									
21		4.0/3.6					20-24 → same as above/below	SP	
22									
23									
24							Bottom of boring = 24' BGS No Refusal.		

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-27
Project Location: Penfield, New York			Page No. 2
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: See updated Figure	Refusal Depth: NA	Total Depth: 20' BGS	Bore Hole ID/OD: 8¼" OD
Weather: 30°F, PC.	Soil Drilled: 20'	Method: Direct Push	Casing Size: NA Macro Core
Subcontractor: Nothnagle.	P.I.D (eV): 10.8	Protection Level: D	Sampler: RCM BAS 4'
Driller: Noel Short	Date Started: 1/19/11	Date Completed: 1/19/11	Sampler ID/OD: 2¼" OD
Rig Type/Model: CME 55 Track Rig	Logged By: BAS	Checked By: DR 7/6/11	Hammer Wt/Fall: NA
Reference Elevation: ± 266.2	Water Level: ~6.8' BTOR	Time: —	Hammer Type: NA

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
				NA	NA	NA	8.0-8.5 → Same as above	SM/SP	
9		2.0.1					8.5-10.0 → Light Brownish/Grayish Red, medium sand; trace-few silt, poorly graded, moist-wet, medium dense, Firm	SP	
10		4.0/2.7							
11		2.0.1					10.0-12.0 → Dark Grayish/Black, medium sand, poorly graded, moist-wet, Loose/Medium Dense, Firm	SP	
12									
							12.0-13.0 → Dark Grayish Brown, medium sand, poorly graded, Soft, medium/Loose, wet, non-plastic	SP	
13		2.0.1							
14		4.0/3.0					13.0-16.0 → Dark Gray, Coarse sand, few-Little medium-coarse gravel, well graded, Loose, Soft, Wet, Fluvial Deposits	SW/GW	
15		2.0.1							
16									

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-27
Project Location: Penfield, New York			Page No. 1
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: See updated Figure	Refusal Depth: NA	Total Depth: 20 BGS	Bore Hole ID/OD: 8 1/4" OD
Weather: ~ 30°F, Partly cloudy	Soil Drilled: 20'	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: RCM Macro Core ~~BAS~~ 4'
Driller: NEAL Short	Date Started: 1/19/11	Date Completed: 1/19/11	Sampler ID/OD: 2 1/4" OD
Rig Type/Model: CME55 track rig	Logged By: RIM ~~BAS~~	Checked By: JR 7/6/11	Hammer Wt/Fall: NA
Reference Elevation: ~ 266.2	Water Level: ~ 6.8' BTOR	Time: —	Hammer Type: NA

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
1		0.1		NA	NA	NA	0-1.0 → Dark Brown/Blackish organic matter, grasses, Dry, Loose, Poorly graded	SM	Am
2		4.0/2.0					1.0-2.0 → Light Brownish/Red, Fine Sand, trace-few silt, poorly graded, Loose, Medium Dense, Dry, Low plasticity	SM	
3		0.1							
4							2.0-4.0 → Dark Brownish/Red, Fine Sand, Little silt, Poorly graded Loose, Dry-Moist	SM	
5		0.1					4.0-6.0 → Dark/Light Brown, Fine Sand, trace silt, poorly graded, moist, Loose, non-plastic	SM	
6		4.0/3.0							
7		0.1					6.0-8.0 → Light Brownish Red, Medium Sand, trace-few silt, poorly graded, moist Medium Dense, Low plastic	SM/SP	
8									

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-27
Project Location: Penfield, New York			Page No. 3
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: See Updated Figure	Refusal Depth: NA	Total Depth: 20' BGS	Bore Hole ID/OD: 8¼" OD
Weather: ≈28°F, Slight Snow, Overcast	Soil Drilled: 20'	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: RCM ~~Macro Core BAS~~
Driller: Neal Shoot	Date Started: 1/19/11	Date Completed: 1/19/11	Sampler ID/OD: 2¼" OD
Rig Type/Model: CME 55 Track Rig	Logged By: RCM ~~BAS~~	Checked By:	Hammer Wt/Fall: NA
Reference Elevation: ≈ 266.2	Water Level: ≈ 6.8' BTOR	Time: —	Hammer Type: NA

Sample Information			Monitoring						
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0.0				NA	NA	NA			
17							16.0 – ~~20.0~~ → Brownish gray, medium SAND, poorly graded, medium stiff, medium dense, wet, Fluvial Deposits	SP	
18		4.0/2.7							
19									
20									
21							Bottom of boring = 20' BGS. No Refusal.		
22							RCM		
23									
24									

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-28
Project Location: Penfield, New York			Page No. 1
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: See Updtd Figure	Refusal Depth: NA	Total Depth: 24 BGS	Bore Hole ID/OD: 8 ¼" OD
Weather: ~28°F, Slight Snow, Overcast	Soil Drilled: 24'	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: Macro Core RCM ~~BAS~~
Driller: Neal Short	Date Started: 1/19/11	Date Completed: 1/19/11	Sampler ID/OD: 2 ¼" OD
Rig Type/Model: CME 55 Track Rig	Logged By: RCM ~~BAS~~	Checked By: JR 7/6/11	Hammer Wt/Fall: NA
Reference Elevation: 268.4	Water Level: ~ 8.7 BTOR	Time: —	Hammer Type: NA

Sample Information			Monitoring						
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0.0				NA	NA	NA			
1		0.1					0-4.0 → Snow, Organic Matter, Dark, grasses, DRY, loose Very little recovery		
2		4.0/0.5							
3		0.1							
4									
5		0.1					4.0-5.0 → Light Brown to Dark Gray, MEDIUM SAND, Little Silt, poorly graded, MEDIUM DENSE, stiff, moist, Low plasticity	SM	
6		4.0/3.0							
7		0.1					5.0-8.0 → Dark gray, MEDIUM SAND, Little gravel, well graded, LOOSE, MEDIUM DENSE, DRY-MOIST	SW	
8									

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-28
Project Location: Penfield, New York			Page No. 2
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: See UPDATED Figure	Refusal Depth: NA	Total Depth: 24 BGS	Bore Hole ID/OD: 8 1/4" OD
Weather: ~28°F, Slight Snow, Overcast	Soil Drilled: 24'	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: RCM ~~BAS~~
Driller: Neal Short	Date Started: 1/19/11	Date Completed: 1/19/11	Sampler ID/OD: 2 1/4" OD
Rig Type/Model: CME 55 Track Rig	Logged By: RCM ~~BAS~~	Checked By: AR 7/6/11	Hammer Wt/Fall: NA
Reference Elevation: 268.41	Water Level: ~8.7 BTOR	Time: —	Hammer Type: NA

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
				NA	NA	NA			
9		2.0.1					8.0-10.0 ~~[illegible]~~ → SAME AS above/before	SW	
10		4.0/3.0							
11		2.0.1							
12									
13		2.0.1					10.0-11.0 → SAME AS above/before	SW	
14		4.0/1.2					11.0-13.5 → Light Brown - Tan, Fine-MEDium SAND, Few Silt, poorly graded, MEDium Dense, MEDium Stiff, Low plasticity, Dry-Moist	SM/SP	
15		2.0.1					13.5-16.0 → Dark Brown, MEDium SAND, Few Silt, poorly graded, Low-plasticity, MEDium Dense, MEDium Stiff, MOIST	SM/SP	
16									

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: DP-28
Project Location: Penfield, New York			Page No. 3
Project No.: 3612102168	Client: NYSDEC		of: 3
Boring Location: See UPDATED Figure	Refusal Depth: NA	Total Depth: 24 BGS	Bore Hole ID/OD: 8 1/4" OD
Weather: ~28°F, Slight Snow, Overcast	Soil Drilled: 24'	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: RCM ~~BAS~~
Driller: Neal Short	Date Started: 1/19/11	Date Completed: 1/19/11	Sampler ID/OD: 2 1/4" OD
Rig Type/Model: CME 55 Track Rig	Logged By: RCM ~~BAS~~	Checked By: JQR 7/6/11	Hammer Wt/Fall: NA
Reference Elevation: 268.41	Water Level: ~8.7 BTOC	Time: —	Hammer Type: NA

Sample Information			Monitoring						
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0.0				NA	NA	NA			
							16.0-18.0 → Same as above/before	SM/SP	
17		0.1							
18		4.0/2.0					18.0-20.0 → Light gray-Tan, medium sand, few silt, poorly graded, medium dense, medium stiff, low-plasticity, moist-wet	SM/SP	
19									
		0.1							
20									
							20.0-21.0 → Same as above/before	SM/SP	
21		0.1							
							21.0-24.0 → Brown, medium sand, loose, poorly graded, wet	SP	
22		4.0/2.5							
23									
		0.1							
24							Bottom of Boring = 24' BGS No Refusal		

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

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Project Name: [redacted] OFF-SITE CARRIAGE CLEANERS			Boring ID: MW/DP-33
Project Location: [redacted] Penfield, NY			Page No. 1
Project No.: 3612[redacted]102168	Client: NYSDEC		of: 1
Boring Location: Dolomite Group Quarry	Refusal Depth: NA	Total Depth: 32	Bore Hole ID/OD: 8"
Weather: Sunny, 70-80°F, light breeze	Soil Drilled: 32	Method: HSA	Casing Size: 4 1/4"
Subcontractor: Geologic, NY	P.I.D (eV): 10.0	Protection Level: D	Sampler: Split Spoon
Driller: Dave Lyons	Date Started: 7/13/11	Date Completed: 7/13/11	Sampler ID/OD: 1.5/2.0"
Rig Type/Model: ATV mounted CME-45	Logged By: J. Rawcliffe	Checked By: RCM 7/18/11	Hammer Wt/Fall: 140lb/30
Reference Elevation: 265.91' (grnd)	Water Level: 7.96' TOR	Time: 7/13/11 1420	Hammer Type: Autohammer

Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	SPT Blows/6"	N Value	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0.0									Sand and gravel road fill		
2											
4		1040							Top 0.7 Brown fine sand with a little medium sand and traces of coarse sand and gravel. Moist. (Fill)		
6	S1 5-7	2.0 / 1.3	1/1/1/4	2	0	—	—	—	Bottom 0.6 light brown fine sand with some medium sand. Some possible stratification (Fill)		
8											
10	S2 10-12	1045 2.0 / 1.1	1/1/WH/1	1	0	—	—	—	Olive to olive grey fine sand with a little silt and traces of medium to coarse sand and gravel. Wet, some stratification some black organic layers!		Slight organic decay "swampy" odor.
12											
14											
16	S3 15-17	1052 2.0 / 0.4	WH/1 / WH/1	1	2.1	—	—	—	Olive grey fine sand with a trace of silt. Wet, stratified, layer 1-4 mm.	occational pieces of gravel	
18											
20	S4 20-22	1105 2.0 / 0.9	1/5/10/6	15	0	—	—	—	Top 0.6 Olive brown to grey fine sand with some silt and traces of medium to coarse sand and gravel. Wet, stratified. Bottom 0.3 Grey to olive grey fine to medium sand and gravel with a little cemented. wet.		Change at 21' to sand + gravel.
22											
24		1125							Top 0.2 Grey fine to medium sand with a trace of coarse sand. Wet.		
26	S5 25-27	2.0 / 1.2	9/13/15/15	28	14	—	—	—	Bottom 1.0 Brown coarse sand and gravel with some fine to medium sand slight trace of silt. Wet, massive.		
28											
30	S6 30-32	1135 2.0 / 1.4	5/9/11/14	20	0	—	—	—	Top 0.4" light Brown fine sand with a little silt. wet stratified with some thin silt layers. Bottom 1.0 Brown coarse sand and gravel with a little medium sand and traces of fine sand wet massive		
32											

NOTES: Installing temporary piezometer Bottom of boring = 32' No Refusal
1" PVC 5' screen BOW = 26.5 (lots of sand in well)
Bottom should be ≈ 29' BCS

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
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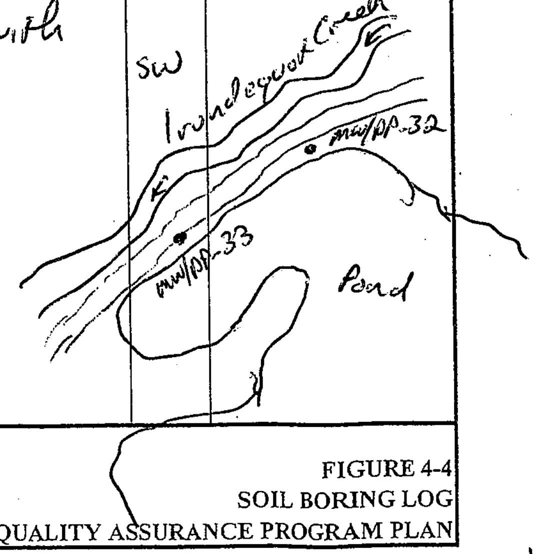
Project Name: [redacted] OFF-SITE CARRIAGE CLEANERS		Boring ID: MW/DP-34
Project Location: [redacted] Penfield, NY		Page No. 1 of: 1
Project No.: 3612[redacted] 102168	Client: NYSDEC	
Boring Location: Dilworth/Carriage Cleaners		
Weather: Sunny, 70-80, light breeze		
Subcontractor: Geologic, NY		
Driller: Dave Lyons		
Rig Type/Model: ATV mounted CME-45		
Reference Elevation: 263.51 ground		
Refusal Depth: NA	Total Depth: 30	Bore Hole ID/OD: 8"
Soil Drilled: 30	Method: HSA	Casing Size: 4¼ ID
P.I.D (eV): 10.0	Protection Level: D	Sampler: NA
Date Started: 7/13/11	Date Completed: 7/13/11	Sampler ID/OD: NA
Logged By: J. Rawcliffe	Checked By: RCM 7/18/11	Hammer Wt/Fall: NA
Water Level: 5.79' TOR	Time: 7/13/11 1420	Hammer Type: NA

Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	SPT Blows/6"	N Value	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0.0	NA	NA	NA	NA	–	–	–	–	0-4' Encountering lots of concrete rubble Concrete rubble, cobbles and roadbed gravel from ≈0-7' BGS (BLL)		Logging cuttings only
2											
4											
6											
8									7-21 Gray fine sand and silt wet.	SP	PID=0
10											
12											
14											
16											
18											
20											PID=0
22									21-30 Gray fine to medium sand with some coarse sand and gravel.	SW	
24											
26											
28											
30									30' Bottom of boring No refusal.		



NOTES: Installed temporary piezometer in borehole 1" PVC
5' screen BOW to TOR = 29.4'
Depth to water = 6.21' TOR Stickup = 0.35' AGS

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

Location ID = DP-34

APPENDIX C-3

WELL CONSTRUCTION DIAGRAMS

Overburden Well Construction Diagram

Well No.: MW-12

Project No.: 3612/02/168-02.1	Project Name: OFF-SITE Carriage Cleaners
NYSDEC	Project Area: Genesee Conservation League (Gun Club)

Contractor: Geologic NY	Driller: Dave Lyons	Method: HSA	
Logged By: J. Rawcliffe		Date Started: 7/13/11	Completed: 7/14/11
Checked By: RCM	Date: 7/18/11	Well Development Date: 7/15/11	

Not To Scale

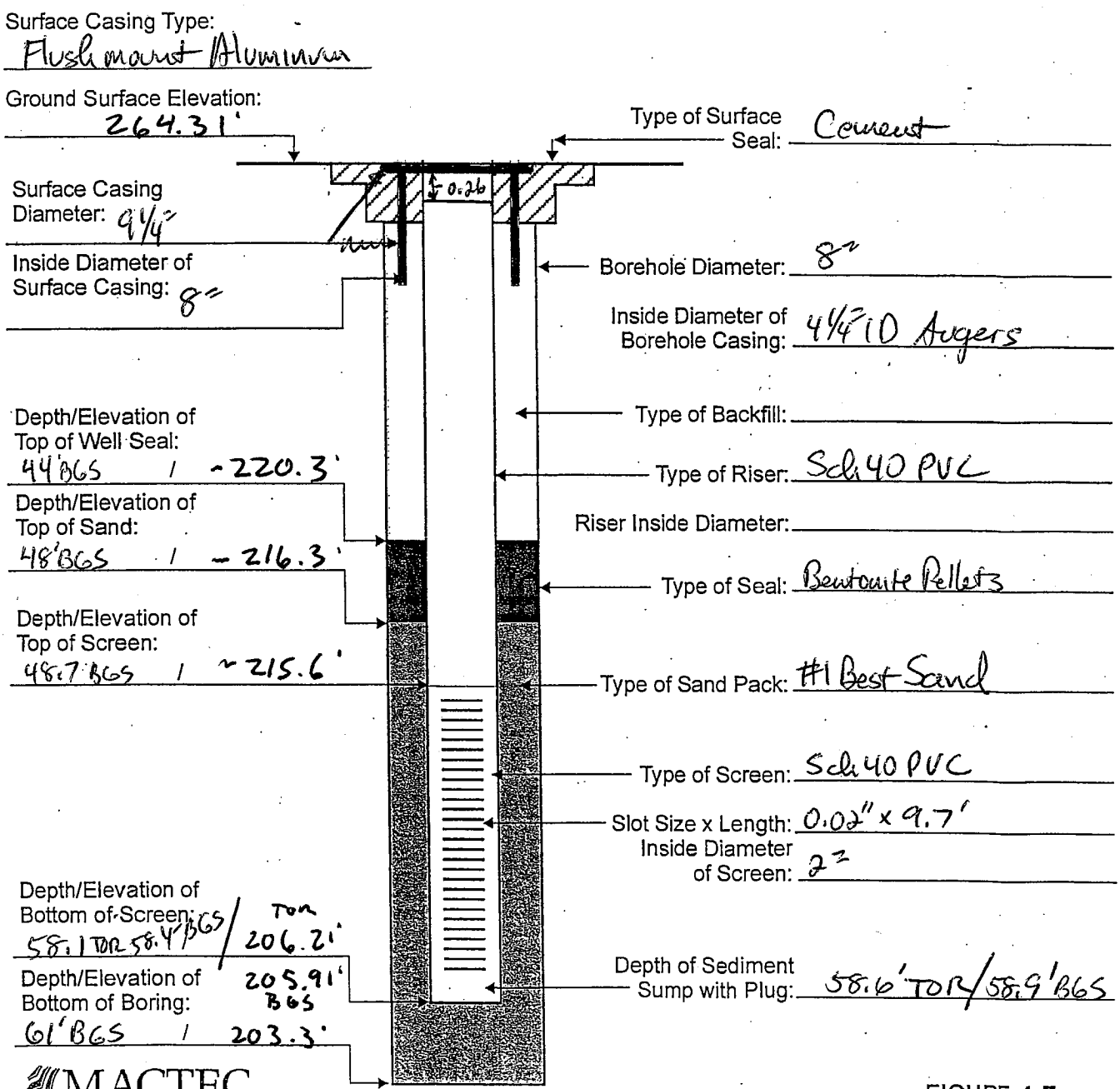


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FIGURE 4-7
OVERBURDEN MONITORING WELL CONSTRUCTION DIAGRAM
NYSDEC QUALITY ASSURANCE PROJECT PLAN

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Overburden Well Construction Diagram

Well No.: MW-11

Project No.: 36121021168-021	Project Name: OFFSITE Carriage Cleaners
NYSDEC	Project Area: PENN LANE Condos
Contractor: Geologic NY / Driller: Dave Myers	Method: HSA
Logged By: J. Rawcliffe	Date Started: 7/11/11 / Completed: 7/12/11
Checked By: RCM 7/18/11 / Date: 7/18/11	Well Development Date: 7/14/11

Not To Scale

Surface Casing Type: Flush mount Aluminum

Ground Surface Elevation: 267.67'

Type of Surface Seal: Cement

0.37

Surface Casing Diameter: 9 1/4"

Inside Diameter of Surface Casing: 8"

Borehole Diameter: 8"

Inside Diameter of Borehole Casing: 4 1/4" ID Augers

Type of Backfill: Bentonite chips, BestSand, Native Cave

Depth/Elevation of Top of Well Seal: 45' BGS / ~222.7'

Type of Riser: Sch 40 PVC

Depth/Elevation of Top of Sand: 48' BGS / ~219.7'

Riser Inside Diameter: 2"

Type of Seal: Bentonite Pellets

Depth/Elevation of Top of Screen: 50.1' BGS / ~217.6'

Type of Sand Pack: #1 BEST SAND

Type of Screen: Sch 40 PVC

Slot Size x Length: 0.02" x 9.7'

Inside Diameter of Screen: 2"

Depth/Elevation of Bottom of Screen: 59.8' BGS / ~207.9'

Depth of Sediment Sump with Plug: 59.9' TOR / 60.3' BGS

Depth/Elevation of Bottom of Boring: 61.4' BGS / ~206.3'

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FIGURE 4-7
OVERBURDEN MONITORING WELL CONSTRUCTION DIAGRAM
NYSDEC QUALITY ASSURANCE PROJECT PLAN

PORT2007022f.cdr

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: DP-06

Project Name: Off-Site Carriage Cleaners
Project Location: Penfield, New York
Project Number: 3612102168 Task Number 02.01
Subcontractor: Nothnagle Drilling Method: Direct Push
Development Method: Parastaltic Development Date: 11-18-10
Bucking Posts/Ballards: NA
Notes: Depth to water: 8.2' bgs (11-16-10).
Depth to water: 7.15 (bgs) @ 11-18-2010.

Date Started: 11-16-2010 Date Completed: 11-18-10
Logged By: (BAS) Brandon Shaw.
Checked By: BJS Checked Date: 11/24/10

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser
MP Elevation (ft): 267.85

Item	Depth BMP (ft)	Elevation (ft)	Description
Surface Casing Elevation	(Rem)	268.33'	
Ground Surface Elevation		268.26'	Slope Away
Riser Pipe (Top) BJS 11/24	0.45 bgs	267.85'	Surface Seal Type: concrete pad
			Lock Identification: NA.
			Stickup Casing Diameter: ~8"
			Backfill/Grout Type: NA.
			Riser Pipe Type: 1" PVC (Sch 40)
			Riser Pipe ID: 1"
			Borehole Diameter: ~3 1/4"
Top of Well Seal	0.5' bgs	~267.35'	
Top of Sand Pack	5' bgs	~262.85'	Type of Seal: pentonite (med. chips)
Top of Screen	~6.2 BJS 11/24	~261.7'	
			Screen Type: Slotted pvc
			Screen ID: ~1.0"
			Screen Slot Size: 0.010"
			Screen Length: ~10' (9.8')
			Filter/Sand Pack Type: #00N Industrial quartz.
Base of Screen	16 BJS 11/24	~251.9'	
End Cap	BJS 11/24 ~~17.1~~	16.3 ~251.6'	Sump: (0.3')
Drilled Depth	~28' bgs	~239.85	Fallback/Backfill: Native Soil
Bottom of Exploration	~28' bgs	~239.65	
Bedrock Surface	unknown	—	

NOT TO SCALE

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FIGURE 4-8
WELL/PIEZOMETER CONSTRUCTION DIAGRAM - FLUSHMOUNT
NYSDEC QUALITY ASSURANCE PROJECT PLAN

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: DP-10

Project Name:	Off-Site Carriage Cleaners	Date Started:	11-17-10 Date Completed: 11-18-10
Project Location:	Penfield, New York	Logged By:	Brandon Shaw
Project Number:	3612102168 Task Number 52-01	Checked By:	BJS Checked Date: 11/24/10
Subcontractor:	Nothnagle Drilling Method: Direct Push		
Development Method:	Parastaltic Development Date: 11-18-10		
Bucking Posts/Ballards:	NA		

Notes: Depth to water: 6.31' (TOR) (11-18-2010). - during development, ~0.45' of sediment was removed.

Measuring Point Information

Measuring Point (MP) Type:	Top Of Riser
MP Elevation (ft):	267.14

Item	Depth BMP (ft)	Elevation (ft)	Description
Surface Casing Elevation	(NA)	267.56'	Slope Away
Ground Surface Elevation		267.5'	Surface Seal Type: Concrete
Riser Pipe (Top)	0-4 BJS 0/24	267.14'	Lock Identification: NA
TOC-TOR: 0.4'			Stickup Casing Diameter: ~8"
			Backfill/Grout Type: NA
			Riser Pipe Type: PVC (sch 40)
			Riser Pipe ID: ~1"
			Borehole Diameter: ~3 1/4"
Top of Well Seal	0.5' bgs	~266.6'	Type of Seal: med. Bentonite chips
Top of Sand Pack	5' bgs	~262.1'	
Top of Screen	6.25' (TOR)	~260.9'	Screen Type: Slotted PVC
			Screen ID: ~1"
			Screen Slot Size: 0.010"
			Screen Length: ~9.8' (10')
			Filter/Sand Pack Type: #00N industrial Quartz
Base of Screen	16.05' (TOR)	~251.1'	
End Cap	16.75' (TOR)	~250.8'	Sump: (0.3')
Drilled Depth	~28' bgs	~239.1'	Fallback/Backfill: Native Soil
Bottom of Exploration	~28' bgs	~239.1'	
Bedrock Surface	unknown	—	

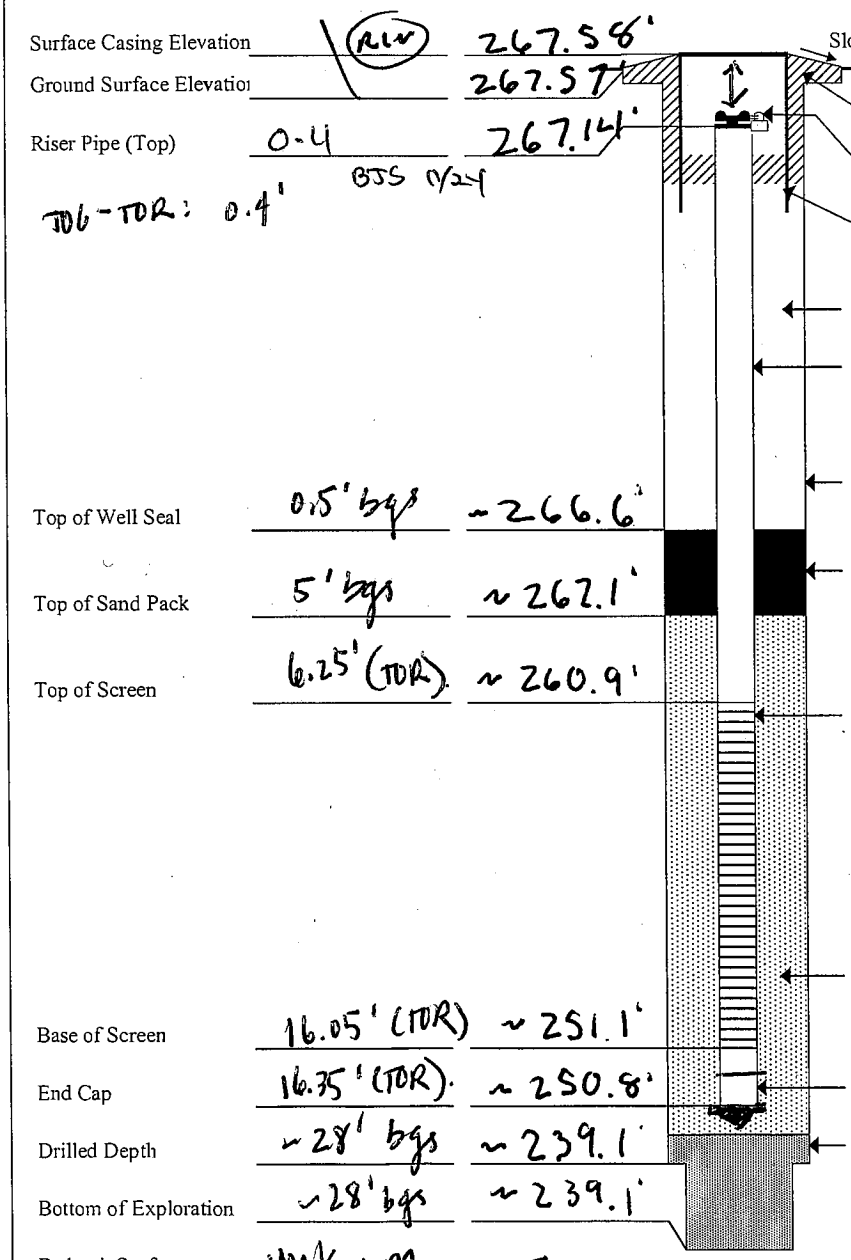

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FIGURE 4-8
WELL/PIEZOMETER CONSTRUCTION DIAGRAM - FLUSHMOUNT
NYSDEC QUALITY ASSURANCE PROJECT PLAN

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: DP-12

Project Name:	Off-Site Carriage Cleaners	Date Started:	11-17-2010 Date Completed: 11-18-10
Project Location:	Penfield, New York	Logged By:	Brandon Shaw
Project Number:	3612102168 Task Number 0.01	Checked By:	BJS Checked Date: 11/24/10
Subcontractor:	Nothnagle	Drilling Method:	Direct Push
Development Method:	Parastaltic	Development Date:	11-18-10.
Bucking Posts/Ballards:	NA		

Notes: Depth to water: 6.09' (BTOR) (11-18-2010).

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser

MP Elevation (ft): 266.76'

Item	Depth BMP (ft)	Elevation (ft)	Description
Surface Casing Elevation	~~NCM~~	267.19'	
Ground Surface Elevation		267.18'	
Riser Pipe (Top)	0.35	266.76'	
Top of Well Seal	0.5' bgs	~266.3'	
Top of Sand Pack	~5' bgs	~261.8	
Top of Screen	~~BAS~~ ~7'. 6.3' (BTOR).	~260.5'	
Base of Screen	16.1' (TOR)	~250.7'	
End Cap	16.44' (TOR).	~250.3'	
Drilled Depth	~28' bgs	~238.8'	
Bottom of Exploration	~28' bgs	~238.8'	
Bedrock Surface	Unknown		

TOC - TOR = 0.35'
BJS 11/24

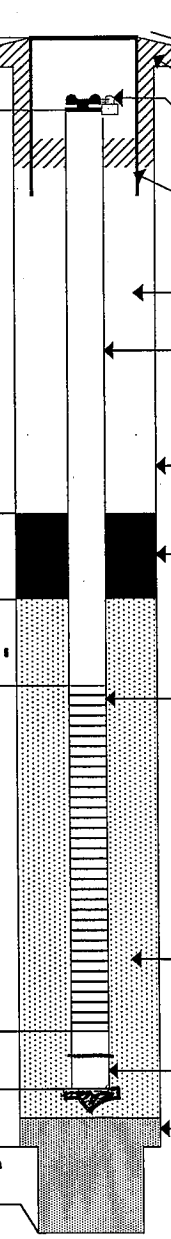

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FIGURE 4-8
WELL/PIEZOMETER CONSTRUCTION DIAGRAM - FLUSHMOUNT
NYSDEC QUALITY ASSURANCE PROJECT PLAN

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: DP-15

Project Name: Off-Site Carriage Cleaners
Project Location: Penfield, New York
Project Number: 3612102168 Task Number 02-01
Subcontractor: Nothnagle Drilling Method: Direct Push
Development Method: Parastaltic Development Date: 11-18-10
Bucking Posts/Ballards: NA
Notes: Depth to water: 3.98' (BTOR) (11-18-2010). Removed ~0.4' of sediment during development

Date Started: 11-18-10 Date Completed: 11-18-10
Logged By: Brandon Shaw
Checked By: BJS Checked Date: 11/24/10

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser
MP Elevation (ft): 263.83

Item	Depth BMP (ft)	Elevation (ft)	Description
Surface Casing Elevation (none)		264.22	
Ground Surface Elevation		264.24	Slope Away
Riser Pipe (Top)	0.4 BJS 11/24	263.83	Surface Seal Type: concrete pad
TOC - TOR: 0.4'			Lock Identification: NA
			Stickup Casing Diameter: ~8"
			Backfill/Grout Type: NA
			Riser Pipe Type: Sch 40 PVC
			Riser Pipe ID: ~1"
			Borehole Diameter: 3 1/4"
Top of Well Seal	~0.5' bgs	~263.3'	Type of Seal: med. Bentonite chips
Top of Sand Pack	~5' bgs	~258.8'	
Top of Screen	6.3' (TOR)	~257.5'	Screen Type: Sch 40 PVC
			Screen ID: ~1"
			Screen Slot Size: 0.010"
			Screen Length: ~9.8' (10')
			Filter/Sand Pack Type: #00N Industrial Quartz
Base of Screen	16.1' (TOR)	~247.7'	
End Cap	16.4' (TOR)	~247.4'	Sump: (~0.3')
Drilled Depth	20' bgs	~243.8'	Fallback/Backfill: Native Soil
Bottom of Exploration	20' bgs	~243.8'	
Bedrock Surface	unknown		

NOT TO SCALE

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FIGURE 4-8
WELL/PIEZOMETER CONSTRUCTION DIAGRAM - FLUSHMOUNT
NYSDEC QUALITY ASSURANCE PROJECT PLAN

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: DP-22

Project Name: Off-Site Carriage Cleaners
Project Location: Penfield, NY
Project Number: 3612102168 Task Number 2.02
Subcontractor: Nothnagle Drilling Method: HSA - 8"x4.5"
Development Method: Surge w/ whale pump Development Date: 01/20/11
Bucking Posts/Ballards: NA
Notes: Depth to Water: 6.81' (BTOR)
AMSL = Above mean Sea level BTOR = Below top of Riser
BGS = Below ground Surface

Date Started: 1/18/11 Date Completed: 1/18/11
Logged By: Ryan Markowski
Checked By: JR Checked Date: 7/6/11

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser
MP Elevation (ft): 266.55

Item	Depth BMP (ft) (BGS)	Elevation (ft) (AMSL)	Description
Surface Casing Elevation	<0.1' BGS	266.71	Slope Away
Ground Surface Elevation	0	266.66	
Riser Pipe (Top)	0.4' bgs	266.55	Surface Seal Type: Concrete / Road Box
			Lock Identification: NA
			Stickup Casing Diameter: 2"
			Backfill/Grout Type: Native Soil
			Riser Pipe Type: Sch. 40 PVC
			Riser Pipe ID: 2"
			Borehole Diameter: 8"
Top of Well Seal	6' bgs	260.7	Type of Seal: Bentonite chips
Top of Sand Pack	8' bgs	258.7	
Top of Screen	9.8' bgs	256.9	Screen Type: Sch 40 Slotted PVC
			Screen ID: 2"
			Screen Slot Size: 0.010"
			Screen Length: 10'
			Filter/Sand Pack Type: OON Industrial Quartz
Base of Screen	19.6 bgs	247.1	
End Cap	20.0' bgs	246.7	Sump: 0.4
Drilled Depth	20' bgs	246.7	Fallback/Backfill: NA
Bottom of Exploration	20' bgs	246.7	
Bedrock Surface	Unknown	Unknown	

NOT TO SCALE

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WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: DP-23

Project Name: Off-Site Conringe Cleaners
Project Location: Penfield, NY
Project Number: 36121021.68 Task Number 2.02
Subcontractor: Nothnagle Drilling Method: HSA 8¼ OD
Development Method: Surge w/ whale pump Development Date: 01/20/11
Bucking Posts/Ballards: NA
Notes: Depth to Water = 4.41' (BTOR) 01-20 11
ASNL = Above mean sea level BTOR = Below top of riser
bgs = below ground surface

Date Started: 1/18/11 Date Completed: 1/18/11
Logged By: Ryan Mankowski
Checked By: JR Checked Date: 7/6/11

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser
MP Elevation (ft): 263.89

Item	Depth BMP (ft)	Elevation (ft) (AMSL)	Description
Surface Casing Elevation	0	264.28	Slope Away
Ground Surface Elevation	0	264.29	Surface Seal Type: Concrete/Road Box
Riser Pipe (Top)	0.4 bgs	263.89	Lock Identification: NA
			Stickup Casing Diameter: 2"
			Backfill/Grout Type: Native Soil
			Riser Pipe Type: Sch 40 PVC
			Riser Pipe ID: 2"
			Borehole Diameter: 8"
Top of Well Seal	7' bgs	257.3	
			Type of Seal: Bentonite chips
Top of Sand Pack	9' bgs	255.3	
Top of Screen	11.1 bgs	253.2	Screen Type: Sch 40 Slotted PVC
			Screen ID: 2"
			Screen Slot Size: 0.010"
			Screen Length: 10'
			Filter/Sand Pack Type: OON Industrial Quartz
Base of Screen	20.8' bgs	243.5	
End Cap	21.2' bgs	243.1	Sump: 0.4
Drilled Depth	22' bgs	242.3	Fallback/Backfill: NA
Bottom of Exploration	22' bgs	242.3	
Bedrock Surface	Unknown	unknown	

NOT TO SCALE

MACTEC
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WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: DP-27

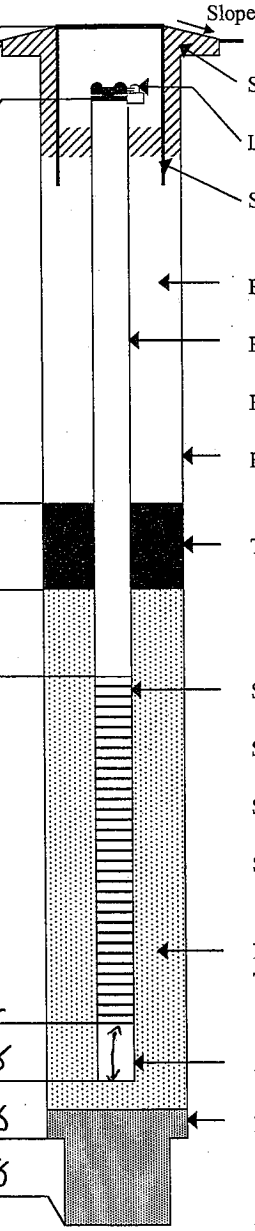
Project Name: Off-Site Carriage Cleaners
Project Location: Perfield, NY
Project Number: 36121021.68 Task Number 2.02
Subcontractor: NOTHNAGLE Drilling Method: HSA 8¼OD
Development Method: Surge w/ whale pump Development Date: 01/20/11
Bucking Posts/Ballards: NA
Notes: Depth to Water = 6.81 (BTOR)
AMSL = Above mean Sea Level (BTOR) = Below top of riser
BGS = Below ground surface

Date Started: 1/19/11 Date Completed: 1/19/11
Logged By: Ryan Markowski
Checked By: JR Checked Date: 7/6/11

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser
MP Elevation (ft): 265.91

Item	Depth BMP (ft) (BGS)	Elevation (ft) (AMSL)	Description
Surface Casing Elevation	0.2 BGS	266.32	Slope Away
Ground Surface Elevation	0	266.18	
Riser Pipe (Top)	0.4' bgs	265.91	Surface Seal Type: Concrete/Road Box
			Lock Identification: NA
			Stickup Casing Diameter: 2"
			Backfill/Grout Type: Native Soil
			Riser Pipe Type: Sch. 40 PVC
			Riser Pipe ID: 2"
			Borehole Diameter: 8"
Top of Well Seal	4' bgs	262.2	Type of Seal: Bentonite chips
Top of Sand Pack	6' bgs	260.2	
Top of Screen	7.9' bgs	258.3	Screen Type: Sch 40 Slotted PVC
			Screen ID: 2"
			Screen Slot Size: 0.010"
			Screen Length: 10'
			Filter/Sand Pack Type: OON Industrial Quartz
Base of Screen	18.0' bgs	248.2	
End Cap	18.4' bgs	247.8	Sump: 0.4
Drilled Depth	18.4' bgs	247.8	Fallback/Backfill: NA
Bottom of Exploration	18.4' bgs	247.8	
Bedrock Surface	Unknown	Unknown	



NOT TO SCALE

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511 Congress Street, Portland Maine 04101

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: DP-28

Project Name: Off Site Drainage Cleanouts
Project Location: Penfield, NY
Project Number: 36121021.68 Task Number 2.02
Subcontractor: Nothnagle Drilling Method: HSA 8 1/4" OD
Development Method: Surge w/ whale pump Development Date: 01/26/11
Bucking Posts/Ballards: NA
Notes: Depth to Water = 8.69 (BTOR)
AMSL = Above mean sea Level BTOR = Below top of riser
BGS = Below ground surface

Date Started: 1/19/11 Date Completed: 1/19/11
Logged By: Ryan Markowski
Checked By: JLR Checked Date: 7/6/11

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser
MP Elevation (ft): 268.37

Item	Depth BMP (ft) (BGS)	Elevation (ft) (AMSL)	Description
Surface Casing Elevation	0.2 AGS	268.62	Slope Away
Ground Surface Elevation	0	268.42	
Riser Pipe (Top)	0.3' bgs	268.37	Surface Seal Type: Concrete / Road Box
			Lock Identification: NA
			Stickup Casing Diameter: 2"
			Backfill/Grout Type: Native Soil
			Riser Pipe Type: Sch. 40 PVC
			Riser Pipe ID: 2"
			Borehole Diameter: 8"
Top of Well Seal	10' bgs	258.4	
			Type of Seal: Bentonite Chips
Top of Sand Pack	12' bgs	256.4	
Top of Screen	13.7' bgs	254.7	Screen Type: Sch 40 Slotted PVC
			Screen ID: 2"
			Screen Slot Size: 0.010"
			Screen Length: 10'
			Filter/Sand Pack Type: OON Industrial Quartz
Base of Screen	23.5' bgs	244.9	
End Cap	23.9' bgs	244.5	Sump: 0.4
Drilled Depth	24' bgs	244.4	Fallback/Backfill: NA
Bottom of Exploration	24' bgs	244.4	
Bedrock Surface	Unknown	Unknown	

NOT TO SCALE

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APPENDIX C-4

WELL DEVELOPMENT RECORDS

WELL DEVELOPMENT RECORD

Project: OFF-Site Carriage Cleaners	Well Installation Date: 7/12/11		Project No. 36121021168-02.1
Client: NYSDEC	Well Development Date: 7/14/11	Logged by: JKR	Checked by: Rcm 7/18/11
Well/Site I.D.: MW-11	Weather: Sunny, warm 72-80°F, light breeze	Start Date: 7/14/11	Finish Date: 7/14/11
		Start Time: 1345	Finish Time: 1630

Well Construction Record Data:

Well Diameter: 2 in.

Bottom of Screen	59.1 ft.	From Ground Surface ☐ From Top of Riser ☒
Sediment Sump/Plug	0.5 ft.	
Screen Length	9.7 ft.	

Fluids Lost during Drilling: 0 gal.

Protective Casing Stick-up	0 ft.	Protective Casing/Well Diff.	0.37 ft.	PID Readings: Ambient Air	0 ppm
				Well Mouth	0 ppm

Well Levels:

		Sediment:		
Initial	7.23 ft.	Well Depth before Development	59.1 ft.	(from top of PVC)
End of Development	7.25 ft.	Well Depth after Development	59.9 ft.	
24 Hours after Development	— ft.	Sediment Depth Removed	0.8 ft.	

HT of Water Column: 51.87 ft. x ☐ 1.68" gal./ft. ☒ 0.16 = 8.3 gal./vol. *for 4" HSA Installed Wells

Equipment:

- ☐ Dedicated Submersible Pump
- ☐ Surge Block
- ☐ Bailer ☐ 2" ☐ _____
- ☒ ~~Grundfos~~ Whale Pump 2" X 4" _____

Approximate Recharge Rage: >1 gpm

Total Gallons Removed: 90+ gal.

Well Development Criteria Met:

	Yes	No
■ Well water clear to unaided eye	☒	☐
■ Sediment thickness remaining in well is <1.0% of screen length	☐	☐
■ Total water removed = a minimum of 5x calculated well volume plus 5x drilling fluid lost	☒	☐
■ Turbidity < 5NTUs	☐	☒
■ <10% change in field parameters	☒	☐

Notes: _____

End of Well Development Sample (1 pint) Collected? Yes ☐ No ☒

Water Parameter Measurements Start purging at 1356

Record at start, twice during and at the end of development (minimum):

Time	Volume	Total Gallons	pH	Temp.	Conductance (mS/cm)	Turbidity	Pumping Rate
1413		15	7.0	14.8	2.524	72	0.9
1428		30	7.0	14.8	2.562	47	0.9 *
1501		45	7.1	14.6	2.568	38	0.9
1518		60	7.1	14.5	2.580	59	0.9 *
1550		75	7.1	14.6	2.579	17	0.9
1608		90	7.1	14.6	2.573	~~11.5~~ 10.7 (11)	0.9

Well Developer's Signature: Jerry K. Rudloff

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Portland, ME 04101

FIGURE 4-9
WELL DEVELOPMENT RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

1356 Start

* Stop to drum purge water

WELL DEVELOPMENT RECORD

Project: OFF Site Carriage Cleaners	Well Installation Date: 7/14/11		Project No. 361/2007/68-02
Client: NYS DEC	Well Development Date: 7/15/11	Logged by: JKR	Checked by: Rm 7/18/11
Well/Site I.D.: MW-12	Weather: Mostly sunny 65-75°F calm	Start Date: 7/15/11	Finish Date: 7/15/11
		Start Time: 0800	Finish Time: 1105

Well Construction Record Data:

Well Diameter: 2 in.

Bottom of Screen (Bottom of well)	58.1 / 58.6	ft.
Sediment Sump/Plug	0.5	ft.
Screen Length	9.7	ft.

From Ground Surface ☐ From Top of Riser ☒

Fluids Lost during Drilling: 0 gal.

Protective Casing Stick-up: 0 ft. Protective Casing/Well Diff.: 0.76 ft.

PID Readings: Ambient Air 0.5 ppm; Well Mouth 0.5 ppm

Well Levels:

Initial	5.27	ft.
End of Development	4.98	ft.
24 Hours after Development	—	ft.
HT of Water Column	53.6	ft.

x ☐ 1.68" gal./ft. ☒ .16 = 8.6 gal./vol. *for 4" HSA Installed Wells

Sediment:

Well Depth before Development	58.2	ft. (from top of PVC)
Well Depth after Development	58.6	ft.
Sediment Depth Removed	0.4	ft.

Equipment:

- ☐ Dedicated Submersible Pump
- ☐ Surge Block
- ☐ Bailer ☐ 2" ☐ _____
- ☒ ~~Grundfos~~ Whale Pump 2" ☒ 4" _____

Approximate Recharge Rage: 1.0 gpm

Total Gallons Removed: 90+ gal.

Well Development Criteria Met:

	Yes	No
■ Well water clear to unaided eye	☒	☐
■ Sediment thickness remaining in well is <1.0% of screen length	☒	☐
■ Total water removed = a minimum of 5x calculated well volume plus 5x drilling fluid lost	☒	☐
■ Turbidity < 5NTUs	☐	☒
■ 10% change in field parameters	☒	☐

Notes: _____

End of Well Development Sample (1 pint) Collected? Yes ☐ No ☐

Water Parameter Measurements 0810 Start purging

Record at start, twice during and at the end of development (minimum): °C mS/cm

Time	Volume	Total Gallons	pH	Temp.	Conductance	Turbidity	Pumping Rate
0820	1	15	7.1	13.1	2.157	340	1.0
0840		30	7.1	13.1	2.135	100	1.0 *
0911		45	7.1	13.4	2.128	>1000	1.0
0929		60	7.0	13.5	2.110	170	1.0 *
1003		75	7.1	13.7	2.094	58	1.0
1020	10+	90	7.0	13.8	2.098	10.2	1.0

Well Developer's Signature: Jerry Rudloff

* Stop purging to take water to clear.

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Portland, ME 04101

FIGURE 4-9
WELL DEVELOPMENT RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

WELL DEVELOPMENT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	Off-Site Carriage Cleaners
PROJECT NUMBER	3612102168
WELL INSTALLATION DATE	11-16-2010
WELL DEVELOPMENT DATE	11-18-2010
LOCATION ID	DP-06
PAGE	1 OF 1
START TIME	1540
START DATE	1605 11-18-10
END TIME	1605
END DATE	11-18-10

WELL DIAMETER (INCHES): [✓] 1-IN. [ ] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [✓] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [✓] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	16.3 FT	FINAL WELL DEPTH (BMP)	16.32 FT	SCREEN LENGTH	10 FT	PROT. CASING STICKUP (AGS)	0.0 FT
INITIAL DTW (BMP)	7.15 FT	SEDIMENT REMOVED (final well depth - initial well depth)	<0.1 FT	SCREENED INTERVAL (BMP)	6.2 TO 16 BJS 11/24	TOC/TOR DIFFERENCE	0.45 FT
WATER COLUMN (initial well depth - initial depth to water)	9.2 FT	DTW AFTER DEVELOP. (BMP)	7.95 FT	PUMPING DEPTH (BMP)	~16 FT	PID AMBIENT AIR	<0.1 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.4 GAL	FINAL RECOVERY DEPTH (BMP)	— FT	APPROXIMATE RECHARGE RATE	— FT/MIN	PID WELL MOUTH	<0.1 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~5 GAL	FINAL RECOVERY TIME (elapsed)	— MIN	FLUIDS LOST DURING DRILLING	0 GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [✓]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
1541	pump on		@ DP-06								
1544	7.87	500	15.13	2.021	7.10	0.51	71000	-82.1			PID: 0.6 ppm
1549	8.11	500	15.28	2.983	7.00	0.28	71000	-89.1			PID: <0.1 ppm
1554	8.07	500	15.24	2.073	6.95	0.11	71000	-94.4			PID: <0.1 ppm
1559	7.95	500	15.31	2.189	6.90	0.07	212	-98.1			PID: <0.1 ppm
1600	pump off		@ DP-06								
			15	2.19	6.9	0.1	212	-100	BJS	11/24/10	

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ] ____
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [✓] OTHER Tubing (3/8")

- [✓] WATER LEVEL METER
- [✓] PID ppb Rae
- [✓] WQ METER YSI
- [✓] TURB. METER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?	✓	
Sediment thickness remaining in well <1.0% of screen length?	✓	
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?		✓
Turbidity < 5NTUs?		✓
10% change in field parameters?		✓

WAS DEVELOPMENT CRITERIA MET? Y [ ] N [✓]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [ ] N [✓]

NUMBER OF GALLONS GENERATED: ~5

SKETCH

NOTES

Well Developer Signature: Brandon Shaw
Checked By: Brad Schoonard Print Name: Date: 11/24/10

FIGURE 4-9
WELL DEVELOPMENT RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

WELL DEVELOPMENT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		LOCATION ID	PAGE
Off-Site Carriage Cleaners		DP-10	1 OF 1
PROJECT NUMBER		START TIME	START DATE
3612102168		1610	11-18-10
WELL INSTALLATION DATE	WELL DEVELOPMENT DATE	END TIME	END DATE
11-17-2010	11-18-2010	1637	11-18-10

WELL DIAMETER (INCHES): [✓] 1-IN. [ ] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [✓] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [✓] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	15.9 FT	FINAL WELL DEPTH (BMP)	16.35 FT	SCREEN LENGTH	10 FT	PROT. CASING STICKUP (AGS)	0.0. FT
INITIAL DTW (BMP)	6.31 FT	SEDIMENT REMOVED (final well depth - initial well depth)	~0.45 FT	SCREENED INTERVAL (BMP)	6.3 TO 16	TOC/TOR DIFFERENCE	0.4 FT
WATER COLUMN (initial well depth - initial depth to water)	9.6 FT	DTW AFTER DEVELOP. (BMP)	8.41 FT	PUMPING DEPTH (BMP)	~16 FT	PID AMBIENT AIR	20.1 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.4 GAL	FINAL RECOVERY DEPTH (BMP)	— FT	APPROXIMATE RECHARGE RATE	— FT/MIN	PID WELL MOUTH	20.1 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~5 GAL	FINAL RECOVERY TIME (elapsed)	— MIN	FLUIDS LOST DURING DRILLING	0 GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [✓]

BJS 11/24

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
1615	pump on		@ DP-10								PID Readings:
1618	8.11	500	15.10	2.148	6.93	0.29	>1000	-36.9			11.4 ppm
1623	8.31	500	15.19	2.081	6.82	0.30	>1000	-44.1			13.7 ppm
1628	8.37	500	15.33	1.990	6.85	0.26	>1000	-58.4			12.2 ppm
1633	8.41	500	15.42	1.805	6.94	0.21	34.6	-62.6			13.7 ppm
1635	pump off		@ DP-10								
			15	1.81	6.9	0.2	34.6	-630	BJS		11/24/10

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ] ____
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [✓] OTHER tubing (HDPE)

- [✓] WATER LEVEL METER
- [✓] PID ppb Rae
- [✓] WQ METER YSI
- [✓] TURB. METER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?		✓
Sediment thickness remaining in well <1.0% of screen length?	✓	
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?	✓	
Turbidity < 5NTUs?		✓
10% change in field parameters?		✓

WAS DEVELOPMENT CRITERIA MET? Y [ ] N [✓]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [ ] N [✓]

NUMBER OF GALLONS GENERATED: ~5

SKETCH

NOTES

Well Developer Signature: Brandon Shaw
Checked By: Brad Schonard Print Name:
Date: 11/24/10

FIGURE 4-9
WELL DEVELOPMENT RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

WELL DEVELOPMENT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		LOCATION ID	PAGE
Off-Site Carriage Cleaners		DP-12	1 OF 1
PROJECT NUMBER		START TIME	START DATE
3612102168		1640	11-18-10
WELL INSTALLATION DATE	WELL DEVELOPMENT DATE	END TIME	END DATE
11-17-2010	11-18-2010	1705	11-18-10

WELL DIAMETER (INCHES): [✓] 1-IN. [ ] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [✓] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [✓] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	16.4 FT	FINAL WELL DEPTH (BMP)	16.44 FT	SCREEN LENGTH	~10' FT	PROT. CASING STICKUP (AGS)	0.6 FT
INITIAL DTW (BMP)	6.09 FT	SEDIMENT REMOVED (final well depth - initial well depth)	<0.1 FT	SCREENED INTERVAL (BMP)	6.3 TO 16.1	TOC/TOR DIFFERENCE	0.35 FT
WATER COLUMN (initial well depth - initial depth to water)	10.3 FT	DTW AFTER DEVELOP. (BMP)	6.07 FT	PUMPING DEPTH (BMP)	~16' FT	PID AMBIENT AIR	<0.1 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.4 GAL	FINAL RECOVERY DEPTH (BMP)	— FT	APPROXIMATE RECHARGE RATE	— FT/MIN	PID WELL MOUTH	<0.1 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~5 GAL	FINAL RECOVERY TIME (elapsed)	— MIN	FLUIDS LOST DURING DRILLING	— GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [✓]

BJS 11/24

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
1642	Pump on @ DP-12										PID Readings:
1646	6.09	500	13.79	1.437	7.14	0.25	71000	-81.0			<0.1 ppm
1651	6.09	500	14.01	1.424	7.19	0.29	71000	-85.5			
1656	6.07	500	14.04	1.412	7.07	0.13	67.5	-94.0			
1701	6.07	500	14.00	1.419	7.12	0.07	12.1	-95.5			
1702	pump off @ DP-12										
			14	1.41	7.1	0.1	12.1	-98	BJS	11/24/2010	

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ] ____
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [✓] OTHER tubing (3/8")

- [✓] WATER LEVEL METER
- [✓] PID ppb Rae
- [✓] WQ METER YSI
- [✓] TURB. METER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?		✓
Sediment thickness remaining in well <1.0% of screen length?	✓	
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?	✓	
Turbidity < 5NTUs?		✓
10% change in field parameters?		✓

WAS DEVELOPMENT CRITERIA MET? Y [ ] N [✓]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [ ] N [✓]

NUMBER OF GALLONS GENERATED: ~5

SKETCH

NOTES

Well Developer Signature: Brandon Shaw
Checked By: Brad Schwarzer Print Name:
Date: 11/24/10

FIGURE 4-9
WELL DEVELOPMENT RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

WELL DEVELOPMENT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	Off-Site Carriage Cleaners
PROJECT NUMBER	3612102168
WELL INSTALLATION DATE	11-18-10
WELL DEVELOPMENT DATE	11-18-10
LOCATION ID	DP-15
PAGE	1 OF 1
START TIME	1710
START DATE	11-18-10
END TIME	1740
END DATE	11-18-10

WELL DIAMETER (INCHES): [✓] 1-IN. [ ] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [✓] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [✓] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	16.0 FT	FINAL WELL DEPTH (BMP)	16.4 FT	SCREEN LENGTH	~10' FT	PROT. CASING STICKUP (AGS)	0.0 FT
INITIAL DTW (BMP)	3.48 FT	SEDIMENT REMOVED (final well depth - initial well depth)	0.4 FT	SCREENED INTERVAL (BMP)	6.3 TO 16.1 BSS 11/24	TOC/TOR DIFFERENCE	0.4 FT
WATER COLUMN (initial well depth - initial depth to water)	12.5 FT	DTW AFTER DEVELOP. (BMP)	3.90 FT	PUMPING DEPTH (BMP)	~16' FT	PID AMBIENT AIR	<0.1 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.5 GAL	FINAL RECOVERY DEPTH (BMP)	— FT	APPROXIMATE RECHARGE RATE	— FT/MIN	PID WELL MOUTH	<0.1 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~5 GAL	FINAL RECOVERY TIME (elapsed)	— MIN	FLUIDS LOST DURING DRILLING	— GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [✓]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
1713	pump on		@ DP-15								PID Readings:
1715	3.81	500	14.25	1.847	7.09	1.04	71000	-20.0			28.9 ppm
1720	3.90	500	13.89	1.657	7.05	1.00	71000	-17.9			39.8 ppm
1725	3.91	500	13.81	1.713	7.07	0.61	71000	-15.1			27.8 ppm
1730	3.90	500.	14.91	1.774	6.99	0.54	71000	-11.1			31.9 ppm
1735	pump off		@ DP-15								
			15	1.77	7.0	0.5	>1000	-11	BSS 11/24/10		
	BA										

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ] ____
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [✓] OTHER tubing (3/8")

- [✓] WATER LEVEL METER
- [✓] PID ppb Rae
- [✓] WQ METER YSI
- [✓] TURB. METER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?		✓
Sediment thickness remaining in well <1.0% of screen length?		✓
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?	✓	
Turbidity < 5NTUs?		✓
10% change in field parameters?		✓

WAS DEVELOPMENT CRITERIA MET? Y [ ] N [✓]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [ ] N [✓]

NUMBER OF GALLONS GENERATED: ~5

SKETCH

NOTES

Well Developer Signature: Brandon Shaw
Checked By: Brad Schoonover Print Name:
Date 11/24/10

FIGURE 4-9
WELL DEVELOPMENT RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

WELL DEVELOPMENT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	Off-Site Carriage Cleaners
PROJECT NUMBER	3612102168/ 02.02
WELL INSTALLATION DATE	01-18-2011
WELL DEVELOPMENT DATE	01-20-2011
LOCATION ID	DP-22
PAGE	1 OF 1
START TIME	0750
START DATE	01-20-2011
END TIME	0900
END DATE	01-20-2011

BAJ

WELL DIAMETER (INCHES): [X] 1-IN. [X] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [X] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	19.3 FT	FINAL WELL DEPTH (BMP)	19.6 FT	SCREEN LENGTH	~10 FT	PROT. CASING STICKUP (AGS)	0 FT
INITIAL DTW (BMP)	10.81 FT	SEDIMENT REMOVED (final well depth - initial well depth)	0.3 FT	SCREENED INTERVAL ~~(BMP)~~ BGS (Approximate)	~10 TO 20	TOC/TOR DIFFERENCE	~0.4 FT
WATER COLUMN (initial well depth - initial depth to water)	~12.5 FT	DTW AFTER DEVELOP. (BMP)	9.36 FT	PUMPING DEPTH ~~(BMP)~~ BGS (Approximate)	~20 FT	PID AMBIENT AIR	<0.1 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	~2 GAL	FINAL RECOVERY DEPTH (BMP)	— FT	APPROXIMATE RECHARGE RATE	— FT/MIN	PID WELL MOUTH	0.3 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~33 GAL	FINAL RECOVERY TIME (elapsed)	— MIN	FLUIDS LOST DURING DRILLING	0 GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [X]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
0814	6.92	pump on @ DP-22	—	—	—	—	—	—	—	1	PID Headspace
0820	8.56	1 gpm	—	—	—	—	71000	—	5	6	PID headspace: 2240 ppb
0825	8.90		—	—	—	—	71000	—	5	11	PID: 2790 ppb
0830	9.01		—	—	—	—	71000	—	5	16	PID: 4850 ppb
0835	9.07		—	—	—	—	71000	—	5	21	PID: 6270 ppb
0840	9.24		—	—	—	—	33.7	—	5	26	PID: 3850 ppb
0845	9.32	↓	10.04	1.255	7.05	3.94	7.78	30.2	5	31	PID: 2900 ppb
0847	pump off @ DP-22.		—	—	—	—	—	—	—	33	

BAJ

EQUIPMENT DOCUMENTATION

[ ]	DEDICATED SUBMERSIBLE	[X]	WATER LEVEL METER
[ ]	SURGE BLOCK	[X]	PID ~~ThermoOVM-580B~~ ppb Rae
[ ]	BAILER	[X]	WQ METER ~~YSI-556~~ BAJ
[ ]	2" [ ] ____	[X]	TURB. METER HACH 2100P
[ ]	GRUNDFOS	[ ]	OTHER
[ ]	2" [ ] 4"	[ ]	OTHER
[X]	OTHER whale pump	[ ]	OTHER

~~Geopump w/ 3/8" Tubing~~ BAJ

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?	X	
Sediment thickness remaining in well <1.0% of screen length?	X	
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?		X
Turbidity < 5NTUs?		X
10% change in field parameters?		X

WAS DEVELOPMENT CRITERIA MET? Y [ ] N [X]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [ ] N [X]

NUMBER OF GALLONS GENERATED: ~33

SKETCH

purge water: DK greyish olive

- did not have a ysi during development

NOTES

Brandon Shaw.

Well Developer Signature: _____ Print Name: _____

Checked By: J. Rawcliffe JR 3/1/10 Date: _____

FIGURE 4-9
WELL DEVELOPMENT RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

WELL DEVELOPMENT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	Off-Site Carriage Cleaners
PROJECT NUMBER	3612102168/ 02.02
WELL INSTALLATION DATE	01-18-2011
WELL DEVELOPMENT DATE	01-20-2011
LOCATION ID	DP-23
PAGE	1 OF 1
START TIME	0920
START DATE	01-20-2011
END TIME	1015
END DATE	01-20-2011

WELL DIAMETER (INCHES): [X] 1-IN. [X] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [X] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	20.1 FT	FINAL WELL DEPTH (BMP)	20.8 FT	SCREEN LENGTH	~10 FT	PROT. CASING STICKUP (AGS)	0 FT
INITIAL DTW (BMP)	4.41 FT	SEDIMENT REMOVED (final well depth - initial well depth)	0.7 FT	SCREENED ~~(BMP)~~ BGS INTERVAL (Approximate)	~11 TO 21	TOC/TOR DIFFERENCE	0.4 FT
WATER COLUMN (initial well depth - initial depth to water)	~15.7 FT	DTW AFTER DEVELOP. (BMP)	5.17 FT	PUMPING DEPTH ~~(BMP)~~ BGS (Approximate)	~21 FT	PID AMBIENT AIR	0.1 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	~2.5 GAL	FINAL RECOVERY DEPTH (BMP)	- FT	APPROXIMATE RECHARGE RATE	- FT/MIN	PID WELL MOUTH	0.2 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~27 GAL	FINAL RECOVERY TIME (elapsed)	- MIN	FLUIDS LOST DURING DRILLING	0 GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [X]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
0936	4.49	pump on @ DP-23	-	-	-	-	-	-	-	1	PID Headspace.
0940	5.32	1 gpm	-	-	-	-	71000	-	5	5	PID: 38.9 ppm
0945	5.35	↓	-	-	-	-	71000	-	5	10	PID: 42.1 ppm
0950	5.37		-	-	-	-	71000	-	5	15	PID: 32.0 ppm
0955	5.29		-	-	-	-	230	-	5	20	PID: 1160 ppb
1000	5.21	↓	-	-	-	-	47.9	-	5	25	PID: 8.5 ppm
1002	Pump off @ DP-23				-	-	-	-	-	27	

DAS

EQUIPMENT DOCUMENTATION

[ ]	DEDICATED SUBMERSIBLE	[X]	WATER LEVEL METER
[ ]	SURGE BLOCK	[X]	PID ~~ThermoOVM 580B~~ ppb Rae.
[ ]	BAILER	[X]	WQ METER ~~YSI 556~~ DAS
[ ]	2" [ ] ____	[X]	TURB. METER HACH 2100P
[ ]	GRUNDFOS	[ ]	OTHER
[ ]	2" [ ] 4"	[ ]	OTHER
[X]	OTHER whale pump	[ ]	OTHER
	~~Geopump w/ 3/8" Tubing~~		

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?	[ ]	[X]
Sediment thickness remaining in well <1.0% of screen length?	[X]	[ ]
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?	[X]	[ ]
Turbidity < 5NTUs?	[ ]	[X]
10% change in field parameters?		
WAS DEVELOPMENT CRITERIA MET?	[ ]	[X]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [ ] N [X]

NUMBER OF GALLONS GENERATED: ~27

SKETCH

purge water: OK grey/sl olive; v. silty

(*) Did not have access to yard during well development.

NOTES

Well Developer Signature: Brandon Shaw
Print Name:
Checked By: JRandall 3/1/10 Date:

FIGURE 4-9
WELL DEVELOPMENT RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

WELL DEVELOPMENT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	Off-Site Carriage Cleaners
PROJECT NUMBER	3612102168/ 02.02
WELL INSTALLATION DATE	01-19-2011
WELL DEVELOPMENT DATE	01-20-2011
LOCATION ID	DP-27
PAGE	1 OF 1
START TIME	1020
START DATE	01-20-2011
END TIME	1050
END DATE	01-20-2011

WELL DIAMETER (INCHES): ~~X~~ 1-IN. [X] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [X] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	17.9 FT	FINAL WELL DEPTH (BMP)	18.0 FT	SCREEN LENGTH	~10 FT	PROT. CASING STICKUP (AGS)	0 FT
INITIAL DTW (BMP)	6.81 FT	SEDIMENT REMOVED (final well depth - initial well depth)	0.1 FT	SCREENED INTERVAL (BGS) (Approximate)	≈8 TO ~18	TOC/TOR DIFFERENCE	0.4 FT
WATER COLUMN (initial well depth - initial depth to water)	11.1 FT	DTW AFTER DEVELOP. (BMP)	6.80 FT	PUMPING DEPTH (BGS) (Approximate)	≈18 FT	PID AMBIENT AIR	20.1 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	~1.8 GAL	FINAL RECOVERY DEPTH (BMP)	— FT	APPROXIMATE RECHARGE RATE	— FT/MIN	PID WELL MOUTH	<0.1 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~24 GAL	FINAL RECOVERY TIME (elapsed)	— MIN	FLUIDS LOST DURING DRILLING	0 GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [X]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
1020	6.99	pump	on	@ DP-27	—	—	—	—	—	1	
1023	7.97	1 gpm	—	—	—	—	>1000	—	3	4	PID: 5 ppb
1028	8.21	↓	—	—	—	—	>1000	—	5	9	PID: 12 ppb
1033	8.26		—	—	—	—	>1000	—	5	14	PID: 2 ppb
1038	8.17		—	—	—	—	122	—	5	19	PID: 0 ppb
1043	8.16	↓	—	—	—	—	43.3	—	5	24	PID: 0 ppb
1049	8.10	pump	off @ DP-27		—	—	—	—	—	~~24~~	

BA

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ]
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [X] OTHER Waste pump ~~Geopump w/ 3/8" Tubing~~

- [X] WATER LEVEL METER
- [X] PID ~~ThermoOVM 580B~~ ppb Rae
- [X] ~~WQ METER YSI 556~~ DR
- [X] TURB. METER HACH 2100P
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [ ] N [X]

NUMBER OF GALLONS GENERATED: ~25

NOTES

Well Developer Signature: [signature]
Checked By: JRandliffe 3/1/10

Print Name: Brandon Shaw
Date:

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?		X
Sediment thickness remaining in well <1.0% of screen length?		X
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?		X
Turbidity < 5NTUs?		X
10% change in field parameters?		X

WAS DEVELOPMENT CRITERIA MET? Y [ ] N [X]

SKETCH

purge water: lt grey/sl brown → cloudy.
(*) Did not have water quality instrument other than Hach 2100p and PID.

FIGURE 4-9
WELL DEVELOPMENT RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

WELL DEVELOPMENT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	Off-Site Carriage Cleaners
PROJECT NUMBER	3612102168/02.02
WELL INSTALLATION DATE	01-19-2011
WELL DEVELOPMENT DATE	01-21-2011

LOCATION ID	DP-28	PAGE	1 OF 1
START TIME	0745	START DATE	08-21-11
END TIME	0830	END DATE	01-21-11

WELL DIAMETER (INCHES): [ ] 1-IN. [X] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [X] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	23.4 FT	FINAL WELL DEPTH (BMP)	23.9 FT	SCREEN LENGTH	~10 FT	PROT. CASING STICKUP (AGS)	ø FT
INITIAL DTW (BMP)	8.69 FT	SEDIMENT REMOVED (final well depth - initial well depth)	~0.5 FT	SCREENED INTERVAL ~~(BMP)~~ BGS (Approximate)	≈14 TO 24	TOC/TOR DIFFERENCE	~0.3 FT
WATER COLUMN (initial well depth - initial depth to water)	14.7 FT	DTW AFTER DEVELOP. (BMP)	15.61 FT	PUMPING DEPTH ~~(BMP)~~ BGS (Approximate)	≈23.5 FT	PID AMBIENT AIR	<0.1 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	~2.4 GAL	FINAL RECOVERY DEPTH (BMP)	— FT	APPROXIMATE RECHARGE RATE	— FT/MIN	PID WELL MOUTH	1.9 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~25 GAL	FINAL RECOVERY TIME (elapsed)	— MIN	FLUIDS LOST DURING DRILLING	ø GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [X]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
0757	8.69	1 gpm	pump on @ DP-28				—	—	—	1	PID headspace
0805	15.21	↓	-	-	-	-	>1000	-	5	~~6~~ 8	12.8 ~~ppb~~ ppm
0810	15.60		-	-	-	-	>1000	-	5	~~6~~ 13	9.7 ~~ppb~~ ppm
0815	15.51		-	-	-	-	cloudy	-	5	~~18~~ 18	31.7 ~~ppb~~ ppm
0820	15.58	↓	-	-	-	-	clear	-	5	23	27.9 ~~ppb~~ ppm
0822	15.61	pump off @ DP-28			-	-	-	-	-	25	

BAS

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ] ____
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [X] OTHER whale pump
- [X] WATER LEVEL METER
- [X] PID ppb Rae
- ~~[X] WQ METER~~ NA
- ~~[X] TURB. METER~~
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?	X	
Sediment thickness remaining in well <1.0% of screen length?	X	
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?	X	
Turbidity < 5NTUs?		X
10% change in field parameters?		

WAS DEVELOPMENT CRITERIA MET? Y [ ] N [X]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [ ] N [X]

NUMBER OF GALLONS GENERATED: ~25

SKETCH

- purge water: dk grey to clear.
- did not have ysi and Hach during development.

NOTES

Well Developer Signature: [signature]

Print Name: Brandon Shaw

Checked By: [signature] 3/1/10

Date:

FIGURE 4-9
WELL DEVELOPMENT RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

APPENDIX C-5

LOW FLOW GROUNDWATER SAMPLING FIELD DATA RECORDS

LOW FLOW GROUNDWATER SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		LOCATION ID	DATE
Off-Site Carriage Cleaners		MW-2	11/16/10
PROJECT NUMBER		START TIME	END TIME
3612102168		10:30	11:45
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-MW2	~~EDT~~ 11:40	828131A	1 OF 1

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER
TUBING ID (INCHES): [ ] 1/8 [✓] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER
MEASUREMENT POINT (MP): [✓] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED		✓	
COLLAR	✓		

INITIAL DTW (BMP)	7.55 FT	FINAL DTW (BMP)	— FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	— FT
WELL DEPTH (BMP)	14.45 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	— PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	6.9 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0 GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.28 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	1.5 GAL	DRAWDOWN/ TOTAL PURGED	0/1.5	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
11:05	7.55	160	16.70	1.180	7.31	4.21	22.1	36.0	13.0	
11:10	7.55	160	16.92	1.634	7.07	0.48	11.7	-47.0	13.0	
11:15	7.55	160	16.82	1.698	7.02	0.23	5.23	-77.1	13.0	
11:20	7.55	160	16.75	1.714	7.01	0.14	3.31	-86.6	13.0	
11:25	7.55	160	16.73	1.727	7.01	0.12	2.69	-89.4	13.0	
11:30	7.55	160	16.81	1.728	7.01	0.11	1.84	-85.9	13.0	
11:35	7.55	160	16.82	1.730	7.01	0.11	1.62	-86.8	13.0	
11:40	Collect	sample								★PID reading on purge water = 8.1 ppm (peak)

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

16.8	1.73	7.0	0.1	1.6	-87	

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [✓] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [ ] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [✓] METHANOL
- [ ] OTHER none

TUBING/PUMP/BLADDER MATERIALS
- [✓] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [✓] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [✓] WL METER Solinst
- [✓] PID ppb Rae Plus
- [✓] WQ METER YSI 556
- [✓] TURB. METER Hach 2100P
- [✓] PUMP Geopump
- [ ] OTHER
- [✓] FILTERS NO. ✓ TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
✓	TCL VOCs	8260B	NO	HCl/4°C	2x40ml	yes	NO	828131A-MW2

PURGE OBSERVATIONS

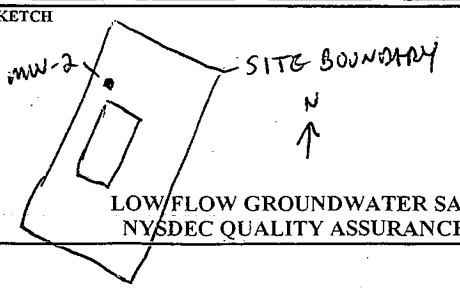
	YES	NO
PURGE WATER CONTAINERIZED	✓	
NO-PURGE METHOD UTILIZED		✓

NUMBER OF GALLONS GENERATED: 1.5

If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

NOTES

LOCATION SKETCH



Sampler Signature: Eric Detwiler Print Name: Eric Detwiler
Checked By: J. Rawcliffe Date: 11/23/10

FIGURE 4-17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners		LOCATION ID: MW-5	DATE: 11/16/10
PROJECT NUMBER: 3612102168		START TIME: 9:00	END TIME: 10:10
SAMPLE ID: 828131A-MW5	SAMPLE TIME: 10:05	SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER
TUBING ID (INCHES): [ ] 1/8 [✓] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER
MEASUREMENT POINT (MP): [✓] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED		✓	
COLLAR	✓		

INITIAL DTW (BMP)	7.72 FT	FINAL DTW (BMP)	7.72 FT	PROT. CASING STICKUP (AGS)	flushmount FT	TOC/TOR DIFFERENCE	0.25 FT
WELL DEPTH (BMP)	14.65 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	— PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	6.93 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0 GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.28 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	1.7 GAL	DRAWDOWN/ TOTAL PURGED	0ft/1.7	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
9:25	7.72	160	16.10	1.840	6.97	0.98	108	207.8	13.5	
9:30	7.72	160	16.71	1.794	6.94	0.76	23.7	209.5	13.5	
9:35	7.72	160	16.76	1.785	6.97	0.70	11.1	197.3	13.5	
9:40	7.72	160	16.85	1.779	6.97	0.49	4.69	193.3	13.5	
9:45	7.72	160	17.01	1.780	6.97	0.35	2.06	184.0	13.5	
9:50	7.72	160	17.12	1.788	6.97	0.32	1.32	176.0	13.5	
9:55	7.72	160	17.11	1.801	6.97	0.24	0.69	169.1	13.5	
10:00	7.72	160	16.87	1.814	6.98	0.18	0.66	161.5	13.5	
10:05	collect	sample								*PID headspace on initial purge water was 610 ppb

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

16.9	1.81	7.0	0.2	0.7	162	

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [✓] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [ ] LIQUINOX [ ] DEIONIZED WATER [ ] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [✓] OTHER nme

TUBING/PUMP/BLADDER MATERIALS: [✓] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [✓] HDPE TUBING [ ] LDPE TUBING [ ] OTHER [ ] OTHER
[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER [ ] OTHER

EQUIPMENT USED: [✓] WL METER ~~YSI~~ Solinst [✓] PID ppb Rae plus [✓] WQ METER YSI 556 [✓] TURB. METER Hach 2100P [✓] PUMP Geopump [ ] OTHER [ ] FILTERS NO. ✓ TYPE

ANALYTICAL PARAMETERS

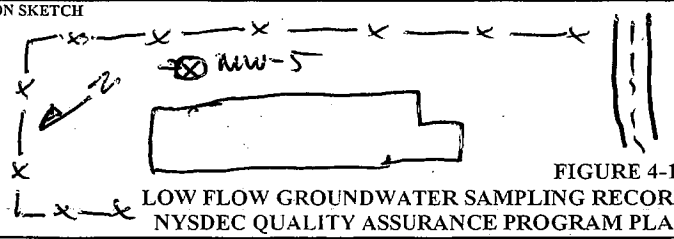
	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
✓	TCL VOCs	8260B	NO	HCl/4°C	2x40 ml	✓	NO	828131A-MW5

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES [✓] NO [ ]
NO-PURGE METHOD UTILIZED: YES [ ] NO [✓]
NUMBER OF GALLONS GENERATED: 1.7
If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

NOTES

LOCATION SKETCH



Sampler Signature: Eric Dehl
Print Name: Eric Detweiler
Checked By: T. Rawcliffe
Date: 11/23/10

FIGURE 4-17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners		LOCATION ID: MW-6M	DATE: 11/15/10
PROJECT NUMBER: 3612102168		START TIME: 14:45	END TIME: 15:35
SAMPLE ID: 828131AMW6M	SAMPLE TIME: 15:25	SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER
TUBING ID (INCHES): [ ] 1/8 [✓] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER
MEASUREMENT POINT (MP): [✓] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED		✓	
COLLAR	✓		

INITIAL DTW (BMP)	7.42 FT	FINAL DTW (BMP)	7.58 FT	PROT. CASING STICKUP (AGS)	FLUSHMOUNT FT	TOC/TOR DIFFERENCE	0.5 FT
WELL DEPTH (BMP)	39.01 FT	SCREEN LENGTH	unknown FT	PID AMBIENT AIR	— PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	31.59 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.006 GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	1.3 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	1.45 GAL	DRAWDOWN/ TOTAL PURGED	1.45 gal	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
14:50	7.60	160	16.65	1.806	8.02	4.25	165	-78.1	37.0	
14:55	7.58	160	16.36	1.972	7.22	0.55	53.3	-85.7	37.0	
15:00	7.58	160	16.30	1.989	7.11	0.26	37.1	-87.8	37.0	
15:05	7.59	160	16.22	1.995	7.08	0.20	27.5	-89.2	37.0	
15:10	7.59	160	16.11	2.001	7.07	0.17	16.9	-90.3	37.0	
15:15	7.59	160	16.12	2.005	7.06	0.14	10.2	-91.4	37.0	
15:20	7.58	160	16.03	2.006	7.05	0.12	6.89	-91.8	37.0	
15:25	7.58	160	15.89	2.008	7.06	0.11	5.98	-91.8	37.0	
⚠ COLLECT SAMPLE @ 15:25										⚠ HEADSPACE ON INITIAL PURGE WATER WAS 3.1 ppm (peak)
	WAS									

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

15.9	2.01	7.1	0.1	6.0	-92	

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [✓] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] _____ [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [ ] LIQUINOX [ ] DEIONIZED WATER [ ] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [✓] METHANOL [✓] OTHER none

TUBING/PUMP/BLADDER MATERIALS: [✓] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [✓] HDPE TUBING [ ] LDPE TUBING [ ] OTHER [ ] OTHER

[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER [ ] OTHER [ ] OTHER

EQUIPMENT USED: [✓] WL METER [✓] PID ppb Rae [✓] WQ METER YSI 556 MPS [✓] TURB. METER HACH 2100P [✓] PUMP Geopump [ ] OTHER [ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
✓	VOCs (TCL)	8260	NO	HCl/4°C	2x40ml	YES	NO	828131A-MW6M

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: [✓] YES [ ] NO
NO-PURGE METHOD UTILIZED: [ ] YES [✓] NO
NUMBER OF GALLONS GENERATED: 1.45
If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

NOTES

Sampler Signature: Eric Detseller Print Name: Eric Detseller
Checked By: J. Rawcliffe Date: 11/23/10

LOCATION SKETCH

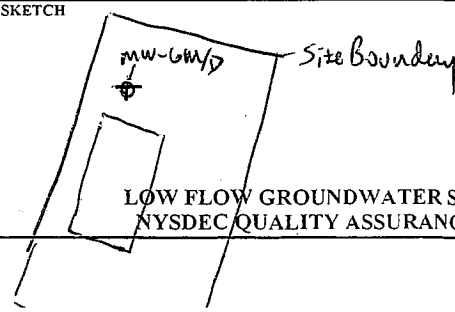


FIGURE 4-17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		LOCATION ID	DATE
Off-Site Carriage Cleaners		MW-6D	11/15/10
PROJECT NUMBER		START TIME	END TIME
3612102168		15:40	16:30
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-MW6D & Dup.	16:20/16:21	828131A	1 OF 1

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER
TUBING ID (INCHES): [ ] 1/8 [✓] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER
MEASUREMENT POINT (MP): [✓] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED		✓	
COLLAR	✓		

INITIAL DTW (BMP)	7.70 FT	FINAL DTW (BMP)	7.70 FT	PROT. CASING STICKUP (AGS)	flushmount FT	TOC/TOR DIFFERENCE	0.5 FT
WELL DEPTH (BMP)	68.1 FT	SCREEN LENGTH	unknown FT	PID AMBIENT AIR	– PPM	REFILL TIMER SETTING	– SEC
WATER COLUMN	60.4 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0 GAL	PID WELL MOUTH	– PPM	DISCHARGE TIMER SETTING	– SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	2.5 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	1.33 GAL	DRAWDOWN/ TOTAL PURGED	0/1.33	PRESSURE TO PUMP	– PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
15:48	7.71	160	16.31	1.277	7.60	5.68	6.16	-172.1	67'	strong sulfur odor
15:53	7.70	160	15.96	1.263	7.47	0.50	4.44	-200.3		
15:58	7.70	160	15.89	1.270	7.43	0.24	3.78	-222.0		
16:03	7.70	160	15.73	1.621	7.28	0.17	7.12	-217.3		
16:08	7.70	160	15.68	1.800	7.21	0.20	3.67	-215.1		
16:13	7.71	160	15.45	1.789	7.19	0.19	3.41	-214.8		
16:20	collect	sample	15.40	1.781	7.18	0.18	3.71	-213.9		
16:21	collect	duplicate	sample							~~**~~ Headspace reading on initial purge water = 3.5 ppm peak
	PA									

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

15.4	1.78	7.2	0.2	3.7	-214	

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max; nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [✓] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] _____ [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [ ] LIQUINOX [ ] DEIONIZED WATER [ ] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [✓] OTHER None

TUBING/PUMP/BLADDER MATERIALS: [✓] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [✓] HDPE TUBING [ ] LDPE TUBING [ ] OTHER [ ] OTHER

[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER [ ] OTHER [ ] OTHER

EQUIPMENT USED: [✓] WL METER Solinst [✓] PID ppb Rae [✓] WQ METER YSI [✓] TURB. METER Hach 2100P [✓] PUMP Geopump [ ] OTHER [ ] FILTERS NO. N/A TYPE

ANALYTICAL PARAMETERS

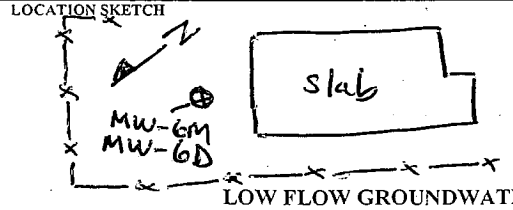
	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
✓	TCL VOCs	8260B	NO	HCl/4°C	4x 40 ml	yes	Yes	828131A-MW6D → 828131A-MW6D Dup

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: [✓] YES [ ] NO
NO-PURGE METHOD UTILIZED: [ ] YES [✓] NO
NUMBER OF GALLONS GENERATED: 1.33
If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

NOTES

LOCATION SKETCH



Sampler Signature: Eric Detweiler Print Name: Eric Detweiler
Checked By: J. Rawcliffe Date: 11/23/10

FIGURE 4-17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME	Off-Site Carriage Cleaners
PROJECT NUMBER	3612102168
SAMPLE ID	828131A-MW7
SAMPLE TIME	13:00
LOCATION ID	MW-7
DATE	11/15/10
START TIME	12:00
END TIME	1310
SITE NAME/NUMBER	CARRIAGE CLEANERS
PAGE	1 OF 1

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER
TUBING ID (INCHES): [ ] 1/8 [✓] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER
MEASUREMENT POINT (MP): [✓] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED		✓	
COLLAR	✓		

INITIAL DTW (BMP)	7.55 FT	FINAL DTW (BMP)	7.55 FT	PROT. CASING STICKUP (AGS)	flushmount FT	TOC/TOR DIFFERENCE	- FT
WELL DEPTH (BMP)	15.10 FT	SCREEN LENGTH	10(?) FT	PID AMBIENT AIR	- PPM	REFILL TIMER SETTING	- SEC
WATER COLUMN	7.55 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	< 0.1 GAL	PID WELL MOUTH	- PPM	DISCHARGE TIMER SETTING	- SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.3 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	1.9 GAL	DRAWDOWN/ TOTAL PURGED	-	PRESSURE TO PUMP	- PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
12:15	7.55	150	15.68	1.508	6.79	2.31	91.3	162.5	14.0	
12:20	7.56	160	15.80	1.814	6.85	0.78	37.5	61.0	14.0	
12:25	7.55	160	15.82	1.888	6.91	0.42	17.7	11.9	14.0	
12:30	7.55	160	15.89	1.895	6.96	0.91	19.7	-10.4	14.0	
12:35	7.55	160	15.97	1.879	6.92	0.63	10.3	-4.1	14.0	
12:40	7.55	160	15.97	1.926	6.96	0.23	3.49	-17.4	14.0	
12:45	7.55	160	16.00	1.931	6.98	0.16	2.25	-28.2	14.0	
12:50	7.55	160	16.02	1.933	6.98	0.15	1.96	-33.3	14.0	
12:55	7.55	160	15.99	1.936	6.99	0.14	1.98	-36.1	14.0	
13:00	7.55	160	15.97	1.936	7.00	0.13	1.78	-38.6	14.0	
13:00	SAMPLE									* HEADSPACE ON PURGE WATER = 8.5 ppm

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	16.0	1.94	7.0	0.1	1.8	-39

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
[✓] PERISTALTIC
[ ] SUBMERSIBLE
[ ] BLADDER
[ ] WATTERA
[ ] OTHER
[ ] OTHER

DECON FLUIDS USED
[ ] LIQUINOX
[ ] DEIONIZED WATER
[ ] POTABLE WATER
[ ] NITRIC ACID
[ ] HEXANE
[ ] METHANOL
[✓] OTHER none

TUBING/PUMP/BLADDER MATERIALS
[✓] SILICON TUBING
[ ] TEFLON TUBING
[ ] TEFLON LINED TUBING
[✓] HDPE TUBING
[ ] LDPE TUBING
[ ] OTHER
[ ] OTHER
[ ] S. STEEL PUMP MATERIAL
[ ] PVC PUMP MATERIAL
[ ] GEOPROBE SCREEN
[ ] TEFLON BLADDER
[✓] OTHER none
[ ] OTHER
[ ] OTHER

EQUIPMENT USED
[✓] WL METER
[ ] PID
[✓] WQ METER
[✓] TURB. METER Hach 2100P
[✓] PUMP Geopump
[ ] OTHER
[ ] FILTERS NO. ✓ TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[✓]	TCL VOCs	8260	NO	HCl/4°C	80 mL	YES	NO	828131A-MW7 (x2)

PURGE OBSERVATIONS

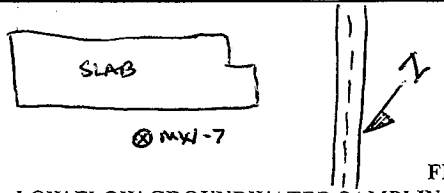
	YES	NO
PURGE WATER CONTAINERIZED	✓	
NO-PURGE METHOD UTILIZED		✓

NUMBER OF GALLONS GENERATED: 1.9

If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

NOTES

LOCATION SKETCH



Sampler Signature: Eric Detweiler Print Name: Eric Detweiler
Checked By: J. Rawcliffe Date: 11/28/10

FIGURE 4-17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners		LOCATION ID: MW-9	DATE: 11/15/10
PROJECT NUMBER: 3612102168		START TIME: 1400	END TIME: 11/15/10
SAMPLE ID: NA	SAMPLE TIME: NA	SITE NAME/NUMBER: CARRIAGE CLEANERS	PAGE: 1 OF 1

WELL DIAMETER (INCHES): ☑ 1 ☐ 2 ☐ 4 ☐ 6 ☐ 8 ☐ OTHER
TUBING ID (INCHES): ☐ 1/8 ☑ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER
MEASUREMENT POINT (MP): ☑ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP		✓	
CASING		✓	
LOCKED		✓	
COLLAR		✓	

INITIAL DTW (BMP)	4.27 FT	FINAL DTW (BMP)	>6.85 FT	PROT. CASING STICKUP (AGS)	FLUSH w/SLAB FT	TOC/TOR DIFFERENCE	* FT
WELL DEPTH (BMP)	7.13 FT	SCREEN LENGTH	unknown FT	PID AMBIENT AIR	NA PPM	REFILL TIMER SETTING	~ SEC
WATER COLUMN	2.86 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	— GAL	PID WELL MOUTH	NA PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.12 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	0.12 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
14:10	NA →									* WELL PURGED DRY IMMEDIATELY (SCREEN LIKELY FULL OF SURFACE DIRT/ DEBRIS; RISER BROKEN @ SLAB GRADE; * HEADSPACE ON PURGE WATER WAS 509 ppm (peak)

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED	
☑ PERISTALTIC	☐ LIQUINOX	☑ SILICON TUBING	☐ S. STEEL PUMP MATERIAL	☑ WL METER	SOLINST
☐ SUBMERSIBLE	☐ DEIONIZED WATER	☐ TEFLON TUBING	☐ PVC PUMP MATERIAL	☑ PID	ppb Rae
☐ BLADDER	☐ POTABLE WATER	☐ TEFLON LINED TUBING	☐ GEOPROBE SCREEN	☐ WQ METER	
☐ _____	☐ NITRIC ACID	☑ HDPE TUBING	☐ TEFLON BLADDER	☐ TURB. METER	
☐ WATTERA	☐ HEXANE	☐ LDPE TUBING	☐ OTHER _____	☑ PUMP	
☐ OTHER _____	☐ METHANOL	☐ OTHER _____	☐ OTHER _____	☐ OTHER _____	
☐ OTHER _____	☐ OTHER _____	☐ OTHER _____	☐ OTHER _____	☐ FILTERS NO. ____ TYPE ____	

ANALYTICAL PARAMETERS

PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
NO SAMPLE 11/15/10							

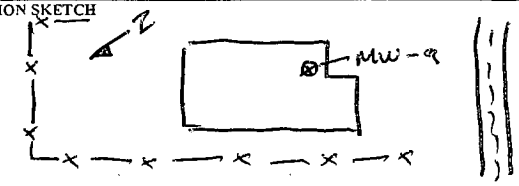
* Broken TOR sticking up out of concrete BJS 11/24/10

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	✓	
NO-PURGE METHOD UTILIZED		✓

NUMBER OF GALLONS GENERATED: 0.12
If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

LOCATION SKETCH



NOTES

Sampler Signature: Brad Schrecengost for Brad Schrecengost → Print Name: Eric Detweiler
Checked By: Brad Schrecengost Date: 11/24/10

FIGURE 4-17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

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PROJECT NAME		LOCATION ID	DATE
Off-Site Carriage Cleaners		MW-10	11/15/10
PROJECT NUMBER		START TIME	END TIME
3612102168			
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
NA	NA	CARRIAGE CLEANERS	1 OF 1

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER
TUBING ID (INCHES): [ ] 1/8 [✓] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER
MEASUREMENT POINT (MP): [✓] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP		✓	
CASING		✓	
LOCKED		✓	
COLLAR		✓	

INITIAL DTW (BMP)	4.41 FT	FINAL DTW (BMP)	>7.35 FT	PROT. CASING STICKUP (AGS)	FLUSH W/SLAB FT	TOC/TOR DIFFERENCE	✗ FT
WELL DEPTH (BMP)	7.62 FT	SCREEN LENGTH	UNKNOWN FT	PID AMBIENT AIR	— PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	3.21 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	— PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.13 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~~0~~ 0.13 GAL	DRAWDOWN/ TOTAL PURGED	—	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
13:30	NA →									PURGED DRY IMMEDIATELY
										WELL MAY HAVE BEEN
										COMPROMISED (BROKEN
										TOR @ SLABE GRADE)
										NO READINGS
										✗ HEADSPACE ON
										PURGE WATER = 18.4 ppm

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [✓] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [ ] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [✓] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [✓] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [✓] WL METER SOLINST
- [ ] PID PPB Rae
- [✓] WQ METER
- [✓] TURB. METER
- [✓] PUMP Geopump
- [ ] OTHER
- [ ] FILTERS NO. ✓ TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
	NO SAMPLE 11/15/10							

✗ Broken TOR sticking up out of concrete BJS 11/24/2010

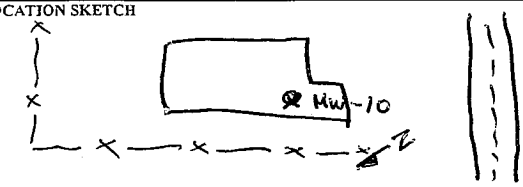
PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	✓	
NO-PURGE METHOD UTILIZED		✓

NUMBER OF GALLONS GENERATED: 0.13

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

LOCATION SKETCH



NOTES

Sampler Signature: Eric Detweiler
Print Name: Eric Detweiler
Checked By: Brad Schoonard
Date: 11/24/10

FIGURE 4-17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Offsite Carriage Cleaners	LOCATION ID: MW-11
PROJECT NUMBER: 361210 2168 (02.1)	DATE: 8-2-11
SAMPLE ID: 828131A-MW11055	START TIME: 1545
SAMPLE TIME: 1630	END TIME: 1650
	SITE NAME/NUMBER: OSCC → 828131A
	PAGE: 1 OF 1

WELL DIAMETER (INCHES): [ ] 1 [X] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR		X	

INITIAL DTW (BMP)	7.25 FT	FINAL DTW (BMP)	7.26 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	0.40 FT
WELL DEPTH (BMP)	60.01 FT	SCREEN LENGTH	~10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	52.76 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	<0.1 (0.001) GAL	PID WELL MOUTH	21.0 PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	8.65 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2 GAL	DRAWDOWN/ TOTAL PURGED	<0.1 (0.0008)	PRESSURE TO PUMP	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1550	BEGIN PURGING									
1554	7.26	160	16.95	1.997	6.96	2.95	7.23	7.0	55	
1559	7.26	185	16.77	2.085	6.93	0.85	5.89	-22.9	55	
1604	7.26	185	16.67	2.090	6.95	0.46	4.40	-19.8	55	
1609	7.25	185	16.91	2.100	6.95	0.36	4.82	-15.3	55	
1614	7.26	185	16.43	2.083	6.95	0.32	2.41	-23.8	55	
1619	7.26	180	16.59	2.088	6.95	0.29	2.15	-24.8	55	
1624	7.26	185	16.50	2.086	6.96	0.29	1.72	-29.9	55	
1629	7.26	185	16.60	2.090	6.96	0.29	1.40	-28.1	55	
				RCM						

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	17	2.09	7.0	0.3	1.4	-28

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX [ ] DEIONIZED WATER [X] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [ ] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [ ] HDPE TUBING [X] LDPE TUBING [ ] OTHER [ ] OTHER; [ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER [ ] OTHER [ ] OTHER

EQUIPMENT USED: [X] WL METER [X] PID [X] WQ METER [X] TURB. METER [X] PUMP [ ] OTHER [ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	VOC	8260B	NO	HCL	3-40ml voa	Yes	NO	828131A-MW11055
X	Methane, Ethane, Ethene	RSK175	NO	HCL	2-40ml voa	Yes	NO	828131A-MW11055
X	Anions (grp. 1)	300	NO	unpres.	1L	Yes	NO	828131A-MW11055
X	CO2 Alkalinity	SM4500, 310.1	NO	unpres.	1L	Yes	NO	828131A-MW11055
X	Sulfide	376.1	NO	NaOH, Zn Acet.	500ml	Yes	NO	828131A-MW11055
X	Fe & Mn	6010B	NO	HNO3	500ml	Yes	NO	828131A-MW11055
X	TOC	415.1	NO	H2SO4	500ml	Yes	NO	828131A-MW11055

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: [X] YES [ ] NO

NUMBER OF GALLONS GENERATED: ~2 gal.

NO-PURGE METHOD UTILIZED: [ ] YES [✓] NO

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

RCM

Sampler Signature: [signature] Print Name: Jeri L. Kilburn

Checked By: RCM 8/22/11 Date: 8-2-11

MACTEC
511 Congress Street, Portland Maine 04101

FIGURE 4.17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Offsite Carriage Cleaners	LOCATION ID: DP-10
PROJECT NUMBER: 361210216 68 (02.1)	START TIME: 1433
SAMPLE ID: 828131A-DP10013	SAMPLE TIME: 1525
SITE NAME/NUMBER: OSCC → 828131A	DATE: 8-2-11
	END TIME: 1545
	PAGE: 1 OF 1

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED		✓	
COLLAR		✓	

INITIAL DTW (BMP)	6.96 FT	FINAL DTW (BMP)	7.28 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	0.40 FT
WELL DEPTH (BMP)	16.40 FT	SCREEN LENGTH	~10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	9.44 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	<0.1 (0.01) GAL	ID WELL MOUTH	13.7 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.39 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2.25 GAL	DRAWDOWN/ TOTAL PURGED	<0.1 (0.006)	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1440	BEGIN PURGING									
1443	7.26	190	16.43	2.108	6.65	2.29	10.8	-1.3	13	
1448	7.29	200	16.43	2.069	6.68	0.55	7.33	-10.0	13	
1453	7.26	180	16.58	2.004	6.70	0.41	6.65	-5.0	13	
1458	7.28	180	16.22	1.946	6.71	0.37	4.76	-6.1	13	
1503	7.28	180	16.23	1.923	6.71	0.41	3.25	-6.4	13	
1508	7.28	190	16.29	1.900	6.72	0.26	1.33	-7.2	13	
1513	7.28	200	16.14	1.874	6.74	0.30	1.51	-8.9	13	
1518	7.28	200	16.13	1.851	6.74	0.25	1.98	-8.9	13	
1523	7.28	200	16.16	1.844	6.74	0.26	3.46	-8.3	13	
				Rcm						
FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])		Rcm	16	1.84	6.7	0.3	3.5	-8.3		

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB.: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] _____ [ ] WATTERA [ ] OTHER _____ [ ] OTHER _____

DECON FLUIDS USED: [X] LIQUINOX [ ] DEIONIZED WATER [X] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER _____

TUBING/PUMP/BLADDER MATERIALS: [ ] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [ ] HDPE TUBING [X] LDPE TUBING [ ] OTHER _____ [ ] OTHER _____

[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER _____ [ ] OTHER _____ [ ] OTHER _____

EQUIPMENT USED: [X] WL METER [X] PID [X] WQ METER [X] TURB. METER [X] PUMP [ ] OTHER _____ [ ] FILTERS NO. ___ TYPE _____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	VOC	8260B	NO	HCL	3-40ml vial	Yes	NO	828131A-DP10013
X	Methane, Ethane, Ethene	RSK175	NO	HCL	2-40ml vial	Yes	NO	828131A-DP10013
X	Anions (grp 1)	300	NO	unpres.	1L	Yes	NO	828131A-DP10013
X	CO2, Alkalinity	SM4500 310.1	NO	unpres.	1L	Yes	NO	828131A-DP10013
X	Sulfide	376.2	NO	NaOH, Zn Acet.	500ml	Yes	NO	828131A-DP10013
X	Fe + Mn	6010B	NO	HNO3	500ml	Yes	NO	828131A-DP10013
X	TOC	415.1	NO	H2SO4	500ml	Yes	NO	828131A-DP10013

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES [X] NO [ ]

NO-PURGE METHOD UTILIZED: YES [ ] NO [ ]

NUMBER OF GALLONS GENERATED: ~2.25gal.

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES: Rcm

Sampler Signature: [signature] Print Name: Jeri L. Kiburz

Checked By: Rcm 8/22/11 Date: 8-2-11

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FIGURE 4.17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Offsite Carriage Cleaners	LOCATION ID: DP-12
PROJECT NUMBER: 36121021628 02.1	DATE: 8-2-11
SAMPLE ID: 828131A-DP12013	START TIME: 1305
SAMPLE TIME: 1425	END TIME: 1430
SITE NAME/NUMBER: OSCC #828131A	PAGE: 1 OF 2

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR		X	

INITIAL DTW (BMP)	6.65 FT	FINAL DTW (BMP)	6.67 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	0.40 FT
WELL DEPTH (BMP)	16.45 FT	SCREEN LENGTH	~10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	9.80 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.1 (0.0008) GAL	PID WELL MOUTH	2.5 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.40 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2.25 GAL	DRAWDOWN/ TOTAL PURGED	0.1 (0.0004)	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1320	BEGIN PURGING									
1325	6.68	195	15.33	1.403	6.96	1.39	53.6	-90.1	13	
1330	6.66	200	14.91	1.309	6.93	0.71	49.2	-82.6	13	
1335	6.67	175	14.60	1.286	6.97	0.49	46.8	-77.0	13	
1340	6.67	160	14.69	1.262	6.97	0.52	48.1	-75.1	13	
1345	6.67	155	14.74	1.258	6.98	0.60	46.3	-77.6	13	
1350	6.67	150	14.82	1.250	6.98	0.53	28.1	-73.9	13	
1355	6.67	155	14.71	1.241	6.99	0.60	23.3	-79.6	13	
1400	6.67	155	14.79	1.242	6.99	0.50	16.3	-80.1	13	
1405	6.67	150	14.55	1.235	6.99	0.41	8.47	-65.3	13	
1410	6.67	160	14.51	1.229	6.99	0.39	7.61	-70.3	13	
1415	6.67	155	14.44	1.228	6.99	0.30	8.83	-71.1	13	
FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])										
RCM		14	1.23	7.0	0.3	98.8	-71			

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.55 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX [ ] DEIONIZED WATER [X] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [ ] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [ ] HDPE TUBING [X] LDPE TUBING [ ] OTHER [ ] OTHER; [ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER [ ] OTHER [ ] OTHER

EQUIPMENT USED: [X] WL METER [X] PID [X] WQ METER [X] TURB. METER [X] PUMP [ ] OTHER [ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	VOC	8260B	NO	HCL	3-40mL vials	Yes	NO	828131A-~~MW~~ DP12013

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES [X] NO [ ]

NO-PURGE METHOD UTILIZED: YES [ ] NO [✓]

NUMBER OF GALLONS GENERATED: ~2.25 gal.

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

RCM

Sampler Signature: [signature] Print Name: Jeri L. Kilburg

Checked By: RCM 8/22/11 Date: 8-2-11

MACTEC
511 Congress Street, Portland Maine 04101

FIGURE 4.17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Offsite Carriage Cleaners		LOCATION ID: DP-12	DATE: 8-2-11
PROJECT NUMBER: 361210216 8		START TIME: 1305	END TIME: 1430
SAMPLE ID: 828131A-DP12013	SAMPLE TIME: 1425	SITE NAME/NUMBER: OSCC → 828131A	PAGE: 2 OF 2

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR		X	

INITIAL DTW (BMP)	6.65 FT	FINAL DTW (BMP)	6.67 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	0.40 FT
WELL DEPTH (BMP)	16.45 FT	SCREEN LENGTH	~10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	9.80 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	~0.1 (0.0008) GAL	PID WELL MOUTH	2.5 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.40 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2.25 GAL	DRAWDOWN/ TOTAL PURGED	~0.1 (0.0004)	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
1420	6.67	160	14.48	1.228	6.99	0.30	9.8	-70.5	13	

RCM

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

RCM	14	1.23	7.0	0.3	9.8	-71

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] _____ [ ] WATTERA [ ] OTHER _____ [ ] OTHER _____

DECON FLUIDS USED: [X] LIQUINOX [ ] DEIONIZED WATER [X] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER _____

TUBING/PUMP/BLADDER MATERIALS: [ ] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [ ] HDPE TUBING [X] LDPE TUBING [ ] OTHER _____ [ ] OTHER _____

[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER _____ [ ] OTHER _____ [ ] OTHER _____

EQUIPMENT USED: [X] WL METER [X] PID [X] WQ METER [X] TURB. METER [X] PUMP [ ] OTHER _____ [ ] FILTERS NO. ____ TYPE _____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	VOC	8260B	NO	HCL	3-40mlvials	Yes	NO	828131A-DP12013

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	X	
NO-PURGE METHOD UTILIZED		X

NUMBER OF GALLONS GENERATED: ~2.25 gal.

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

RCM

Sampler Signature: [signature] Print Name: Jeri L. Kilburz

Checked By: RCM 8/22/11 Date: 8-2-11

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FIGURE 4.17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Offsite Carriage Cleaners	LOCATION ID: MW-7
PROJECT NUMBER: 361210216B (02.1)	DATE: 8-2-11
SAMPLE ID: 828131A-MW07012	START TIME: 1120
SAMPLE TIME: 1220	END TIME: 1245
	SITE NAME/NUMBER: OSCC → 828131A
	PAGE: 1 OF 1

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR		X	

INITIAL DTW (BMP)	7.63 FT	FINAL DTW (BMP)	7.65 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	0.25 FT
WELL DEPTH (BMP)	15.01 FT	SCREEN LENGTH	~10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	7.38 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	~0.1 GAL (0.0008)	PID WELL MOUTH	4.8 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.30 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2.5 GAL	DRAWDOWN/ TOTAL PURGED	~0.1 (0.0003)	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1135	BEGIN PURGING									
1140	7.66	235	16.32	1.789	6.84	1.39	24.4	-10.7	12	
1145	7.65	235	15.99	1.772	6.83	0.46	7.89	-28.9	12	
1150	7.65	235	15.42	1.750	6.85	0.32	2.25	-22.7	12	
1155	7.65	235	15.54	1.750	6.85	0.23	1.21	-17.6	12	
1200	7.65	245	15.37	1.742	6.84	0.21	0.91	-16.2	12	
1205	7.65	250	15.52	1.749	6.85	0.24	0.88	-19.9	12	
1210	7.65	245	15.54	1.730	6.86	0.28	1.96	-18.9	12	
1215	7.65	240	15.51	1.735	6.86	0.24	4.08	-14.9	12	
				RCM						

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

RCM	16	1.74	6.9	0.2	4.1	-15	

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330. 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER _____ [ ] WATTERA [ ] OTHER _____ [ ] OTHER _____

DECON FLUIDS USED: [X] LIQUINOX [ ] DEIONIZED WATER [X] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER _____

TUBING/PUMP/BLADDER MATERIALS: [ ] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [ ] HDPE TUBING [X] LDPE TUBING [ ] OTHER _____ [ ] OTHER _____

[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER _____ [ ] OTHER _____ [ ] OTHER _____

EQUIPMENT USED: [X] WL METER [X] PID [X] WQ METER [X] TURB. METER [X] PUMP [ ] OTHER _____ [ ] FILTERS NO. ___ TYPE _____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	VOC	8260B	NO	HCL	3-40ml vials	Yes	NO	828131A-MW07012
X	Methane, Ethane, Ethene	RSK175	NO	HCL	2-40ml vials	Yes	NO	828131A-MW07012
X	Anions (Carb.1)	300	NO	unpres.	1L	Yes	NO	828131A-MW07012
X	CO2; Alkalinity	SM4500; 310.1	NO	unpres.	1L	Yes	NO	828131A-MW07012
X	Sulfide	376.2	NO	NaOH Zn Acet.	500ml	Yes	NO	828131A-MW07012
X	Fe, Mn	6010B	NO	HNO3	500ml	Yes	NO	828131A-MW07012
X	TOC	415.1	NO	H2SO4	500ml	Yes	NO	828131A-MW07012

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES [X] NO [ ]

NO-PURGE METHOD UTILIZED: YES [ ] NO [ ]

NUMBER OF GALLONS GENERATED: ~2.5 gal.

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

RCM

Sampler Signature: [signature] Print Name: Jeri L. Kiburz

Checked By: RCM 8/22/11 Date: 8-2-11

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FIGURE 4.17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Offsite Carriage Cleaners
PROJECT NUMBER	36121021168 (02.1)
SAMPLE ID	828131A-MW05012
SAMPLE TIME	1105
LOCATION ID	MW-5
DATE	8-2-11
START TIME	0955
END TIME	1115
SITE NAME/NUMBER	OSCC → 828131A
PAGE	1 OF 1

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR		X	

INITIAL DTW (BMP)	7.79 FT	FINAL DTW (BMP)	7.81 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	0.20 FT
WELL DEPTH (BMP)	14.65 FT	SCREEN LENGTH	~10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	6.86 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	∠0.1 GAL (0.0008)	PID WELL MOUTH	24.1 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.28 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2.25 GAL	DRAWDOWN/ TOTAL PURGED	∠0.1 (0.0004)	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1015	BEGIN PURGING									
1020	7.81	250	18.25	1.725	6.83	0.64	4.19	70.4	12	
1025	7.81	225	18.04	1.726	6.84	0.38	3.48	56.1	12	
1030	7.81	200	18.14	1.738	6.84	0.34	1.73	47.6	12	
1035	7.81	200	18.18	1.746	6.84	0.40	2.19	48.2	12	
1040	7.81	200	18.08	1.745	6.84	0.54	1.37	46.8	12	
1045	7.81	200	18.09	1.752	6.84	0.49	1.68	45.2	12	
1050	7.81	200	18.01	1.750	6.84	0.42	0.94	46.2	12	
1055	7.81	200	18.06	1.756	6.84	0.37	1.08	44.3	12	
1100	7.81	200	18.03	1.752	6.84	0.36	0.73	44.1	12	
				RCM						

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

RCM	18	1.75	6.8	0.4	0.7	44	

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX [ ] DEIONIZED WATER [X] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [ ] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [ ] HDPE TUBING [X] LDPE TUBING [ ] OTHER [ ] OTHER; [ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER [ ] OTHER [ ] OTHER

EQUIPMENT USED: [X] WL METER [X] PID [X] WQ METER YSI [X] TURB. METER HACH [X] PUMP Peristaltic [ ] OTHER [ ] FILTERS NO. X TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	8260B	VOC	NO	HCL	3-40ml vials	Yes	NO	828131A-MW05012
X	CO2	SM4500	NO	NA	500ml	Yes	NO	828131A-MW05012
X	Alkalinity	310.1	NO	NA	500ml	Yes	NO	828131A-MW05012
X	Chloride	300	NO	NA	500ml	Yes	NO	828131A-MW05012

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES [X] NO [ ]

NUMBER OF GALLONS GENERATED: ~2.25gal.

NO-PURGE METHOD UTILIZED: YES [ ] NO [X]

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

RCM

Sampler Signature: Jeri L. Kiburz

Print Name: Jeri L. Kiburz

Checked By: RCM 8/22/11

Date: 8-2-11

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FIGURE 4.17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Offsite Carriage Cleaners	LOCATION ID: MW-2
PROJECT NUMBER: 361210216B (02.1)	START TIME: 0830
SAMPLE ID: 828131A-MW02012	SAMPLE TIME: 0920
	DATE: 8-2-11
	END TIME: 0955
	SITE NAME/NUMBER: OSCC → 828131A
	PAGE: 1 OF 1

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR		X	

INITIAL DTW (BMP)	7.62 FT	FINAL DTW (BMP)	7.62 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	0.35 FT
WELL DEPTH (BMP)	14.30 FT	SCREEN LENGTH	~10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	6.68 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	19.7 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.27 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	~2.5 GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0842	BEGIN PURGING									
0844	7.63	210	16.50	1.494	6.82	0.76	37.2	-9.9	12	
0849	7.63	200	16.38	1.702	6.82	0.58	6.14	-19.0	12	
0854	7.62	200	16.40	1.734	6.83	0.43	4.24	-23.8	12	
0859	7.63	200	16.37	1.738	6.83	0.32	2.43	-23.5	12	
0904	7.63	200	16.36	1.740	6.83	0.30	2.12	-24.1	12	
0909	7.63	205	16.36	1.743	6.83	0.29	2.76	-27.7	12	
0914	7.63	205	16.42	1.747	6.83	0.26	2.09	-21.3	12	
0918	7.62	210	16.34	1.745	6.83	0.25	2.21	-22.6	12	
				RCM						

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

16	1.75	6.8	0.3	2.2	-23	

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330. 0.696 = 0.696)
pH: nearest tenth (ex. 5.55 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX [ ] DEIONIZED WATER [X] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [ ] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [ ] HDPE TUBING [X] LDPE TUBING [ ] OTHER [ ] OTHER

[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER [ ] OTHER [ ] OTHER

EQUIPMENT USED: [X] WL METER [X] PID [X] WQ METER [X] TURB. METER [X] PUMP [ ] OTHER [ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	VOC	8260B	NO	HCL	3-40ml vials	Yes	Yes	828131A-MW02012
X	Methane, Ethane, Ethene	RSK175	NO	HCL	2-40ml vials	Yes	NO	828131A-MW02012
X	Nitrate, Nitrite, Sulfate, Chloride	300	NO	NA	1L	Yes	NO	828131A-MW02012
X	Sulfide	376.2	NO	NaOH + ZnAcetate	500ml	Yes	NO	828131A-MW02012
X	TOC	415.1	NO	H2SO4	500ml	Yes	NO	828131A-MW02012
X	Fe & Mn	6010B	NO	HNO3	500ml	Yes	NO	828131A-MW02012
	Alkalinity; CO2	310.1; SM4500	NO	NA	1L	Yes	NO	828131A-MW02012

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: [X] YES [ ] NO

NO-PURGE METHOD UTILIZED: [ ] YES [ ] NO

NUMBER OF GALLONS GENERATED: 2.5 gal.

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

Duplicate sample collected for VOC 8260B only and labeled 828131A-MW02012 DUP.

Sampler Signature: Jeri L. Kiburz

Print Name: Jeri L. Kiburz

Checked By: RCM 8/22/11 Date: 8-2-11

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FIGURE 4.17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Offsite Carriage Cleaners
PROJECT NUMBER	36121021168 (02.1)
SAMPLE ID	828131A-MW6M035
SAMPLE TIME	0820
LOCATION ID	MW-6M
DATE	8-2-11
START TIME	0720
END TIME	0830
SITE NAME/NUMBER	OSCC-828131A
PAGE	1 OF 1

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR		X	

INITIAL DTW (BMP)	7.53 FT	FINAL DTW (BMP)	7.73 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	0.35 FT
WELL DEPTH (BMP)	38.85 FT	SCREEN LENGTH	~10 FT	PID AMBIENT AIR	0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	31.32 FT	DRAWDOWN VOLUME (initial DTW - final DTW X well diam. squared X 0.041)	0.1 (0.008) GAL	PID WELL MOUTH	344 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	1.28 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	2.5 GAL	DRAWDOWN/ TOTAL PURGED	0.1 (0.003)	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0735	BEGIN PURGING									
0738	7.85	260	15.66	2.078	6.73	0.41	16.6	-2.2	35	
0743	7.86	265	15.61	1.752	6.75	0.47	19.8	-15.2	35	Slowed purge rate
0748	7.79	190	15.75	1.765	6.78	0.50	10.7	-19.0	35	
0753	7.76	185	15.84	1.772	6.79	0.33	10.4	-21.1	35	
0758	7.77	195	15.88	1.780	6.80	6.34	10.1	-30.9	35	
0803	7.77	190	15.88	1.783	6.81	0.29	9.8	-21.9	35	
0808	7.75	185	15.86	1.787	6.81	0.26	10.6	-28.4	35	
0813	7.74	180	15.85	1.789	6.82	0.25	8.98	-32.6	35	
0818	7.73	185	15.87	1.789	6.85	0.24	7.23	-35.9	35	
				RCM						

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

RCM	16	1.79	6.9	0.2	7.2	-36

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3335 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] _____ [ ] WATTERA [ ] OTHER _____ [ ] OTHER _____

DECON FLUIDS USED: [X] LIQUINOX [ ] DEIONIZED WATER [X] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER _____

TUBING/PUMP/BLADDER MATERIALS: [ ] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [ ] HDPE TUBING [X] LDPE TUBING [ ] OTHER _____ [ ] OTHER _____

[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER _____ [ ] OTHER _____ [ ] OTHER _____

EQUIPMENT USED: [X] WL METER [X] PID [X] WQ METER [X] TURB. METER [X] PUMP [ ] OTHER _____ [ ] FILTERS NO. ____ TYPE _____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	VOC	8260B	NO	HCL	3-40ml vials	Yes 0820	NO	828131A-MW6M035
[ ]								
[ ]								
[ ]								
[ ]								
[ ]								
[ ]								

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES [X] NO [ ]

NO-PURGE METHOD UTILIZED: YES [ ] NO [✓]

NUMBER OF GALLONS GENERATED: ~2.5 gal.

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

Sampler Signature: Jeri L. K

Print Name: Jeri L. Kiburz

Checked By: RCM 8/22/11

Date: 8-2-11

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FIGURE 4.17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Offsite Carriage Cleaners		LOCATION ID: MW-12	DATE: 8/2/11
PROJECT NUMBER: 361210216 8		START TIME: 0951	END TIME: 1130
SAMPLE ID: 828131A-MW12055	SAMPLE TIME: 1122	SITE NAME/NUMBER: DSCC-828131A	PAGE: 1 OF 1

WELL DIAMETER (INCHES): ☐ 1 ☑ 2 ☐ 4 ☐ 6 ☐ 8 ☐ OTHER

TUBING ID (INCHES): ☐ 1/8 ☑ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP): ☑ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED			✓
COLLAR	✓		

INITIAL DTW (BMP)	5.13 FT	FINAL DTW (BMP)	5.16 FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	0.30 FT
WELL DEPTH (BMP)	58.38 FT	SCREEN LENGTH	~10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	53.25 FT	DRAWDOWN VOLUME (initial DTW - final DTW X well diam. squared X 0.041)	<0.1 (0.005) GAL	PID WELL MOUTH	19.8 PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	8.73 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	2.73 GAL	DRAWDOWN/ TOTAL PURGED	<0.1 (0.002)	PRESSURE TO PUMP	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1025	BEGIN PURGING									
1030	5.16	210	15.02	2.212	6.97	2.00	876	80.1		
1035	5.16	210	14.97	2.219	6.96	0.39	363	61.7		
1040	5.16	210	14.93	2.230	6.95	0.29	143	49.3		
1045	5.16	210	14.66	2.236	6.96	0.27	70.6	41.2		
1050	5.16	210	14.69	2.231	6.97	0.27	35.4	33.0		
1055	5.16	210	14.84	2.227	6.97	0.26	16.3	25.2		
1100	5.16	210	14.99	2.224	6.98	0.24	8.69	19.7		
1105	5.16	210	14.97	2.222	6.99	0.24	5.36	14.7		
1110	5.16	210	15.03	2.218	7.00	0.23	5.11	10.4		
1115	5.16	210	14.96	2.206	7.00	0.23	3.95	6.6		
1122	SAMPLES Collected								~55' BTOC	

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	15	2.210	7.0	0.2	4.0	7

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: ☑ PERISTALTIC ☐ SUBMERSIBLE ☐ BLADDER ☐ WATTERA ☐ OTHER ☐ OTHER

DECON FLUIDS USED: ☑ LIQUINOX ☑ DEIONIZED WATER ☐ POTABLE WATER ☐ NITRIC ACID ☐ HEXANE ☐ METHANOL ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS: ☒ SILICON TUBING ☐ TEFLON TUBING ☐ TEFLON LINED TUBING ☐ HDPE TUBING ☒ LDPE TUBING ☐ OTHER ☐ OTHER

☐ S. STEEL PUMP MATERIAL ☐ PVC PUMP MATERIAL ☐ GEOPROBE SCREEN ☐ TEFLON BLADDER ☒ OTHER none ☐ OTHER ☐ OTHER

EQUIPMENT USED: ☑ WL METER Solonist ☑ PID ☑ WQ METER YSI 556 MPS ☑ TURB. METER HACH 2100P ☑ PUMP GeoPump → PEAK ☐ OTHER ☐ FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
✓	VOC	8260B	N	HCl	(3) 40ml	✓	N	
	VOA							

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	✓	
NO-PURGE METHOD UTILIZED		✓

NUMBER OF GALLONS GENERATED: ~2.5 gal

If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

SKETCH/NOTES: See Figure 3.1

Sampler Signature: Print Name: Ryan Markovski

Checked By: Brandon Shaw Date: August 22, 2011

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FIGURE 4.17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Offsite Carriage Cleaners		LOCATION ID: DP-15	DATE: 8/2/11
PROJECT NUMBER: 361210216 8		START TIME: 0820	END TIME: 0930
SAMPLE ID: 828131A-DP15013	SAMPLE TIME: 0921	SITE NAME/NUMBER: OSCC - 828131A	PAGE: 1 OF 1

WELL DIAMETER (INCHES): [✓] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [ ] 1/8 [X] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [✓] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED			✓
COLLAR	✓		

INITIAL DTW (BMP)	4.17 FT	FINAL DTW (BMP)	4.23 FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	0.40 FT
WELL DEPTH (BMP)	16.02 FT	SCREEN LENGTH	~10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	11.85 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	<0.1 (0.002) GAL	PID WELL MOUTH	2.2 PPM 8/1/11	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.49 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	2.34 GAL	DRAWDOWN/ TOTAL PURGED	<0.1 (0.001)	PRESSURE TO PUMP	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0825	BEGIN PURGING									
0830	4.22	200	14.30	1.645	6.83	2.00	118	37.3		
0835	4.23	200	13.95	1.722	6.85	0.43	42.8	36.6		
0840	4.23	200	14.08	1.755	6.90	0.39	43.7	32.3		
0845	4.23	200	13.84	1.757	6.86	0.23	12.8	32.4		
0850	4.23	200	13.81	1.755	6.85	0.19	7.64	32.3		
0855	4.23	200	13.77	1.758	6.84	0.18	5.68	32.1		
0900	4.23	200	13.74	1.762	6.83	0.16	4.69	32.2		
0905	4.23	200	13.78	1.764	6.82	0.15	2.74	32.4		
0910	4.23	200	13.74	1.766	6.82	0.16	3.35	32.3	↓	
0921	SAMPLES Collected				Rem				≈13' BTOR	

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	14	1.770	6.18	0.12	3.4	32

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [✓] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX [X] DEIONIZED WATER [ ] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [✓] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [ ] HDPE TUBING [X] LDPE TUBING [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [X] OTHER none [ ] OTHER [ ] OTHER

EQUIPMENT USED: [✓] WL METER Solinst [X] PID [✓] WQ METER YSI 556 MPS [✓] TURB. METER HACH 2100P [✓] PUMP GeoPump Flex [ ] OTHER [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
✓	VOC	8260B	✓	HCl	(3)40ml	✓	✓	See Above
✓	MNA	Various	✓	Various		✓		
	PAS							

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	✓	
NO-PURGE METHOD UTILIZED		✓

NUMBER OF GALLONS GENERATED: ≈2.1 gal

If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

SKETCH/NOTES: - New Tubing Installed

Sampler Signature: [signature] Print Name: Ryan Markowski

Checked By: Brandon Shaw Date: August 22, 2011

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FIGURE 4.17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Offsite Drainage Closure		LOCATION ID: DP-22	DATE: 8/2/11
PROJECT NUMBER: 361210216 8		START TIME: 1400	END TIME: 1505
SAMPLE ID: 828131A-DP22015	SAMPLE TIME: 1500	SITE NAME/NUMBER: OSCC → 828131A	PAGE: 1 OF 1

WELL DIAMETER (INCHES): ☐ 1 ☑ 2 ☐ 4 ☐ 6 ☐ 8 ☐ OTHER

TUBING ID (INCHES): ☐ 1/8 ☒ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP): ☑ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED			✓
COLLAR	✓		

INITIAL DTW (BMP)	7.45 FT	FINAL DTW (BMP)	7.49 FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	0.35 FT
WELL DEPTH (BMP)	19.27 FT	SCREEN LENGTH	~~0.04~~ FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	11.82 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	<0.1 (0.07) GAL	PID WELL MOUTH	3.1 PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	1.94 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL.)	2.6 GAL	DRAWDOWN/ TOTAL PURGED	<0.1 (0.003)	PRESSURE TO PUMP	— PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1408	BEGIN PURGING									
1413	7.48	200	14.42	1.899	7.05	0.51	2.08	87.1		
1418	7.48	200	13.89	1.878	7.12	0.45	1.34	70.3		
1423	7.49	200	13.75	1.872	7.01	0.26	1.15	46.1		
1428	7.49	200	13.81	1.862	6.92	0.23	1.49	27.0		
1433	7.49	200	13.67	1.858	6.64	0.20	1.33	15.1		
1438	7.49	200	14.05	1.845	6.47	0.20	2.95	10.3		
1443	7.49	200	14.14	1.843	6.56	0.20	4.19	5.6		
1448	7.49	200	14.10	1.845	6.72	0.20	1.48	2.6		
1453	7.49	200	14.25	1.839	6.76	0.21	3.11	0.7		
1458	7.49	200	14.22	1.837	6.82	0.21	1.32	-0.6		
1500	Samples Collected								≈15' BTOR	

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	14	1.840	6.8	0.2	1.3	1

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: ✓ PERISTALTIC; ☐ SUBMERSIBLE; ☐ BLADDER; ☐ WATTERA; ☐ OTHER; ☐ OTHER

DECON FLUIDS USED: ✓ LIQUINOX; ✓ DEIONIZED WATER; ☐ POTABLE WATER; ☐ NITRIC ACID; ☐ HEXANE; ☐ METHANOL; ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS: ✓ SILICON TUBING; ☐ TEFLON TUBING; ☐ TEFLON LINED TUBING; ☐ HDPE TUBING; ✓ LDPE TUBING; ☐ OTHER; ☐ OTHER

☐ S. STEEL PUMP MATERIAL; ☐ PVC PUMP MATERIAL; ☐ GEOPROBE SCREEN; ☐ TEFLON BLADDER; ✓ OTHER inline; ☐ OTHER; ☐ OTHER

EQUIPMENT USED: ✓ WL METER Solinst; ✓ PID; ✓ WQ METER YSI 556 MPS; ✓ TURB. METER Hach 2100P; ✓ PUMP 650 Pump; ☐ OTHER; ☐ FILTERS NO. — TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
✓	VOC	8260B	N	HCl	(3) 40ml	✓	N	See Above

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	✓	
NO-PURGE METHOD UTILIZED		✓

NUMBER OF GALLONS GENERATED: ≈2.6 gal

If yes, purged approximately 1 standing volume prior to sampling or N/A mL for this sample location.

SKETCH/NOTES: - New Tubing Installed

Sampler Signature: Print Name: Ryan Markowski

Checked By: Brandon Shaw Date: August 22, 2011

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FIGURE 4.17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Offsite Carriage Cleaners	LOCATION ID: DP-23
PROJECT NUMBER: 3612102168	START TIME: 1135
SAMPLE ID: 828131A-DP23-3015	SAMPLE TIME: 1213
DATE: 8/2/11	END TIME: 1230
SITE NAME/NUMBER: OSCC → 828131A	PAGE: 1 OF 1

WELL DIAMETER (INCHES): ☐ 1 ☑ 2 (RM) ☐ 4 ☐ 6 ☐ 8 ☐ OTHER

TUBING ID (INCHES): ☐ 1/8 ☒ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP): ☑ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED			✓
COLLAR	✓		

INITIAL DTW (BMP)	5.04 FT	FINAL DTW (BMP)	5.04 FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	0.35 FT
WELL DEPTH (BMP)	20.50 FT	SCREEN LENGTH	~10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	15.46 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	24.7 PPM / 8/1/11	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	2.54 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	≈1.1 GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1137	BEGIN PURGING									
1140	5.04	150	15.55	1.674	6.85	0.47	16.3	6.8		
1145	5.04	150	15.41	1.650	6.85	0.33	12.3	2.8		
1150	5.04	150	15.38	1.648	6.85	0.30	9.74	1.6		
1155	5.04	150	15.34	1.653	6.85	0.25	8.94	0.5		
1200	5.04	150	15.32	1.660	6.86	0.25	7.97	-0.1		
1205	5.04	150	15.26	1.667	6.85	0.26	7.52	-0.7		
1213	Samples Collected								≈15' BTOR	
					RM					

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	15	1.670	6.8	0.7	7.5	-1

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.55 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: ☑ PERISTALTIC ☐ SUBMERSIBLE ☐ BLADDER ☐ WATTERA ☐ OTHER ☐ OTHER

DECON FLUIDS USED: ☑ LIQUINOX ☑ DEIONIZED WATER ☐ POTABLE WATER ☐ NITRIC ACID ☐ HEXANE ☐ METHANOL ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS: ☒ SILICON TUBING ☐ TEFLON TUBING ☐ TEFLON LINED TUBING ☐ HDPE TUBING ☒ LDPE TUBING ☐ OTHER ☐ OTHER

☐ S. STEEL PUMP MATERIAL ☐ PVC PUMP MATERIAL ☐ GEOPROBE SCREEN ☐ TEFLON BLADDER ☒ OTHER None ☐ OTHER ☐ OTHER

EQUIPMENT USED: ☑ WL METER Solinst ☒ PID ☑ WQ METER YSI 556 MPS ☑ TURB. METER Hach 2100P ☑ PUMP 60 Pump ☐ OTHER ☐ FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
☑	VOC	8260B	N	HCl	(3) 40ml	✓	N	See Above
☑	MNA	Various	N	Various		✓	N	
☐								
☐								
☐								
☐								
☐	BTEX							

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES ☑ NO ☐

NO-PURGE METHOD UTILIZED: YES ☐ NO ☑

NUMBER OF GALLONS GENERATED: ≈2.5 gal

If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

SKETCH/NOTES: - New Tubing Installed

Sampler Signature: [signature] Print Name: Ryan Markowski

Checked By: Brandon Shaw Date: August 22, 2011

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FIGURE 4.17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Offsite Carriage Cleaners		LOCATION ID: DP-27	DATE: 8/2/11
PROJECT NUMBER: 36121021.68		START TIME: 1511	END TIME: 1553
SAMPLE ID: 828131A-DP27015	SAMPLE TIME: 1549	SITE NAME/NUMBER: OSCC - 828131A	PAGE: 1 OF 1

WELL DIAMETER (INCHES): ☐ 1 ☑ 2 ☐ 4 ☐ 6 ☐ 8 ☐ OTHER

TUBING ID (INCHES): ☐ 1/8 ☒ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP): ☑ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED			✓
COLLAR	✓		

INITIAL DTW (BMP)	7.53 FT	FINAL DTW (BMP)	7.56 FT	PROT. CASING STICKUP (AGS)	— FT	TOC/TOR DIFFERENCE	0.35 FT
WELL DEPTH (BMP)	17.69 FT	SCREEN LENGTH	~10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	— SEC
WATER COLUMN	10.16 FT	DRAWDOWN VOLUME (initial DTW - final DTW X well diam. squared X 0.041)	<0.1 (0.095) GAL	PID WELL MOUTH	1.7 PPM	DISCHARGE TIMER SETTING	— SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	1.67 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	1.42 GAL	DRAWDOWN/ TOTAL PURGED	<0.1 (0.904)	PRESSURE TO PUMP	— PSI

8/1/11

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1512	BEGIN PURGING									
1515	7.56	165	13.81	1.146	6.67	1.05	21.2	-13.0		
1520	7.56	165	13.47	1.140	6.69	0.44	12.8	-14.6		
1525	7.56	165	13.31	1.140	6.71	0.34	8.88	-14.9		
1530	7.56	165	13.26	1.138	6.72	0.29	5.78	-15.0		
1535	7.56	165	13.29	1.138	6.73	0.28	5.09	-14.6		
1540	7.56	165	13.29	1.139	6.73	0.29	3.95	-15.6		
1545	7.56	165	13.23	1.139	6.74	0.30	2.64	-16.3	V	
1549	Samples Collected								~15 ft bmp	

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	13	1.140	6.7	0.3	2.6	-16

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.55 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max. nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: ☑ PERISTALTIC ☐ SUBMERSIBLE ☐ BLADDER ☐ WATTERA ☐ OTHER ☐ OTHER

DECON FLUIDS USED: ☑ LIQUINOX ☑ DEIONIZED WATER ☐ POTABLE WATER ☐ NITRIC ACID ☐ HEXANE ☐ METHANOL ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS: ☒ SILICON TUBING ☐ TEFLON TUBING ☐ TEFLON LINED TUBING ☐ HDPE TUBING ☒ LDPE TUBING ☐ OTHER ☐ OTHER

☐ S. STEEL PUMP MATERIAL ☐ PVC PUMP MATERIAL ☐ GEOPROBE SCREEN ☐ TEFLON BLADDER ☒ OTHER none ☐ OTHER ☐ OTHER

EQUIPMENT USED: ☑ WL METER Solinst ☒ PID ☒ WQ METER YSI 556 MPS ☑ TURB. METER HACH 2100P ☑ PUMP GeoPump PDMC ☐ OTHER ☐ FILTERS NO. ✓ TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
✓	VOC	8260B	✓	HCl	(3) 40ml	✓	✓	See Above

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: ☑ YES ☐ NO

NO-PURGE METHOD UTILIZED: ☐ YES ☑ NO

NUMBER OF GALLONS GENERATED: ~1.5 gal

If yes, purged approximately 1 standing volume prior to sampling or N/A mL for this sample location.

SKETCH/NOTES: - New Tubing Installed

Sampler Signature: Print Name: Ryan Markowski

Checked By: Brandon Shaw Date: August 22, 2011

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FIGURE 4.17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Offsite Lagoons		LOCATION ID: DP-28	DATE: 8/2/11
PROJECT NUMBER: 3612102168		START TIME: 0700	END TIME: 0810
SAMPLE ID: 828131A-DP28018	SAMPLE TIME: 0808	SITE NAME/NUMBER: OSLL → 828131A	PAGE: 1 OF 1

WELL DIAMETER (INCHES): ☐ 1 ☑ 2 ☐ 4 ☐ 6 ☐ 8 ☐ OTHER

TUBING ID (INCHES): ☐ 1/8 ☒ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP): ☑ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED			✓
COLLAR	✓		

INITIAL DTW (BMP)	9.31 FT	FINAL DTW (BMP)	9.37 FT	PROT. CASING STICKUP (AGS)	\ FT	TOC/TOR DIFFERENCE	0.25 FT
WELL DEPTH (BMP)	23.59 FT	SCREEN LENGTH	~10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	\ SEC
WATER COLUMN	14.28 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	<0.1 (0.009) GAL	PID WELL MOUTH	20.3 PPM / 8/1/11	DISCHARGE TIMER SETTING	\ SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	2.34 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	1.95 GAL	DRAWDOWN/ TOTAL PURGED	<0.1 (0.008)	PRESSURE TO PUMP	\ PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0708	BEGIN PURGING									
0713	9.37	150	16.30	1.774	6.67	2.20	22.2	175.3		
0718	9.37	150	15.90	1.760	6.70	0.46	13.5	141.3		
0723	9.37	150	15.86	1.758	6.71	0.50	9.80	106.0		
0728	9.37	150	15.80	1.758	6.73	0.42	8.14	57.4		
0733	9.37	150	15.82	1.751	6.74	0.37	6.84	16.1		
0738	9.37	150	15.78	1.747	~~6.82~~ 6.75	0.30	5.02	-4.2		
0743	9.37	150	15.68	1.745	6.76	0.29	4.04	-19.8		
0748	9.37	150	15.70	1.738	6.77	0.30	4.21	-26.7		
0753	9.37	150	15.72	1.736	6.77	0.29	4.02	-33.6		
0758	9.37	150	15.74	1.734	6.77	0.31	3.41	-36.5		
0808	SAMPLES Collected								~18' Bton	

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	16	1.731	6.8	0.3	3.4	-37

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330. 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: ☑ PERISTALTIC ☐ SUBMERSIBLE ☐ BLADDER ☐ WATTERA ☐ OTHER ☐ OTHER

DECON FLUIDS USED: ☑ LIQUINOX ☑ DEIONIZED WATER ☐ POTABLE WATER ☐ NITRIC ACID ☐ HEXANE ☐ METHANOL ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS: ☒ SILICON TUBING ☐ TEFLON TUBING ☐ TEFLON LINED TUBING ☐ HDPE TUBING ☒ LDPE TUBING ☐ OTHER ☐ OTHER; ☐ S. STEEL PUMP MATERIAL ☐ PVC PUMP MATERIAL ☐ GEOPROBE SCREEN ☐ TEFLON BLADDER ☑ OTHER none ☐ OTHER ☐ OTHER

EQUIPMENT USED: ☑ WL METER Solinst ☒ PID ☑ WQ METER YSI 556 MPS ☑ TURB. METER HACH 2100P ☑ PUMP GEO Pump → PZVC ☐ OTHER ☐ FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
☑	VOC	8260B	N	HCl	~~3~~ 40 mL	N	MS/MSD	See Analyte

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	✓	
NO-PURGE METHOD UTILIZED		✓

NUMBER OF GALLONS GENERATED: ~1.85 gal

If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

SKETCH/NOTES

- Collected MS/MSD along w/ sample ID 9 VOC sample bottle total
- New Tubing

Sampler Signature: [signature] Print Name: Ryan Mankowski

Checked By: Brandon Shaw Date: August 22, 2011

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FIGURE 4.17
LOW FLOW GROUNDWATER SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

APPENDIX C-6

PORE WATER SAMPLING RECORDS

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

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PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: PS-1 / DATE: 11-16-2010
PROJECT NUMBER: 3612102168	START TIME: 1215 / END TIME: 1300
SAMPLE ID: 828131A-PS0101 / SAMPLE TIME: 1240	SITE NAME/NUMBER: 828131A / PAGE: 1 OF 1

SAMPLE TYPE: [ ] GRAB [ ] WELL/PIEZOMETER [ ] GEOPROBE [✓] PORE WATER (mg/mss) [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [ ] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [✓] OTHER N/A

TUBING ID (INCHES): [ ] 1/8 [✓] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none

WELL INTEGRITY (YES / NO / N/A): CAP, CASING, LOCKED COLLAR — N/A 04

INITIAL DTW (BMP)	FT	FINAL DTW (BMP)	FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	FT	SCREEN LENGTH	FT	PID AMBIENT AIR	PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	BV GAL	PID WELL MOUTH	PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1220	BEGIN PURGING									
1229	—	~150	10.52	2.244	6.93	1.20	141	-16.5	~2'	
1234	—	↓	10.42	2.248	6.88	0.53	202	-18.9	↓	
1239	—	↓	10.47	2.521	6.87	0.29	94.9	-20.1	↓	PID: 54 ppb
1240	Collected grab Sample @ PS-1									
1245	—	—	7.23 / 1.27	1.269 / 8.4	8.40 / 13.9	13.93 / 1.7	1.74	-10.5 / -11	~1' / ~2m	Surface water parameters

SAMPLE OBSERVATIONS: CLEAR ✓ COLORED CLOUDY TURBID ODOR OTHER (see notes)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX [X] DEIONIZED WATER [ ] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [X] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [ ] HDPE TUBING [X] LDPE TUBING [ ] OTHER [ ] OTHER

[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [✓] TEFLON BLADDER pore water [ ] OTHER [ ] OTHER

EQUIPMENT USED: [✓] WATER LEVEL METER [✓] PID [✓] WQ METER [✓] TURB. METER [ ] PUMP [ ] OTHER [ ] FILTERS NO. TYPE

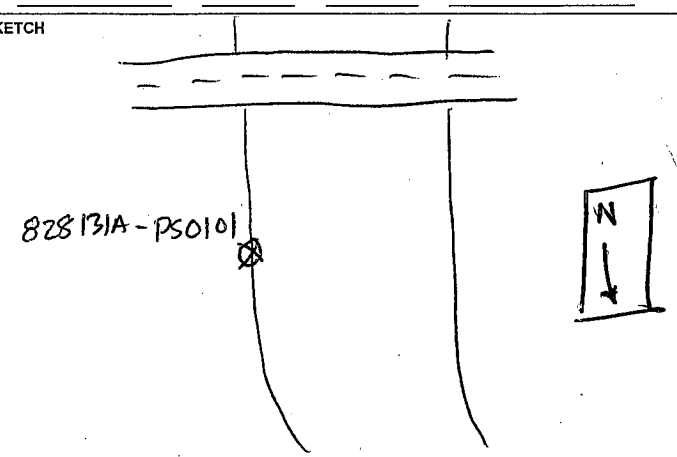
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓	✓	See Above

NOTES

Collected pore water sample from Toe of bank of stream and approx. 2' into water bank.
- collected ms/mss here also

SKETCH



PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES [ ] NO [✓]

NUMBER OF GALLONS GENERATED: ~2

NO-PURGE METHOD UTILIZED: YES [ ] NO [✓]

If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: Print Name: Brandon Shaw

Checked By: RCM Date: 9/13/11

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		PS0201	11/16/10
PROJECT NUMBER		**START TIME**	**END TIME**
3612102168		2:15	16:21
SAMPLE ID	**SAMPLE TIME**	**SITE NAME/NUMBER**	**PAGE**
828131A-PS0201	16:06	pw02	1 OF 1

SAMPLE TYPE: [ ] GRAB [ ] WELL/PIEZOMETER [ ] GEOPROBE [✓] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [ ] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [✓] OTHER 1/4"

TUBING ID (INCHES): [ ] 1/8 [✓] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [✓] OTHER none

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

N/A

INITIAL DTW (BMP)	FT	FINAL DTW (BMP)	FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	FT	SCREEN LENGTH	N/A FT	PID AMBIENT AIR	PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
3:45	–	250	9.02	1.800	6.95	0.37	247	-111.8	2' +/-	odor, sheen
3:55	–	150	8.94	1.793	6.94	0.30	425	-113.2	"	odor, sheen
4:05	–	150	8.83	1.791	6.93	0.20	202	-116.9	"	odor, sheen
4:06	collect sample 828131A-PS02									
4:09	–	–	7.60 / 8	1.191 / 1.19	8.29 / 8.3	15.29 / 15.3	1.94 / 1.9	-109.1 / -110 RCM		Surface Parameters

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ____ CLOUDY ____ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

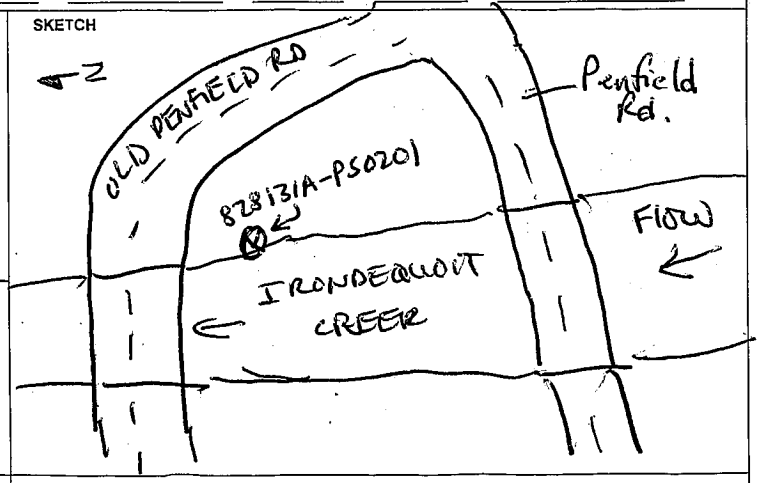
TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[ ] PID
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[ ] GEOPROBE SCREEN	[✓] WQ METER YSI 556
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[✓] TURB. METER HACH 2100P
[ ] OTHER	[ ] HEXANE	[X] LDPE TUBING	[✓] OTHER pore water sampler	[✓] PUMP Geopump
[ ] OTHER	[ ] METHANOL	[ ] OTHER	[ ] OTHER	[ ] OTHER
	[ ] OTHER	[ ] OTHER	[ ] OTHER	[ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2/ x 40 mL	✓		See above

NOTES
odor and sheen noted on porewater (approx. 2' below creek water level) sample pt.

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: –
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or ____ mL for this sample location.

Sampler Signature: for Eric Detweiler Print Name: Eric Detweiler

Checked By: RCM Date: 9/13/11

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners		SAMPLE LOCATION: PS0301 - East bank Frond. crk.	DATE: 11/16/10
PROJECT NUMBER: 3612102168		START TIME: 14:30	END TIME: 17:30
SAMPLE ID: 828131A-PS0301	SAMPLE TIME: 17:20	SITE NAME/NUMBER: 828131A	PAGE: 1 OF 1

SAMPLE TYPE: [ ] GRAB [ ] WELL/PIEZOMETER [ ] GEOPROBE [✓] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [ ] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [✓] OTHER 1/4"

TUBING ID (INCHES): [ ] 1/8 [✓] 1/4 [✓] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	FT	FINAL DTW (BMP)	FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	FT	SCREEN LENGTH	FT	PID AMBIENT AIR	PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
16:50	—	250	8.39	1.575	6.58	1.12	559	-91.2	—	
17:00	—	250	8.35	1.578	7.48	0.61	266	-98.2	—	light odor
17:10	—	250	8.33	1.575	7.42	0.65	214	-102.4	—	light odor
17:15	—	250	8.32	1.574	7.39	0.68	198	-104.6	—	light odor
17:21	—	200	7.92	1.085	8.18	15.74	2.7	-107.8	—	Surface parameters
			8	1.09	8.2	15.7	2.7	-110	RCM	

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ____ CLOUDY ____ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

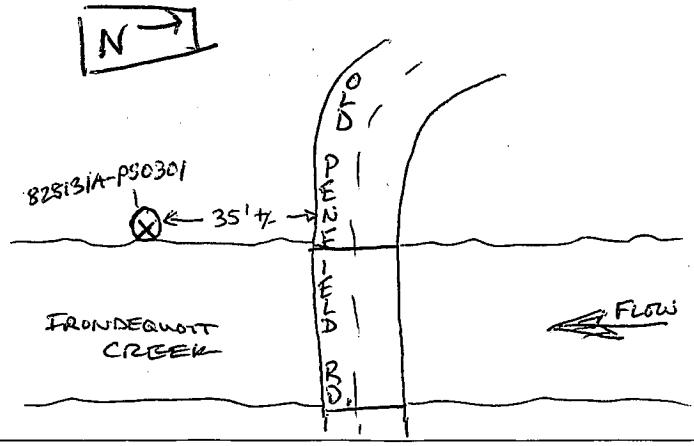
TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED	
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER	
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[ ] PID	
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[ ] GEOPROBE SCREEN	[✓] WQ METER	YSI 556
[ ] WATTERA	[ ] NITRIC ACID	[ ] HDPE TUBING	[✓] TEFLON BLADDER	[✓] TURB. METER	Hach 2100P
[ ] OTHER	[ ] HEXANE	[X] LDPE TUBING	[✓] OTHER Pore Water	[✓] PUMP	Geopump
[ ] OTHER	[ ] METHANOL	[ ] OTHER	[ ] OTHER Sampler	[ ] OTHER	
	[ ] OTHER	[ ] OTHER	[ ] OTHER	[ ] FILTERS NO. ___	TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See above

NOTES
Too dark outside to observe whether or not a sheen was present.

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[✓]	NUMBER OF GALLONS GENERATED: —
NO-PURGE METHOD UTILIZED	[ ]	[✓]	If yes, purged approximately 1 standing volume prior to sampling or ____ mL for this sample location.

Sampler Signature: for Eric Detweiler Print Name: Eric Detweiler CLW.

Checked By: RCM Date: 9/13/11

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		PS0401	11/17/10
PROJECT NUMBER		**START TIME**	**END TIME**
3612102168		9:30	
SAMPLE ID	**SAMPLE TIME**	**SITE NAME/NUMBER**	**PAGE**
NA	NA		1 OF 1

SAMPLE TYPE [ ] GRAB [ ] WELL/PIEZOMETER [ ] GEOPROBE [X] PORE WATER [ ] OUTFALL [ ] OTHER _____

WELL DIAMETER (INCHES) [ ] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER _____

TUBING ID (INCHES) [ ] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER _____

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER _____

WELL INTEGRITY	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	FT	FINAL DTW (BMP)	FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	FT	SCREEN LENGTH	FT	PID AMBIENT AIR	PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
10:02		300	9.33	0.698	7.04	9.44	34.0	228.5	2.5'(+/-)	
10:07		300	8.75	0.631	7.21	9.79	548	218.4	"	DO too high, abandon sample

SAMPLE OBSERVATIONS: CLEAR _____ COLORED _____ CLOUDY _____ TURBID _____ ODOR _____ OTHER (see notes) _____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[ ] WATER LEVEL METER
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[ ] PID
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[ ] GEOPROBE SCREEN	[ ] WQ METER
[ ] _____	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[ ] TURB. METER
[ ] WATTERA	[ ] HEXANE	[X] LDPE TUBING	[ ] OTHER _____	[ ] PUMP
[ ] OTHER _____	[ ] METHANOL	[ ] OTHER _____	[ ] OTHER _____	[ ] OTHER
[ ] OTHER _____	[ ] OTHER _____	[ ] OTHER _____	[ ] OTHER _____	FILTERS NO. ___ TYPE _____

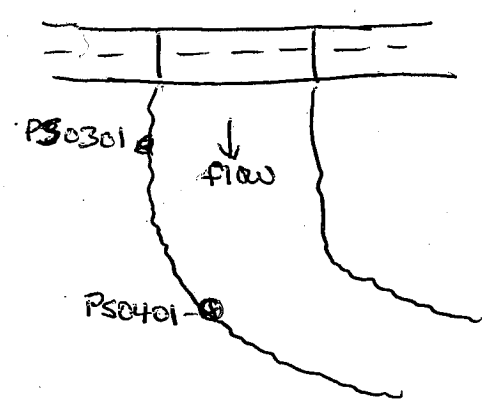
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compound	8620B	HCl	3 x 40 mL			

NOTES

DO is too high, abandon sample

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[ ]	NUMBER OF GALLONS GENERATED _____
NO-PURGE METHOD UTILIZED	[ ]	[ ]	If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

Sampler Signature: Print Name:

Checked By: Date:

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: PS-04 / DATE: 01-17-2011
PROJECT NUMBER: 3612102168/02.02	START TIME: 0955 / END TIME: 1100
SAMPLE ID: 828131A-PS0402 / SAMPLE TIME: 1050	SITE NAME/NUMBER: 828131A / PAGE: 1 OF 1

SAMPLE TYPE: [ ] GRAB [ ] WELL/PIEZOMETER [ ] GEOPROBE [X] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [ ] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [X] OTHER 1/4"

TUBING ID (INCHES): [ ] 1/8 [X] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	/ FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	/ FT	SCREEN LENGTH	/ FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	/ GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1031	BEGIN PURGING									
1038	—	350	4.29	1.114	7.13	1.23	44.4	18.0	-3'	DR890 DO: 2.8mg/L
1043	—	350	4.46	1.177	7.09	1.03	39.8	6.3		
1048	—	350	4.52	1.118	7.07	0.96	57.9	1.9		
1050	—	Collected pore water sample								
1052	pump off		4	1.12	7.1	1.0	57.9	1.9		RCM 2/4/11

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ____ CLOUDY ____ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [ ] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [X] LDPE TUBING
- [ ] OTHER
- [ ] OTHER
- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [X] OTHER Pore Water Sampler
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [ ] PID ppb ThermoOVM 580B
- [X] WQ METER YSI 556
- [X] TURB. METER HACH 2100P
- [X] PUMP Geopump
- [X] OTHER DR 890 Colorimeter
- [ ] FILTERS NO. NA TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above

NOTES

collected from -3' into stream bank
PID: 20.1 ppm
Stream DO: 14.4mg/L w/ DR 890
pore water DO: 2.8 mg/L
(*) confirmed ✓

SKETCH

stream Readings: @1055
DO (DR890): 14.4 mg/L
Turbidity: 3.03 ; DO: 14.14 mg/L.
pH: 7.69
E/L: 1.789
Temp 0.02
Orp: 21.4

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED: /
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: Brandon Shaw Print Name:

Checked By: RCM Date: 1/25/11

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Off-Site Carriage Cleaners		PS-5	11/17/10
PROJECT NUMBER		START TIME	END TIME
3612102168		11:00	11:45
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
828131A-PS0501	11:41	828131A	1 OF 1

SAMPLE TYPE: ☐ GRAB ☐ WELL/PIEZOMETER ☐ GEOPROBE ☑ PORE WATER ☐ OUTFALL ☐ OTHER

WELL DIAMETER (INCHES): ☐ 1 ☐ 2 ☐ 4 ☐ 6 ☐ 8 ☑ OTHER 1/4"

TUBING ID (INCHES): ☐ 1/8 ☑ 1/4 ☑ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP): ☐ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☑ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

BA

INITIAL DTW (BMP)	FT	FINAL DTW (BMP)	FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	FT	SCREEN LENGTH	FT	PID AMBIENT AIR	PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	PSI

BA

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
11:06	—	250	8.91	1.825	6.7	2.17	7,000	-64.3	—	
11:16	—	250	8.91	1.864	6.66	2.19	740	-71.4	—	
11:25	—	250	8.78	1.827	6.66	2.46	74.2	-72.2	—	
11:35	—	200	8.68	1.794	6.67	2.53	18.0	-73.3	—	
11:44	—	NA	8.61	0.693	7.83	16.29	31.2	-53.7		surface water parameters
			9	0.693	7.8	16.3	31.2	-54	rcm	

SAMPLE OBSERVATIONS: CLEAR ____ COLORED ____ CLOUDY ____ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
X PERISTALTIC	X LIQUINOX	X SILICON TUBING	S. STEEL PUMP MATERIAL	WATER LEVEL METER rcm
SUBMERSIBLE	X DEIONIZED WATER	TEFLON TUBING	PVC PUMP MATERIAL	✓ PID ppb
BLADDER	POTABLE WATER	TEFLON LINED TUBING	GEOPROBE SCREEN	✓ WQ METER YSI
WATTERA	NITRIC ACID	HDPE TUBING	✓ TEFLON BLADDER	✓ TURB. METER
OTHER	HEXANE	X LDPE TUBING	OTHER pore water Sampler	PUMP
OTHER	METHANOL	OTHER	OTHER	OTHER
	OTHER	OTHER	OTHER	FILTERS NO. ____ TYPE ____

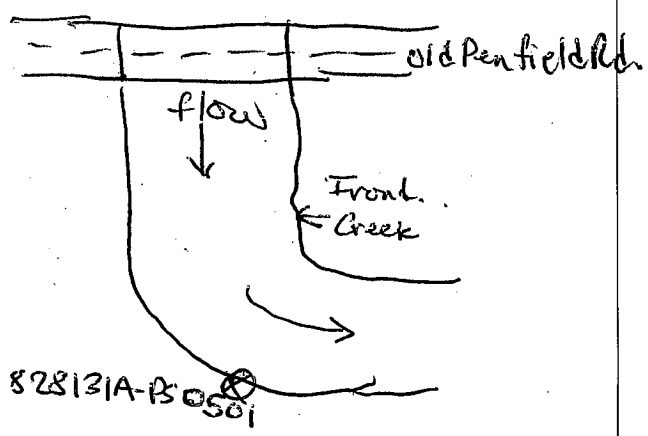
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compound	8620B	HCl	2 x 40 mL	✓		See Above

NOTES

No odor or sheen on sample / purged water

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	☐	☑	NUMBER OF GALLONS GENERATED: —
NO-PURGE METHOD UTILIZED	☐	☑	If yes, purged approximately 1 standing volume prior to sampling or NA mL for this sample location.

Sampler Signature: for Eric Detweiler Print Name: Eric Detweiler

Checked By: rcm Date: 9/13/11

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: PS-06 / DATE: 1/17/11
PROJECT NUMBER: 3612102168/02.02	START TIME: 1325 / END TIME: 1330
SAMPLE ID: 828131A-PS06021312 / SAMPLE TIME	SITE NAME/NUMBER: 828131A / PAGE: 1 OF 1

SAMPLE TYPE: [ ] GRAB [ ] WELL/PIEZOMETER [ ] GEOPROBE [X] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [ ] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [X] OTHER 1/4"

TUBING ID (INCHES): [ ] 1/8 [X] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	/ FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	/ FT	SCREEN LENGTH	/ FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	/ GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1330	BEGIN PURGING									
1349			4.05	1.073	7.68	0.70	64.6	-86.5	~12'	DR890 DO = 1.6 mg/L
1354			4.19	1.066	7.59	0.36	53.6	-88.6		
1359			4.24	1.067	7.54	0.20	26.0	-92.2		
1312	→	Collected	Samples							
					Ran	//				

SAMPLE OBSERVATIONS: CLEAR ✓ COLORED ____ CLOUDY ____ TURBID ____ ODOR None OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX [X] DEIONIZED WATER [ ] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [ ] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [ ] HDPE TUBING [X] LDPE TUBING [ ] OTHER

[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [X] OTHER Pore Water Sampler [ ] OTHER [ ] OTHER

EQUIPMENT USED: [ ] WATER LEVEL METER [ ] PID ppb ThermoOVM 580B [X] WQ METER YSI 556 [X] TURB. METER HACH 2100P [X] PUMP Geopump [ ] OTHER [ ] FILTERS NO. NA TYPE

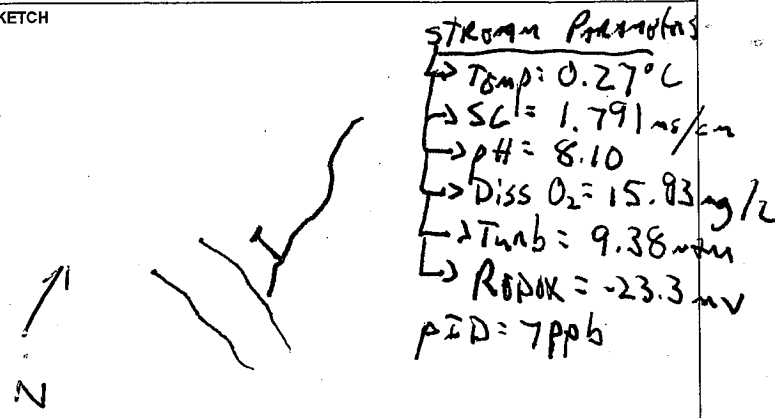
ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓	—	See Above

NOTES

- STREAM DO = 15.9 mg/L
- PORE Water DO = 1.6 mg/L

SKETCH



PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED: /
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or ____NA____mL for this sample location.

Sampler Signature: Ryan Mankowski Print Name: Ryan Mankowski

Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Off-Site Carriage Cleaners	SAMPLE LOCATION: PS-07 / DATE: 1/21/11
PROJECT NUMBER: 3612102168/02.02	START TIME: 0745 / END TIME: 0955
SAMPLE ID: 828131A-PS0802 / SAMPLE TIME: 0945	SITE NAME/NUMBER: 828131A / PAGE: 1 OF 1

SAMPLE TYPE: [ ] GRAB [ ] WELL/PIEZOMETER [ ] GEOPROBE [X] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [ ] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [X] OTHER 1/4"

TUBING ID (INCHES): [ ] 1/8 [X] 1/4 [X] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

INITIAL DTW (BMP)	/ FT	FINAL DTW (BMP)	/ FT	PROT. CASING STICKUP (AGS)	/ FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	/ FT	SCREEN LENGTH	/ FT	PID AMBIENT AIR	/ PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	/ FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	/ GAL	PID WELL MOUTH	/ PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	/ GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	/ GAL	DRAWDOWN/ TOTAL PURGED	/	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
0920	BEGIN PURGING									→ Pump On
0927		225	1.80	1.823	6.83	5.00	35.7	-3.2	~2'	
0932		225	1.79	1.812	6.82	4.25	277	6.8		
0937		225	1.72	1.809	6.81	3.96	222	0.6		
0945	SAMPLES Collected									

Rem
1/24/11

SAMPLE OBSERVATIONS: CLEAR ____ COLORED Brownish CLOUDY ✓ TURBID ✓ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER ____
- [ ] WATTERA
- [ ] OTHER ____
- [ ] OTHER ____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER ____

TUBING/PUMP/BLADDER MATERIALS

[X]	SILICON TUBING	[ ]	S. STEEL PUMP MATERIAL
[ ]	TEFLON TUBING	[ ]	PVC PUMP MATERIAL
[ ]	TEFLON LINED TUBING	[ ]	GEOPROBE SCREEN
[ ]	HDPE TUBING	[ ]	TEFLON BLADDER
[X]	LDPE TUBING	[X]	OTHER Pore Water Sampler
[ ]	OTHER ____	[ ]	OTHER ____
[ ]	OTHER ____	[ ]	OTHER ____

EQUIPMENT USED
- [ ] WATER LEVEL METER
- [ ] PID ppb ThermoOVM 580B
- [X] WQ METER YSI 556
- [X] TURB. METER HACH 2100P
- [X] PUMP Geopump
- [X] OTHER DR 890 DO meter
- [ ] FILTERS NO. NA TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	Volatile Organic Compounds	8620B	HCL	2 X 40ml	✓		See Above

NOTES

- Stream DO = 14.5 mg/L
- pore water DO = 5.8 mg/L colorimeter

SKETCH

Stream Parameters
- Temp = 0.05 °C
- SC = 1.990 ms/cm
- pH = 7.71
- Diss O_2 = 14.21 mg/L
- Turb = DID not take
- DO% = 97.8
- ORP = 1.5
- PID → DID not take

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[ ]	[X]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED: /

If yes, purged approximately 1 standing volume prior to sampling or ___NA___ mL for this sample location.

Sampler Signature: [signature] Print Name: Ryan Mankowski

Checked By: Brandon Shaw Date: 02-28-2011

FIGURE 4-10
GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

APPENDIX C-7

EXTERIOR SOIL VAPOR SAMPLING RECORDS

SOIL VAPOR SAMPLING RECORD

PROJECT NAME: Off-Site Carriage Cleaners
LOCATION ID: SV-01 through SV-04 DATE: 11/29/10
PROJECT NO./TASK NO.: 3612102168-02.01
CLIENT: NYSDEC
PROJECT LOCATION: Penfield, New York
SAMPLER NAME: Eric Detweiler
WEATHER CONDITIONS (AM): NA
SAMPLER SIGNATURE: Eric Detweiler
WEATHER CONDITIONS (PM): partly cloudy, windy 42°
CHECKED BY: BAS DATE: 12-01-2010.

SUMMA Canister Record Information

SOIL VAPOR SAMPLE		SOIL VAPOR SAMPLE		SOIL VAPOR SAMPLE		SOIL VAPOR SAMPLE	
Flow Regulator No:	2675	Flow Regulator No:	2659	Flow Regulator No:	2710	Flow Regulator No:	2714
Flow Rate (mL/min):	33	Flow Rate (mL/min):	33	Flow Rate (mL/min):	33	Flow Rate (mL/min):	33
Canister Serial No:	321	Canister Serial No:	311	Canister Serial No:	310	Canister Serial No:	318
Start Date/Time:	11/29/2010 14:45	Start Date/Time:	11/29/2010 15:05	Start Date/Time:	11/29/2010 15:17	Start Date/Time:	11/29/2010 15:33
Start Pressure ("Hg):	-30	Start Pressure ("Hg):	-28	Start Pressure ("Hg):	-28.5	Start Pressure ("Hg):	-29.5
Stop Date/Time:	11/29/2010 16:10	Stop Date/Time:	11/29/2010 16:11	Stop Date/Time:	11/29/2010 16:54	Stop Date/Time:	11/29/2010 16:01
Stop Pressure ("Hg):	-30	Stop Pressure ("Hg):	-28	Stop Pressure ("Hg):	-5	Stop Pressure ("Hg):	-3
Sample ID: B28131A-GV010 (*)		Sample ID: B28131A-GV020 (*)		Sample ID: B28131A-GV0301		Sample ID: B28131A-GV0401	

Other Sampling Information:

Property Type	commercial	Property Type	commercial	Property Type	commercial	Property Type	Commercial
Helium Test Conducted?	No	Helium Test Conducted?	No	Helium Test Conducted?	No	Helium Test Conducted?	No
Potential Vapor Entry Points:	NA	Potential Vapor Entry Points:	NA	Potential Vapor Entry Points:	NA	Potential Vapor Entry Points:	NA
Ground Surface:	asphalt	Ground Surface:	asphalt	Ground Surface:	grass	Ground Surface:	grass
Noticable Odor:	No	Noticable Odor:	No	Noticable Odor:	No	Noticable Odor:	No
PID Reading (ppb): (ppm)	purge air 0.0 ppm	PID Reading (ppb):	purge air 0.0 ppm	PID Reading (ppb):	purge air 1.2 ppm	PID Reading (ppb):	purge air 0.0 ppm
Intake Depth:	~6'	Intake Depth:	~6'	Intake Depth:	~5'	Intake Depth:	Unknown
Commens: tight soils? sample would not purge or draw		Commens: tight soils? sample would not purge or draw		Commens: sample collected slowly (limited flow)		Commens: no sample restrictions	

Comments/Location Sketch:

- SV-01 and SV-02 locations would not draw air/vapor (tight soils/water?)
- SV-03 drew sample slowly (limited airflow)
- SV-04 drew sample as normal (within ½ hr)

(*) Did not submit summa samples to lab for analysis.

BAS 12-01-2010.

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FIGURE 4-19
SOIL VAPOR SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

SOIL VAPOR IMPLANT SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

Project Name:	Off-Site Carriage Cleaners			Boring ID:	SV-01
Project Location:	Penfield, New York			Page No.	1
Project No.:	3612102168	Client:	NYSDEC	of:	1
Boring Location:	North of site	Refusal Depth:	NA	Total Depth:	6'
Weather:	42° F ; Sunny	Soil Drilled:	6	Method:	Direct Push
Subcontractor:	Nothnagle	P.I.D (eV):	10.8	Protection Level:	D
Driller:	Jeff S.	Date Started:	11-15-2010	Date Completed:	11-15-10.
Rig Type/Model:	6610 DT	Logged By:	BAS	Checked By:	BSS 11/24/10
Reference Elevation:	Unknown	Water Level:	~8' bgs	Time:	— NR BSS
He Breakthrough %:	—	Initial He %:	—	Final He %:	—

Sample Information					Monitoring				
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	SPT Blows/6"	N Value	PID Field Scan	PID Headspace	Lab Sample Collected	Lab Sample ID	USCS Group Symbol ft bgs

Soil Vapor Diagram (1)

Overburden Drilling Notes:

* perched water zone @ ~3.5' to 4' bgs

Soil Vapor Point Construction Notes:

- concrete; completed with road box.
- solid ¼" teflon tubing with red cap.
- hydrated bentonite
- 0.5 — stainless steel screen (~0.5')
- 5 — glass beads
- expendible steel point
- 6

NOTES: (1) not to scale

FIGURE 4-11
SOIL VAPOR IMPLANT SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: SV-01
Project Location: Penfield, New York			Page No. 1
Project No.: 3612102168	Client: NYSDEC		of: 1
Boring Location: North of site	Refusal Depth: NA	Total Depth: 6	Bore Hole ID/OD: 2"
Weather: 42°F, sunny.	Soil Drilled: 6	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: BAS
Driller: Jeff S.	Date Started: 11-15-10	Date Completed: 11-15-10	Sampler ID/OD: —
Rig Type/Model: 6610 DT	Logged By: BAS	Checked By: BJS 11/24/10	Hammer Wt/Fall: —
Reference Elevation: unknown	Water Level: Unknown	Time: 0930	Hammer Type: —

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
1		3.1/4.0		2.0-1			0-2 Lt olive/tan/brown clean fine SAND w/ some coarse sand, damp; poorly graded, m dense, SP 2-3.5 Light grey clean fine Sand, damp to wet, some coarse sand, poorly graded, SP, m dense 3.5-4; Saturated fine SAND; poorly graded, SP, trace silt;	Fill	
5		2.5/2.0		0.1			4-6 Lt grey to grey to dark olive to dk grey; fine SANDY SILT; poorly graded, damp to dry, loose to m dense, trace m coarse Sand, NP → SP.	SM SM	
							BA		

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL VAPOR IMPLANT SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

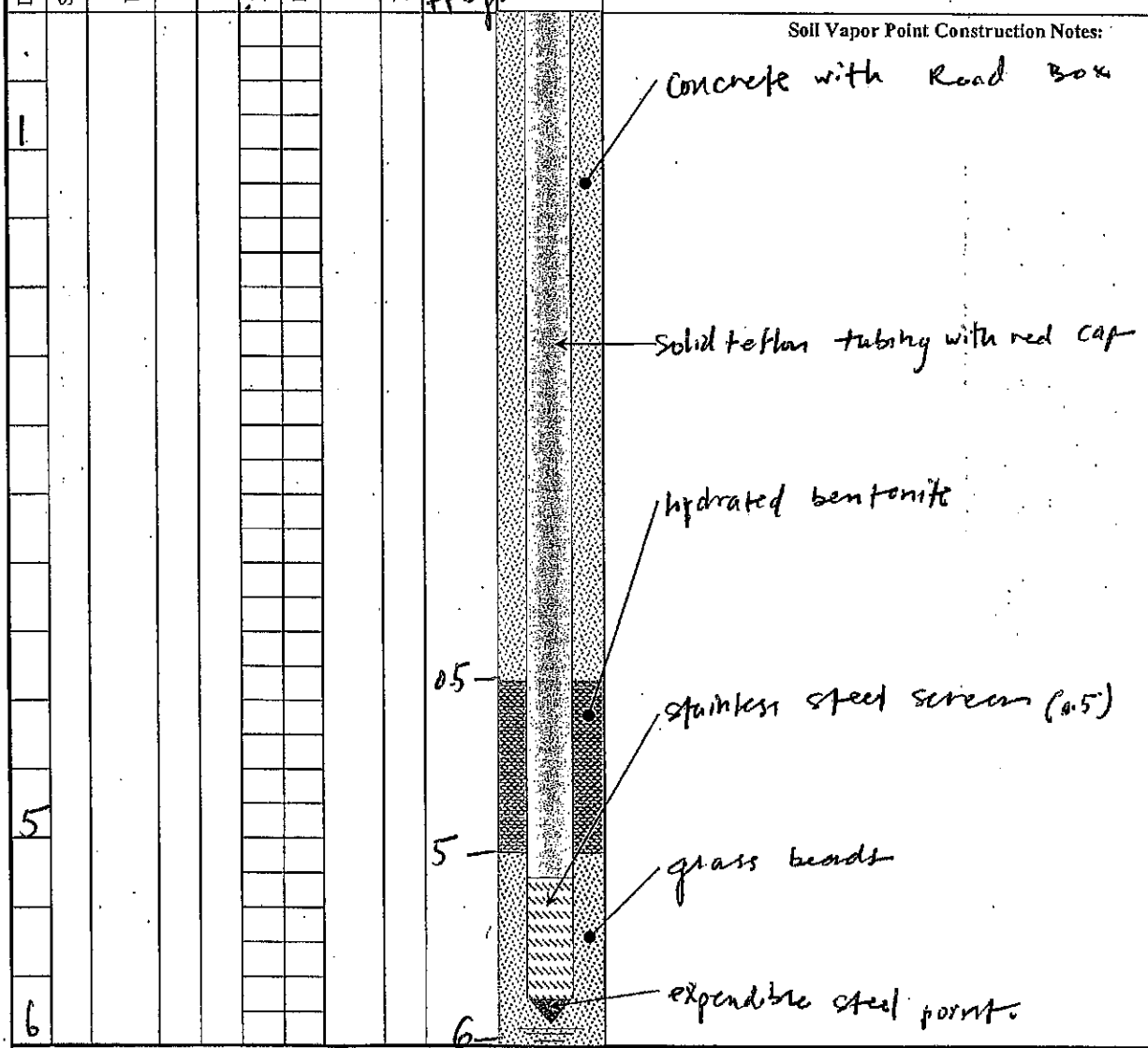
Project Name:	Off-Site Carriage Cleaners			Boring ID:	SV-02
Project Location:	Penfield, New York			Page No.	1
Project No.:	3612102168	Client:	NYSDEC	of:	1
Boring Location:	NW of Site	Refusal Depth:	NA	Total Depth:	6
Weather:	49°F, Sunny	Soil Drilled:	6	Method:	Direct Push
Subcontractor:	Nothnagle	P.I.D (eV):	10.8	Protection Level:	D
Driller:	Jeff. S.	Date Started:	11-15-2010	Date Completed:	11-15-2010
Rig Type/Model:	6610 DT.	Logged By:	BAS	Checked By:	BJS 11/24/10
Reference Elevation:	unknown	Water Level:	unknown	Time:	1000.
He Breakthrough %:	—	Initial He %:	—	Final He %:	—

Bore Hole ID/OD:	2"
Casing Size:	2"
Sampler:	BAS
Sampler ID/OD:	—
Hammer Wt/Fall:	—
Hammer Type:	—

Sample Information: Depth (feet bgs); Sample Number; Penetration/Recovery (feet); SPT Blows/6"; N Value
Monitoring: PID Field Scan; PID Headspace; Lab Sample Collected; Lab Sample ID
USCS Group Symbol: ft bgs
Soil Vapor Diagram (*)

Overburden Drilling Notes:

Soil Vapor Point Construction Notes:



NOTES:
(*) not drawn to scale

FIGURE 4-11
SOIL VAPOR IMPLANT SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: SV-02
Project Location: Penfield, New York			Page No. 1
Project No.: 3612102168	Client: NYSDEC		of: 1
Boring Location: NW of site	Refusal Depth: NA	Total Depth: 6	Bore Hole ID/OD: ~2"
Weather: 49°F, Sunny	Soil Drilled: 6	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: BAS
Driller: Jeff S.	Date Started: 11-15-2010	Date Completed: 11-15-2010	Sampler ID/OD: —
Rig Type/Model: 6610 DT,	Logged By: BAS	Checked By: BJS 11/24/01	Hammer Wt/Fall: —
Reference Elevation: unknown	Water Level: unknown	Time: 1000	Hammer Type: —

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
1		3.2/4.0	0.1				0-0.5 Asphalt; road bedding 0.5-3 Lt tan / Lt olive Brown fine SAND w/trace m coarse sand, poorly graded, damp SP → NP; Loose 3-4 Light grey / Light olive grey fine SAND w some silt, poorly graded, damp, SP, m Dense	Fill	
2									
3									
4									
5		2.1/2.0	0.1				4-6 grey to olive grey fine SAND w/ SILT, poorly graded; damp to dry; m Dense to Dense, SP; some moisture @ ~6'	SM	
6									
							BAS		

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL VAPOR IMPLANT SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

Project Name:	Off-Site Carriage Cleaners			Boring ID:	SV-03
Project Location:	Penfield, New York			Page No.	1
Project No.:	3612102168	Client:	NYSDEC	of:	1
Boring Location:	NW of site	Refusal Depth:	NA	Total Depth:	6
Weather:	36°F, cloudy.	Soil Drilled:	6	Method:	Direct Push
Subcontractor:	Nothnagle	P.I.D (eV):	10.8	Protection Level:	D
Driller:	Jeff S.	Date Started:	11-16-2010	Date Completed:	11-16-10
Rig Type/Model:	661 DT	Logged By:	BAS	Checked By:	BSS 11/24
Reference Elevation:	unknown	Water Level:	unknown	Time:	NR - BSS 11/24
He Breakthrough %:		Initial He %:		Final He %:	

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	SPT Blows/6"	N Value	PID Field Scan	PID Headspace	Lab Sample Collected	Lab Sample ID	USCS Group Symbol	Soil Vapor Diagram ④
									FF bgs	

Overburden Drilling Notes:

Soil Vapor Point Construction Notes:

Concrete with 4" Aluminum Road Box

solid 1/4" teflon tubing with cap

hydrated bentonite

0.5'

stainless steel screen (0.5')

4.5

glass beads

expendable steel point

5.5

1 5 6

NOTES:

④ not drawn to Scale

FIGURE 4-11
SOIL VAPOR IMPLANT SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Off-Site Carriage Cleaners			Boring ID: SV-03
Project Location: Penfield, New York			Page No. 1
Project No.: 3612102168	Client: NYSDEC		of: 1
Boring Location: NW of site	Refusal Depth: NA	Total Depth: 6	Bore Hole ID/OD: 2"
Weather: 36°F, cloudy	Soil Drilled: 6	Method: Direct Push	Casing Size: NA
Subcontractor: Nothnagle	P.I.D (eV): 10.8	Protection Level: D	Sampler: BAS
Driller: Jeff S.	Date Started: 11-16-2010	Date Completed: 11-16-2010	Sampler ID/OD: —
Rig Type/Model: 6610DT	Logged By: BAS	Checked By: BSS 11/22/10	Hammer Wt/Fall: —
Reference Elevation: Unknown	Water Level: —	Time: —	Hammer Type: —

Sample Information			Monitoring						
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
1		2-2 / 4.0	0.1				0-1.5 Brown to Dk Brown clean fine SAND, damp, with some to little silt, poorly graded, loose; SP	Fill	
2							1.5-4 Lt brown clean fine SAND, damp, loose, NP, poorly graded		
3									
4									
5		2-2 / 2.0	0.1				4-5 Same as 1.5-4	Fill	
6							5-5.5 Lt grey to Black Fill material, SAND with ash and wood fragments, well graded, damp, NP, Moderate		
							5.5-6 Reddish Brown fine to medium SAND, poorly graded, NP, damp to moist. Some to little fines	SM	
							BAS		

NOTES:

FIGURE 4-4
SOIL BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

APPENDIX D

SLUG TEST AND HYDRAULIC CONDUCTIVITY DATA

Appendix D: Summary of Hydraulic Conductivity Test Results

Location Identification	Well Type	Hvorslev (ft/day)	Bouwer-Rice (ft/day)	Springer-Gelhar (ft/day)	K values Geometric mean (ft/day)	V = Ki/n (ft/day)	V (ft/year)	Geometric mean	
DP-22* Screening Interval: 18' - 22' bgs	Overburden 10 PSI - RHT	8.1	6.2		7.1	0.028	10	**4**	**=V (ft/year)**
	Overburden 10 PSI - RHT	3.7	3.0		3.3	0.013	5		
	Overburden 20 PSI - RHT	2.3	2.0		2.2	0.009	3		
	Overburden 30 PSI - RHT	1.4	1.2		1.3	0.005	2		
	Overburden 30 PSI - RHT	1.4	1.2		1.3	0.005	2		
DP-30* Screening Interval: 18' - 22' bgs	Overburden 10 PSI - RHT	13.9	11.2		12.5	0.050	18	**15**	**=V (ft/year)**
	Overburden 10 PSI - RHT	11.9	9.2		10.5	0.042	15		
	Overburden 20 PSI - RHT	9.6	7.8		8.6	0.035	13		
	Overburden 20 PSI - RHT	10.0	7.9		8.9	0.035	13		
	Overburden 30 PSI - RHT	8.8	7.2		7.9	0.032	12		
	Overburden 30 PSI - RHT	11.6	9.5		10.5	0.042	15		
	Overburden 38 PSI - RHT	12.7	10.0		11.3	0.045	16		
	Overburden 37 PSI - RHT	14.6	12.5		13.5	0.054	20		
DP-31* Screening Interval: 18' - 22' bgs	Overburden 10 PSI - RHT	9.9	7.5		8.6	0.035	13	**21**	**=V (ft/year)**
	Overburden 10 PSI - RHT	22.8	17.2		19.8	0.079	29		
	Overburden 20 PSI - RHT	13.2	10.7		11.9	0.048	17		
	Overburden 20 PSI - RHT	25.4	18.0		21.4	0.085	31		
	Overburden 30 PSI - RHT	16.2	11.9		13.9	0.055	20		
	Overburden 30 PSI - RHT	16.6	12.5		14.4	0.058	21		
DP-22** Screening Interval: 9.6' - 19.6' bgs	MW - FHT-1	11.6	8.2		9.8	0.039	14	**18**	**=V (ft/year)**
	MW - FHT-2	13.7	10.3		11.9	0.047	17		
	MW - RHT-1	17.6	11.5		14.2	0.057	21		
	MW - RHT-2	16.6	10.7		13.3	0.053	19		
DP-23** Screening Interval: 10.8' - 20.8' bgs	MW - FHT-1		32.9	41.7	37.1	0.148	54	**45**	**=V (ft/year)**
	MW - FHT-2		32.8	40.0	36.2	0.145	53		
	MW - RHT-1		16.2	23.0	19.3	0.077	28		
	MW - RHT-2		28.9	38.7	33.4	0.134	49		
DP-28** Screening Interval: 13.6' - 23.6' bgs	MW - FHT-1	4.6	3.6		4.0	0.016	6	**7**	**=V (ft/year)**
	MW - FHT-2	4.9	3.7		4.3	0.017	6		
	MW - RHT-1	6.3	4.6		5.4	0.022	8		
	MW - RHT-2	5.4	4.0		4.7	0.019	7		
MW-11** Screening Interval: 49.9' - 59.9' bgs	MW - FHT-1			191	191	0.915	334	**222**	**=V (ft/year)**
	MW - FHT-2			159	159	0.762	278		
	MW - RHT-1			101	101	0.486	177		
	MW - RHT-2			84	84	0.403	147		
MW-12** Screening Interval: 48.6' - 58.6' bgs	MW - FHT-1			159	159	0.765	279	**238**	**=V (ft/year)**
	MW - FHT-2			170	170	0.817	298		
	MW - RHT-1			111	111	0.530	194		
	MW - RHT-2			114	114	0.545	199		

Notes:
cm/sec = centimeters per seconds
MW = monitoring well
FHT = Falling Head Test
RHT = Rising Head Slug Test
ft/day = feet per day
ft/year = feet per year
K = hydraulic conductivity
V = velocity (in either ft/day or ft/year)
i = hydraulic gradient (feet per foot); hydraulic gradient calculated at 0.0010 feet per foot for the shallow overburden and 0.0012 feet per foot for the deep overburden

Geometric Mean of Shallow Overburden = 13 ft/year
Geometric Mean of Deep Overburden = 230 ft/year

Notes (Continued):
n = porosity, using assumed porosity of 0.25 for the overburden locations
* indicates results were obtained through pneumatic slug testing of 1" direct push explorations, conducted by MACTEC in January 20
** indicates results were obtained through solid slug testing on five 2-inch ID monitoring wells by MACTEC in August 2011
bgs = below ground surface

Off-Site Carriage Cleaners Site - Penfield, NY
Hydraulic Gradient Calculations

$$i = \frac{\text{(Change in Head)}}{\text{(Shortest distance between observed or interpreted heads)}}$$

Hydraulic Gradient (i) calculations from 8/2011 contour data.

Deeper Overburden
MW-11 to MW-12
1.19 = difference in head
1025 = distance between wells (feet)
i = 0.0012

Geometric Mean of Overburden Gradient

i = 0.0010

Shallow Overburden
DP-23 to DP-28
0.2 = difference in head
290 = distance between wells (feet)
i = 0.0007

Shallow Overburden
DP-15 to DP-23
0.79 = difference in head
710 = distance between wells (feet)
i = 0.0011

Shallow Overburden
DP-28 to DP-27
0.68 = difference in head
800 = distance between wells (feet)
i = 0.0009

Shallow Overburden
DP-10 to DP-23
1.32 = difference in head
1025 = distance between wells (feet)
i = 0.0013

Shallow Overburden
DP-12 to DP-23
1.08 = difference in head
990 = distance between wells (feet)
i = 0.0011

Created by: BAS 11/1/11
Checked by: CRS 12/1/11

Appendix D: Pneumatic Slug Test Information

Location ID	Screening Interval	Depth to Water	Pressure within the rods	Number of Tests
DP-22	18’ to 22’	7.3’ bgs	10 psi	4
DP-22	18’ to 22’	7.3’ bgs	20 psi	1
DP-22	18’ to 22’	7.3’ bgs	30 psi	2
DP-30	18’ to 22’	9.1’ bgs	10 psi	4
DP-30	18’ to 22’	9.1’ bgs	20 psi	2
DP-30	18’ to 22’	9.1’ bgs	30 psi	2
DP-30	18’ to 22’	9.1’ bgs	38 psi	2
DP-31	18’ to 22’	13.1’ bgs	10 psi	5
DP-31	18’ to 22’	13.1’ bgs	20 psi	3
DP-31	18’ to 22’	13.1’ bgs	38 psi	3

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP-22-6 PERFORMED BY: BAS
MONITORING WELL ID	DP-22	
DATE OF TEST	01-17-2011	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP-22-6	
DATA COLLECTION RATE	1 Hz	
TRANSDUCER		
SERIAL #	12345	
PSIG	10	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	7.3' bgs	
WELL DEPTH (FT./TOC)	~ 22' bgs	
XD DEPTH (FT.TOC)	~ 12' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	NA	
NEW XD REFERENCE	—	
START TIME OF TEST	1541	
END TIME OF TEST	1545	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP-22-10 PERFORMED BY: BTS
MONITORING WELL ID	DP-22	
DATE OF TEST	01-17-2011	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP-22-10	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	10	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	7.3' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~12' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1549	
END TIME OF TEST	1551	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP-22-10-1 PERFORMED BY: BAS
MONITORING WELL ID	DP-22	
DATE OF TEST	01-17-2011	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP-2210-1	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	10	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~7.3' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~12' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1542	
END TIME OF TEST	1554	
NOTES:		

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Portland, ME 04101

FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP2210-2 PERFORMED BY: DAS
MONITORING WELL ID	DP-22	
DATE OF TEST	01-17-2011	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP2210-2	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	10	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~7.3' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~12' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1554	
END TIME OF TEST	1554	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP2210-3 PERFORMED BY: BAS
MONITORING WELL ID	DP-22	
DATE OF TEST	01-17-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP2210-3	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	10	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~7.3' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~12' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	-	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1556	
END TIME OF TEST	1557	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP2210-4 PERFORMED BY: DAS
MONITORING WELL ID	DP-22	
DATE OF TEST	01-17-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP2210-4	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	10	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~7.3' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~12' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1602	
END TIME OF TEST	1604	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP-22-T PERFORMED BY: BAS
MONITORING WELL ID	DP-22	
DATE OF TEST	01-17-2011	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP-22-T	
DATA COLLECTION RATE	1/s	
TRANSDUCER		
SERIAL #	12345	
PSIG	~ 20	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	7.3' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~12' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1545	
END TIME OF TEST	1549	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP2220-1 PERFORMED BY: PAS
MONITORING WELL ID	DP-22	
DATE OF TEST	01-17-2011	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP2220-1	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	20	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~7.3' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~12' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1604	
END TIME OF TEST	1606	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP2230-1 PERFORMED BY: JAS
MONITORING WELL ID	DP-22	
DATE OF TEST	01-17-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP2230-1	
DATA COLLECTION RATE	1 cg	
TRANSDUCER		
SERIAL #	12345	
PSIG	30	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~7.3' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~12' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1557	
END TIME OF TEST	1601	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP-2230-2 PERFORMED BY:
MONITORING WELL ID	DP-22	
DATE OF TEST	01-17-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP 2230-2	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	30	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~7.3' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~12' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1606	
END TIME OF TEST	1610	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP-3010-1 PERFORMED BY: ~~DA~~
MONITORING WELL ID	DP-30	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP3010-1	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	10	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~9.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~15' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1148	
END TIME OF TEST	1152	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3010-2 PERFORMED BY: RA
MONITORING WELL ID	DP-30	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP3010-2	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	10	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~9.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~15' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1152	
END TIME OF TEST	1152	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3010-3 PERFORMED BY: RTS
MONITORING WELL ID	DP-30	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP3010-3	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	10	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~9.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~15' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1154	
END TIME OF TEST	1155	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3010-4 PERFORMED BY: DF
MONITORING WELL ID	DP-30	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP3010-4	
DATA COLLECTION RATE	1sp	
TRANSDUCER		
SERIAL #	12345	
PSIG	10	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~9.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~15' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1155	
END TIME OF TEST	1156	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3020-1 PERFORMED BY: DPS
MONITORING WELL ID	DP-30	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP3020-1	
DATA COLLECTION RATE	1sp	
TRANSDUCER		
SERIAL #	12345	
PSIG	20	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~9.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~15' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1157	
END TIME OF TEST	1158	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3020-2 PERFORMED BY: JAS
MONITORING WELL ID	DP-30	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP3020-2	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	20	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~9.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~15' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1158	
END TIME OF TEST	1200	

NOTES:

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3030-1 PERFORMED BY: DAS
MONITORING WELL ID	DP-30	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP3030-1	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	30	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~9.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~15' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1200	
END TIME OF TEST	1202	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3030-2 PERFORMED BY: DTS
MONITORING WELL ID	DP-30	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP3030-2	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	30	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~9.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~15' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1202	
END TIME OF TEST	1204	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP30XX-1 PERFORMED BY: MT
MONITORING WELL ID	DP-30	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP30XX-1	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	38	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~9.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~15' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1204	
END TIME OF TEST	1205	

NOTES: Maximum pressure test

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP30X-2 PERFORMED BY: BAS
MONITORING WELL ID	DP-30	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP30X-2	
DATA COLLECTION RATE	1cp	
TRANSDUCER		
SERIAL #	12345	
PSIG	37	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~9.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~15' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1205	
END TIME OF TEST	1207	

NOTES: Maximum pressure test.

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

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AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3110-1 PERFORMED BY: PAC
MONITORING WELL ID	DP-31	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP3110-1	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	10	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~13.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~17' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1302	
END TIME OF TEST	1305	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3110-2 PERFORMED BY: JPS
MONITORING WELL ID	DP-31	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP3110-2	
DATA COLLECTION RATE	1sg	
TRANSDUCER		
SERIAL #	12345	
PSIG	10	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~13.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~17' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1305	
END TIME OF TEST	1306	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3110-3 PERFORMED BY: BAS
MONITORING WELL ID	DP-31	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP3110-3	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	10	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~13.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~17' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1306	
END TIME OF TEST	1308	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP-3\10-4 PERFORMED BY: AS
MONITORING WELL ID	DP-3\	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP-3\10-4	
DATA COLLECTION RATE	1sec	
TRANSDUCER		
SERIAL #	12345	
PSIG	10	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~13.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~17' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1308	
END TIME OF TEST	1309	

NOTES:

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3110-5 PERFORMED BY: PA
MONITORING WELL ID	DP-31	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP3110-5	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	10	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~13.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~17' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1310	
END TIME OF TEST	1311	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3120-1 PERFORMED BY: RAS
MONITORING WELL ID	DP-31	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP3120-1	
DATA COLLECTION RATE	10g	
TRANSDUCER		
SERIAL #	12345	
PSIG	20	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~13.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~17' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1312	
END TIME OF TEST	1313	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3120-2 PERFORMED BY: BAS
MONITORING WELL ID	DP-31	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP3120-2	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	20	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~13.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~17' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1313	
END TIME OF TEST	1314	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3/20-3 PERFORMED BY: BAS
MONITORING WELL ID	DP-3/	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP3/20-3	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	20.	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~13.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~17' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1315	
END TIME OF TEST	1317	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3130-1 PERFORMED BY: DAS
MONITORING WELL ID	DP-31	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP31	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	30	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~13.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~17' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1317	
END TIME OF TEST	1319	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3130-2 PERFORMED BY: DAT
MONITORING WELL ID	DP-31	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP31	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	30	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~13.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~17' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1319	
END TIME OF TEST	1321	
NOTES:		

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FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

AQUIFER TEST COMPLETION CHECKLIST

SETUP	DATE	AQUIFER TEST NO. DP3130-3 PERFORMED BY: DT
MONITORING WELL ID	DP-31	
DATE OF TEST	01-20-11	
TYPE OF TEST	pneumatic	
HERMIT TYPE/SERIAL#	—	
TEST #	DP31	
DATA COLLECTION RATE	log	
TRANSDUCER		
SERIAL #	12345	
PSIG	30	
SCALE FACTOR	—	
OFFSET	—	
INPUT CHANNEL	—	
TEST DATA		
INPUT MODE (TOC/SUR)	ground surface	
STATIC WATER LEVEL (FT./TOC)	~13.1' bgs	
WELL DEPTH (FT./TOC)	~22' bgs	
XD DEPTH (FT.TOC)	~17' bgs	
INITIAL XD REFERENCE	—	
SLUG DEPTH (FT./TOC)	—	
TIME OF SLUG PLACEMENT	—	
TIME OF WL EQUILIBRATION	—	
NEW XD REFERENCE	—	
START TIME OF TEST	1321	
END TIME OF TEST	1323	
NOTES:		

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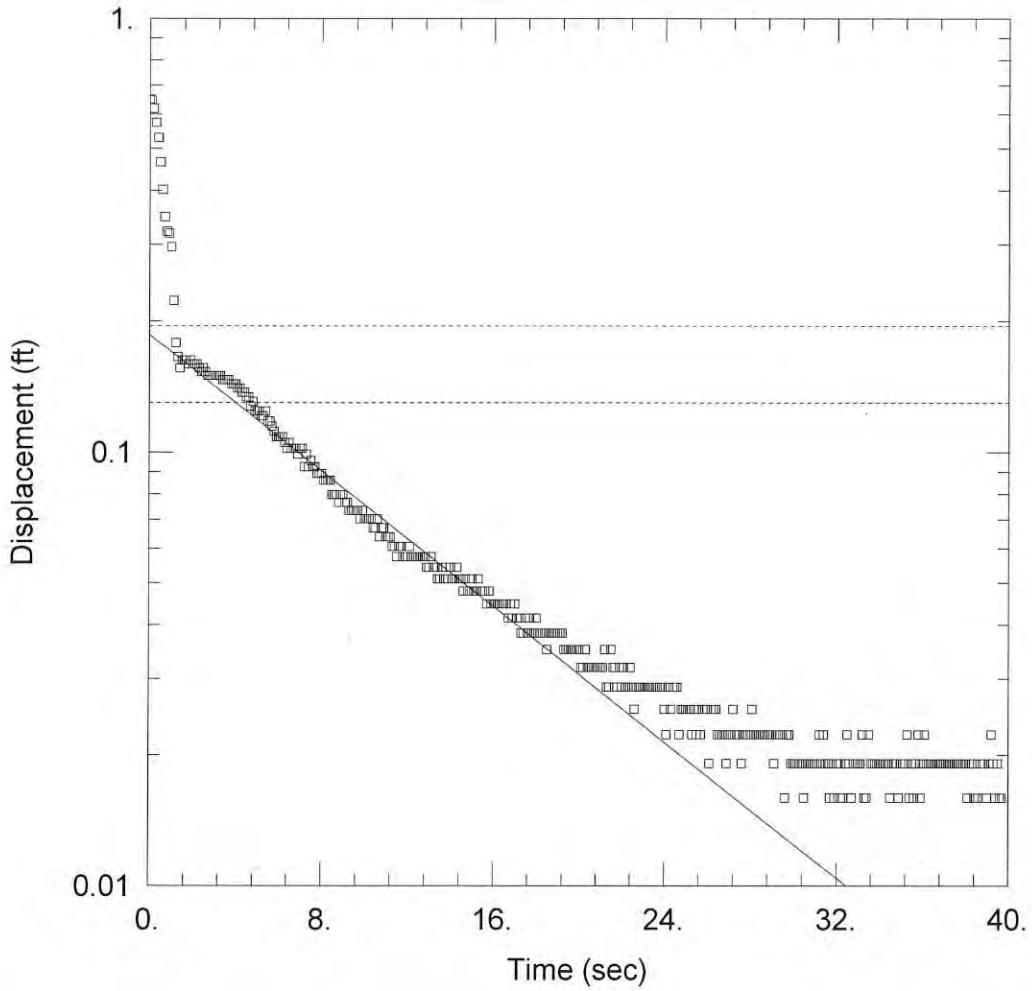
FIGURE 4-19
AQUIFER TEST COMPLETION CHECKLIST
NYSDEC QUALITY ASSURANCE PROGRAM PLAN



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP22 10PSI 1.aqt
Date: 11/29/11 Time: 14:37:09

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-22
Test Date: 1/17/11

AQUIFER DATA

Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

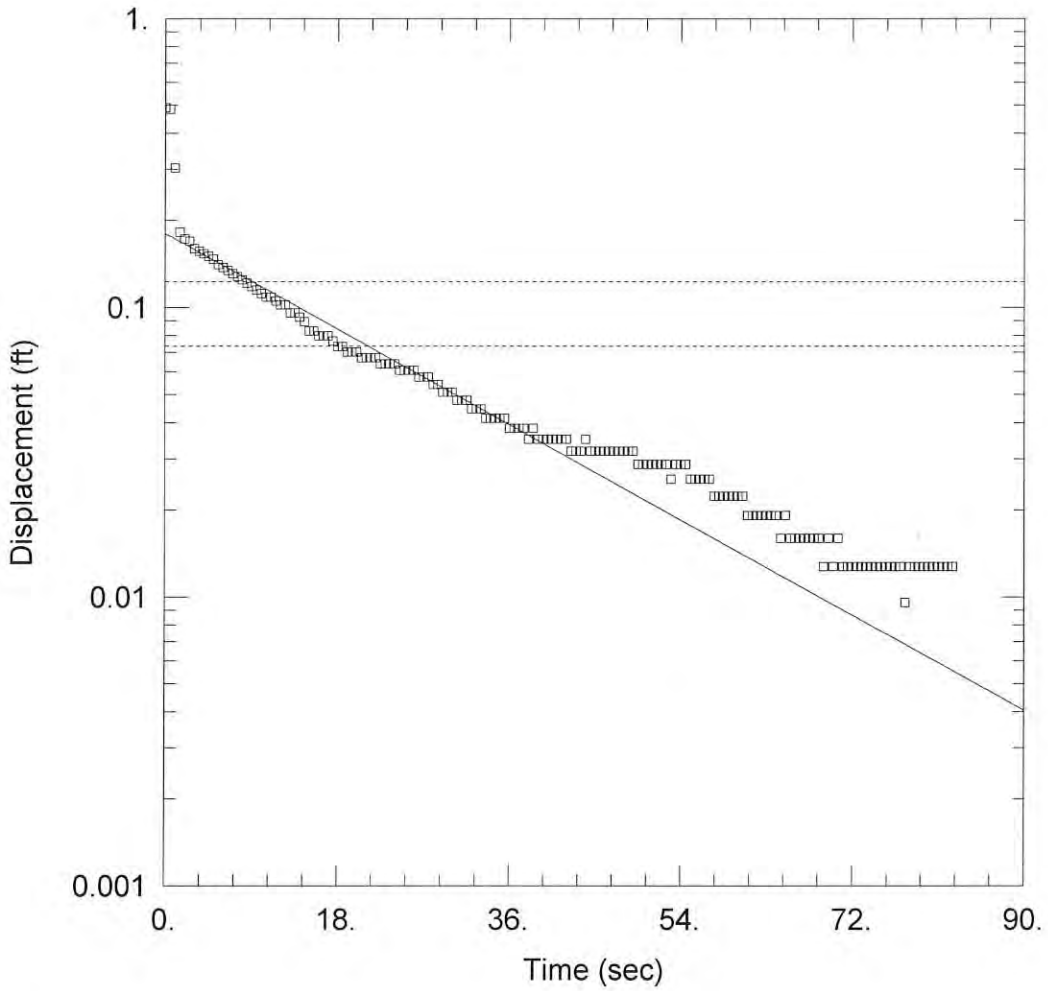
WELL DATA (DP-22)

Initial Displacement: 0.65 ft
Total Well Penetration Depth: 14.7 ft
Casing Radius: 0.042 ft
Static Water Column Height: 12.9 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 6.199 ft/day y0 = 0.1863 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP22 10PSI 4.aqt
Date: 11/29/11 Time: 14:37:22

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-22
Test Date: 1/17/11

AQUIFER DATA

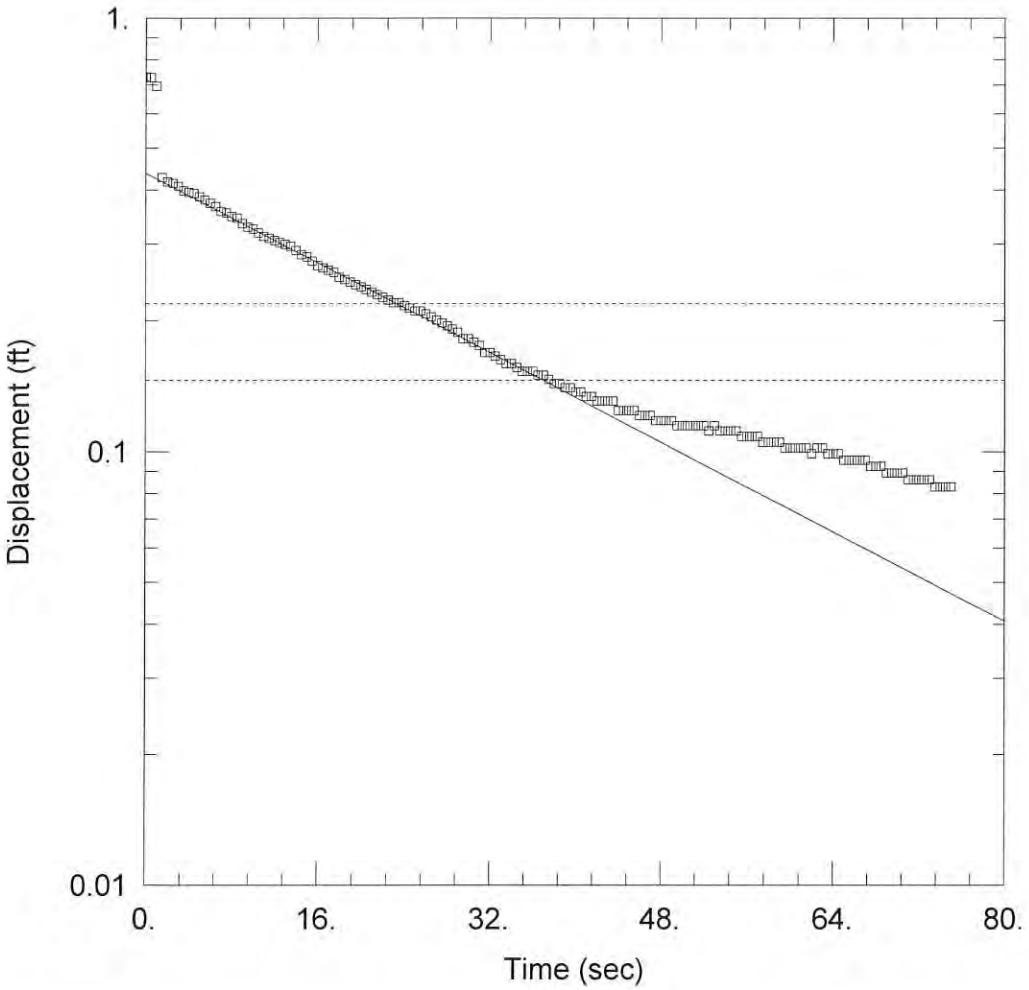
Saturated Thickness: 80. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-22)

Initial Displacement: 0.49 ft
Total Well Penetration Depth: 14.7 ft
Casing Radius: 0.042 ft
Static Water Column Height: 14.7 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 3.657 ft/day
y0 = 0.1796 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP22 20PSI 1.aqt
Date: 11/29/11 Time: 14:37:31

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-22
Test Date: 1/17/11

AQUIFER DATA

Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

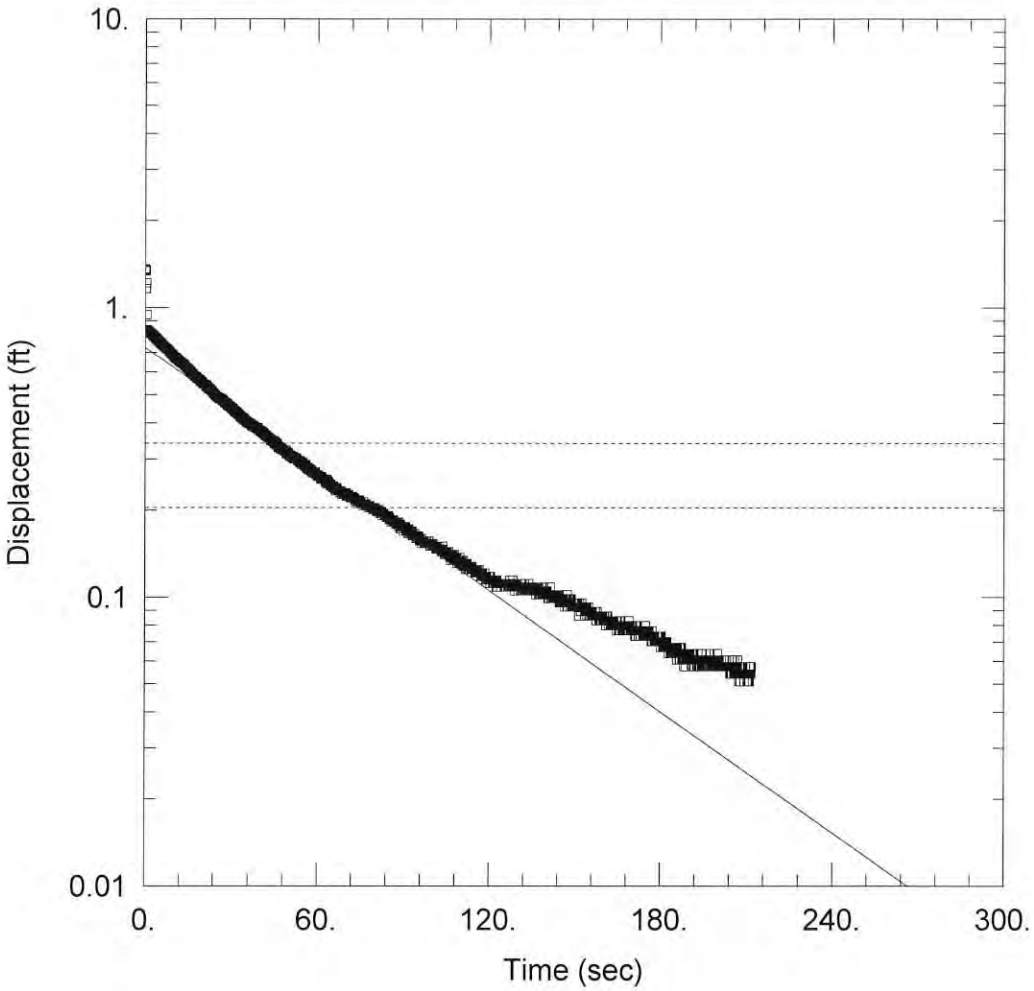
WELL DATA (DP-22)

Initial Displacement: 0.73 ft
Total Well Penetration Depth: 14.7 ft
Casing Radius: 0.042 ft
Static Water Column Height: 14.7 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 2.042 ft/day y0 = 0.4369 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP22 30PSI 1.aqt
Date: 11/29/11 Time: 14:37:43

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-22
Test Date: 1/17/11

AQUIFER DATA

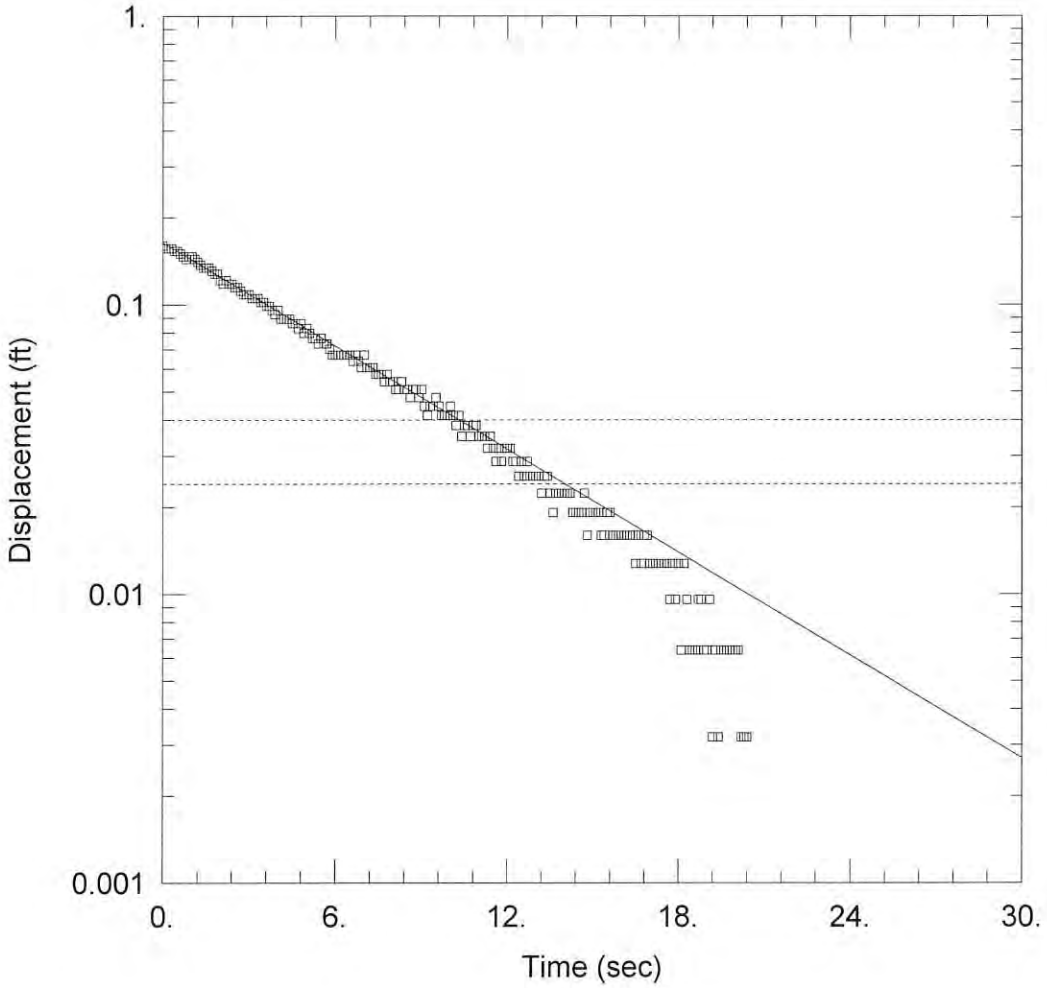
Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-22)

Initial Displacement: 1.36 ft
Total Well Penetration Depth: 14.7 ft
Casing Radius: 0.042 ft
Static Water Column Height: 14.7 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 1.398 ft/day
y0 = 0.7278 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP-30 10PSI 4.aqt
Date: 11/29/11 Time: 14:40:10

PROJECT INFORMATION

Company: MACTEC
Project: 3612102168
Test Well: DP-30
Test Date: 1/20/2011

AQUIFER DATA

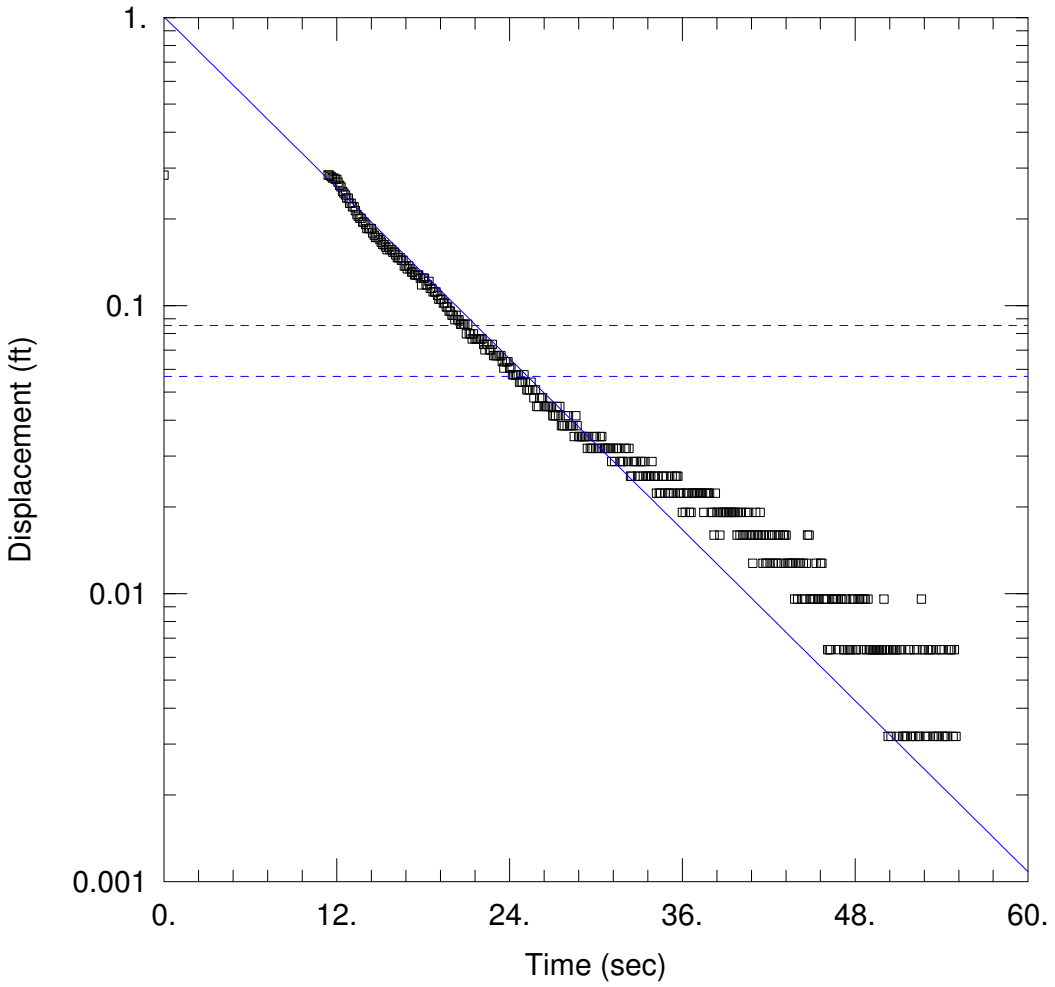
Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-30 10PSI)

Initial Displacement: 0.16 ft
Total Well Penetration Depth: 12.9 ft
Casing Radius: 0.042 ft
Static Water Column Height: 12.9 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 11.88 ft/day
y0 = 0.1637 ft



WELL TEST ANALYSIS

Data Set: C:\NYSDEC\CarClean\Copy of Slug Data\OCC DP-30 20PSI 1.aqt
Date: 12/18/11 Time: 20:25:51

PROJECT INFORMATION

Company: MACTEC
Project: 3612102168
Test Well: DP-30
Test Date: 1/20/2011

AQUIFER DATA

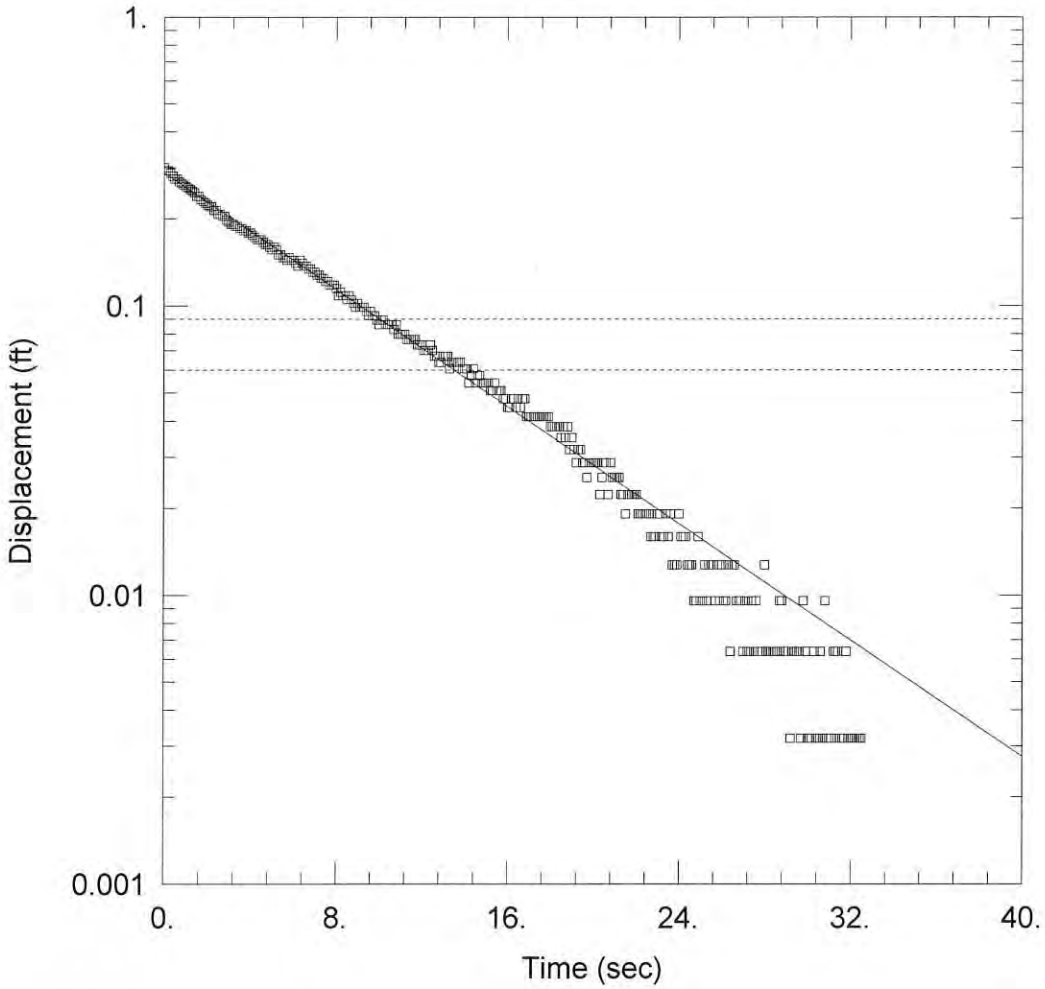
Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-30)

Initial Displacement: 0.2838 ft
Total Well Penetration Depth: 12.9 ft
Casing Radius: 0.042 ft
Static Water Column Height: 12.9 ft
Screen Length: 4. ft
Well Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 7.718 ft/day
y0 = 1.007 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP-30 20PSI 2.aqt
Date: 11/29/11 Time: 14:40:23

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-30
Test Date: 1/20/11

AQUIFER DATA

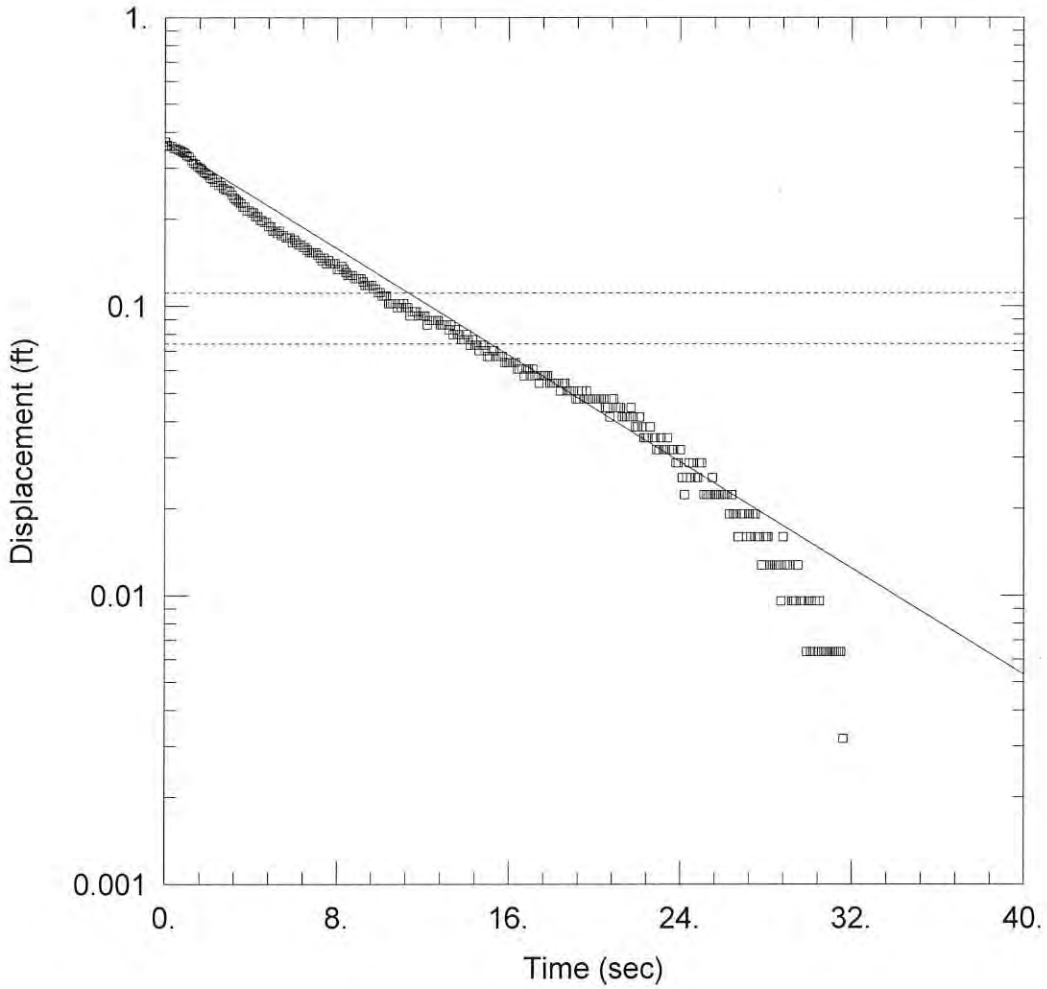
Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-30)

Initial Displacement: 0.3 ft
Total Well Penetration Depth: 12.9 ft
Casing Radius: 0.042 ft
Static Water Column Height: 12.9 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 7.87 ft/day y0 = 0.288 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP30 30PSI 1.aqt
Date: 11/29/11 Time: 14:40:29

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-30
Test Date: 1/20/11

AQUIFER DATA

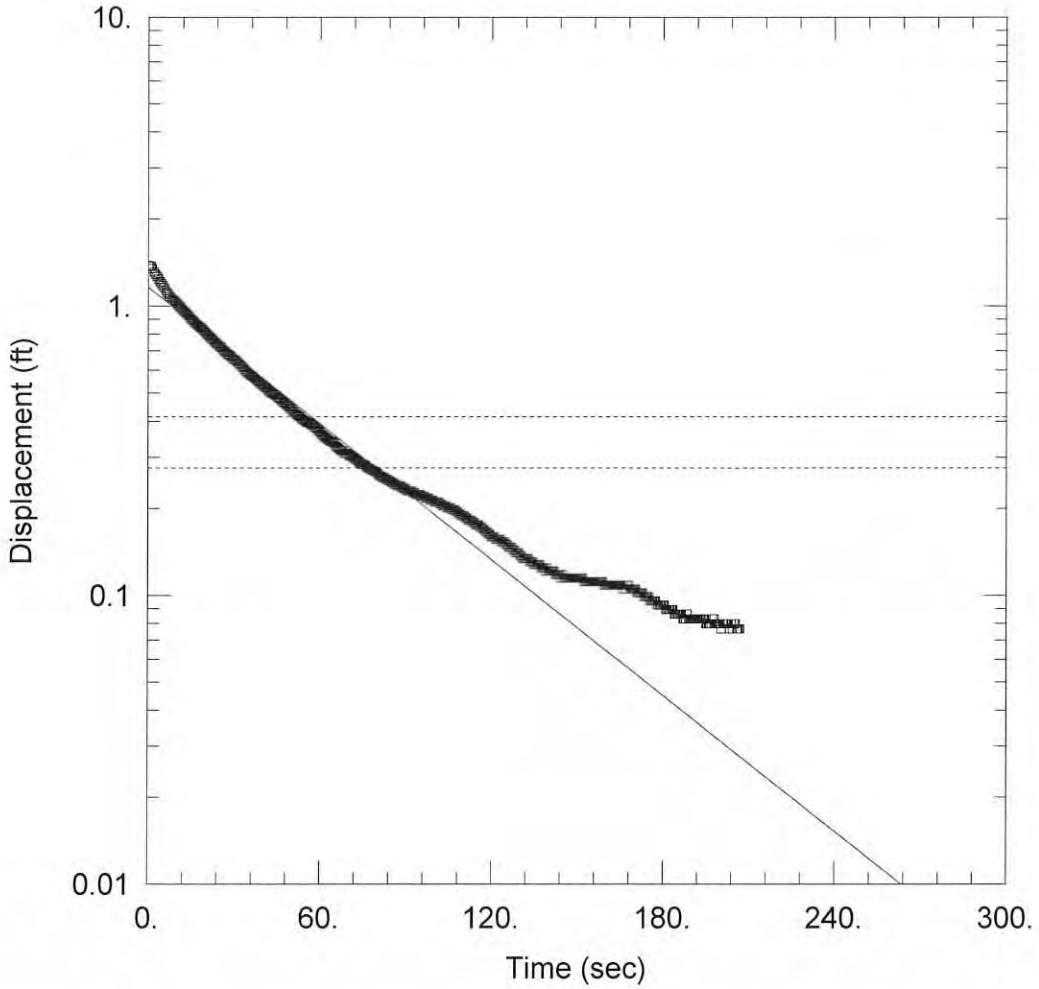
Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-30)

Initial Displacement: 0.37 ft
Total Well Penetration Depth: 12.9 ft
Casing Radius: 0.042 ft
Static Water Column Height: 12.9 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 7.17 ft/day
y0 = 0.3679 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP22 30PSI 2.aqt
Date: 11/29/11 Time: 14:39:51

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-22
Test Date: 1/17/11

AQUIFER DATA

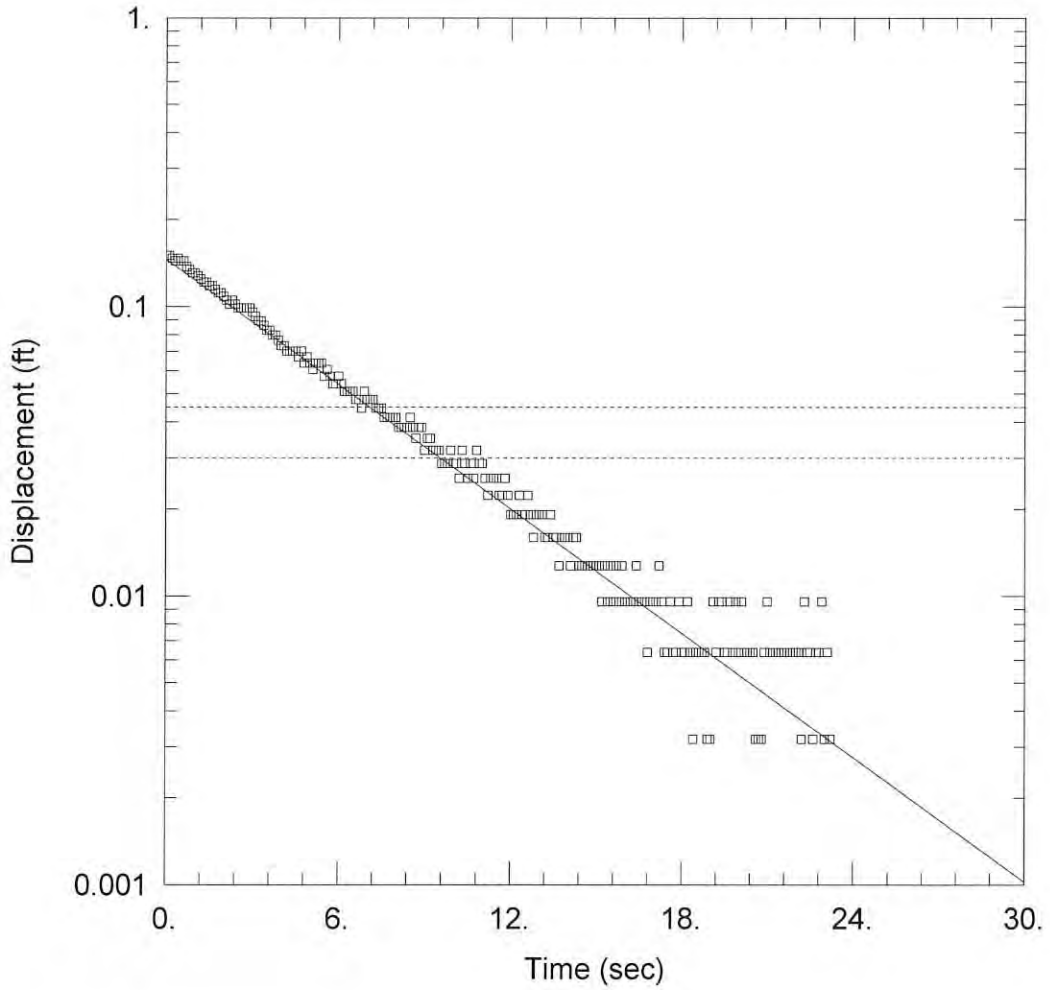
Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-22)

Initial Displacement: 1.38 ft
Total Well Penetration Depth: 14.7 ft
Casing Radius: 0.042 ft
Static Water Column Height: 14.7 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 1.241 ft/day
y0 = 1.158 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP-30 10PSI 3.aqt
Date: 11/29/11 Time: 14:40:04

PROJECT INFORMATION

Company: MACTEC
Project: 3612102168
Test Well: DP-30
Test Date: 1/20/2011

AQUIFER DATA

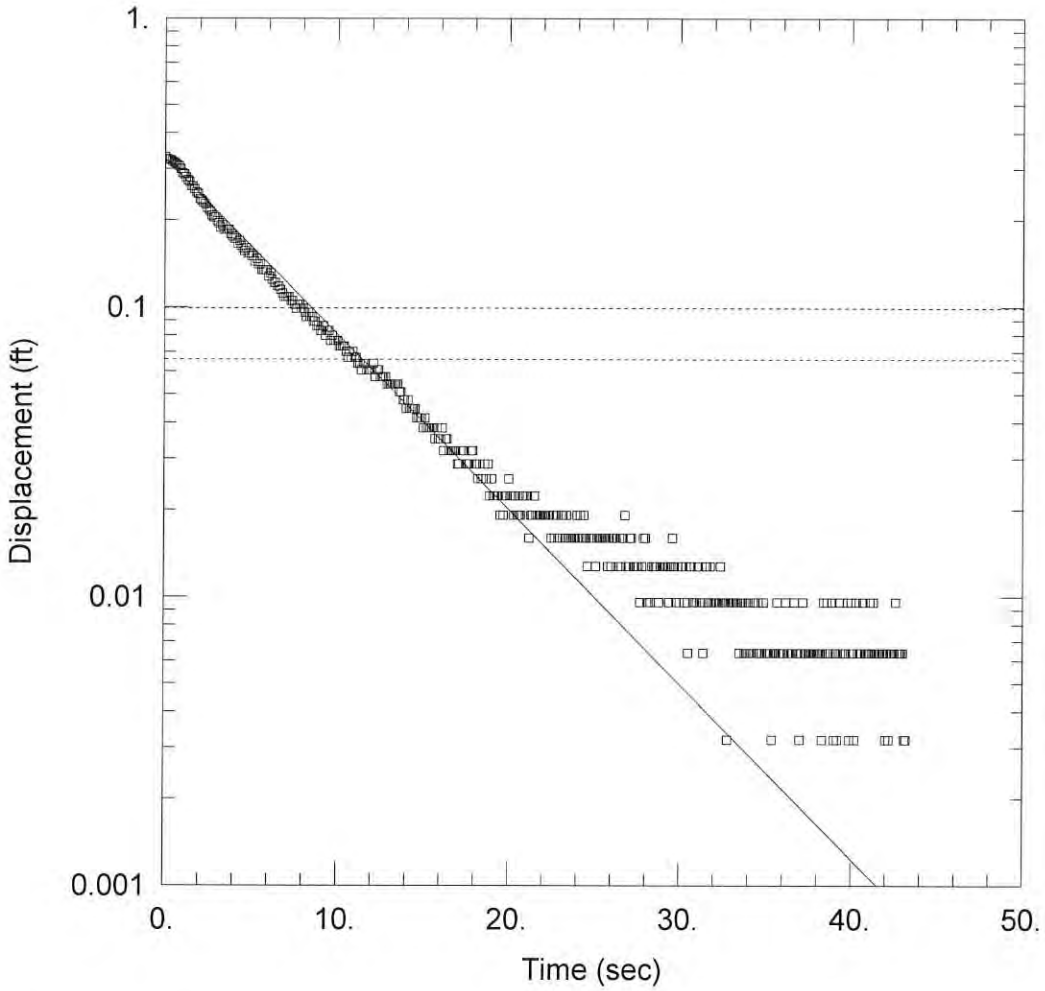
Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-30 10PSI)

Initial Displacement: 0.15 ft
Total Well Penetration Depth: 12.9 ft
Casing Radius: 0.042 ft
Static Water Column Height: 12.9 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 11.19 ft/day
y0 = 0.1451 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP30 30PSI 2.aqt
Date: 11/29/11 Time: 14:40:35

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-30
Test Date: 1/20/11

AQUIFER DATA

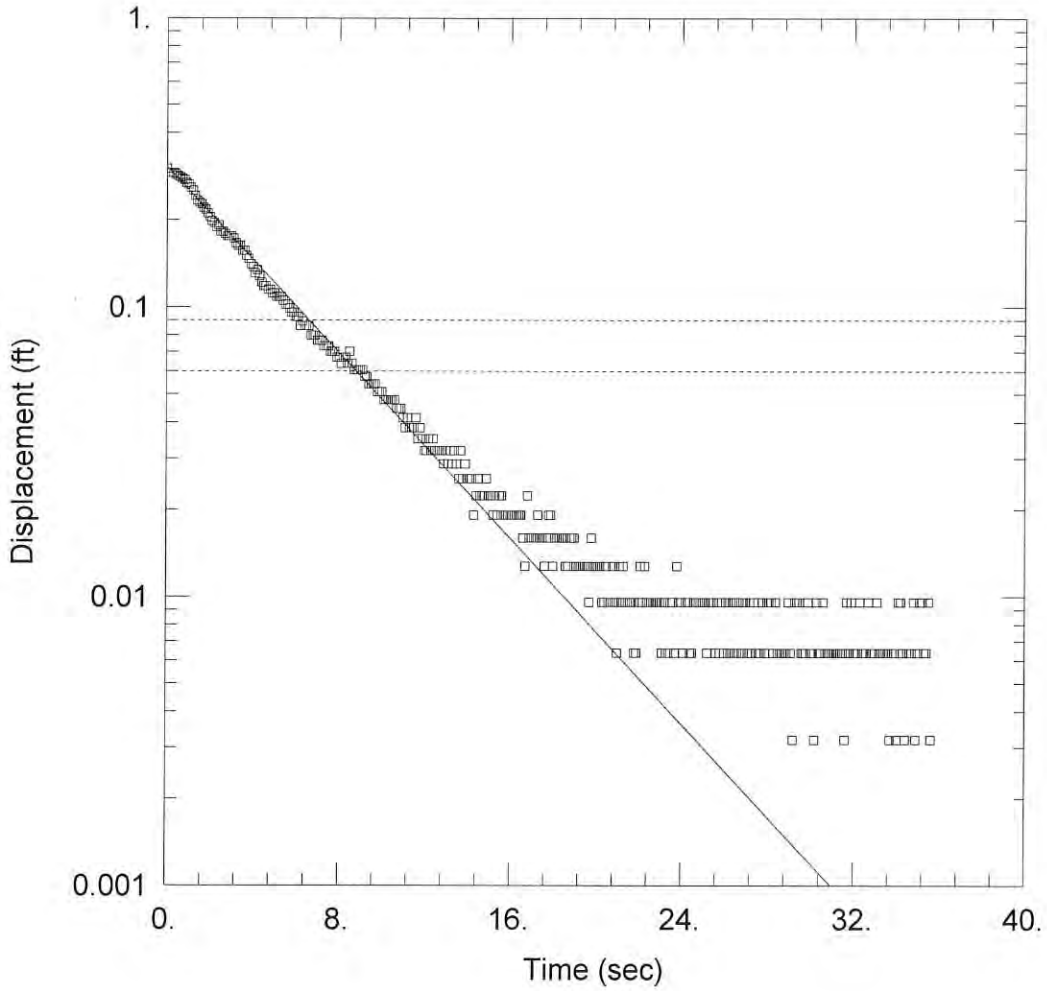
Saturated Thickness: 80. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-30)

Initial Displacement: 0.33 ft
Total Well Penetration Depth: 12.9 ft
Casing Radius: 0.042 ft
Static Water Column Height: 12.9 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 9.439 ft/day
y0 = 0.3247 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP30 37PSI-2.aqt
Date: 11/29/11 Time: 14:40:40

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-30
Test Date: 1/20/11

AQUIFER DATA

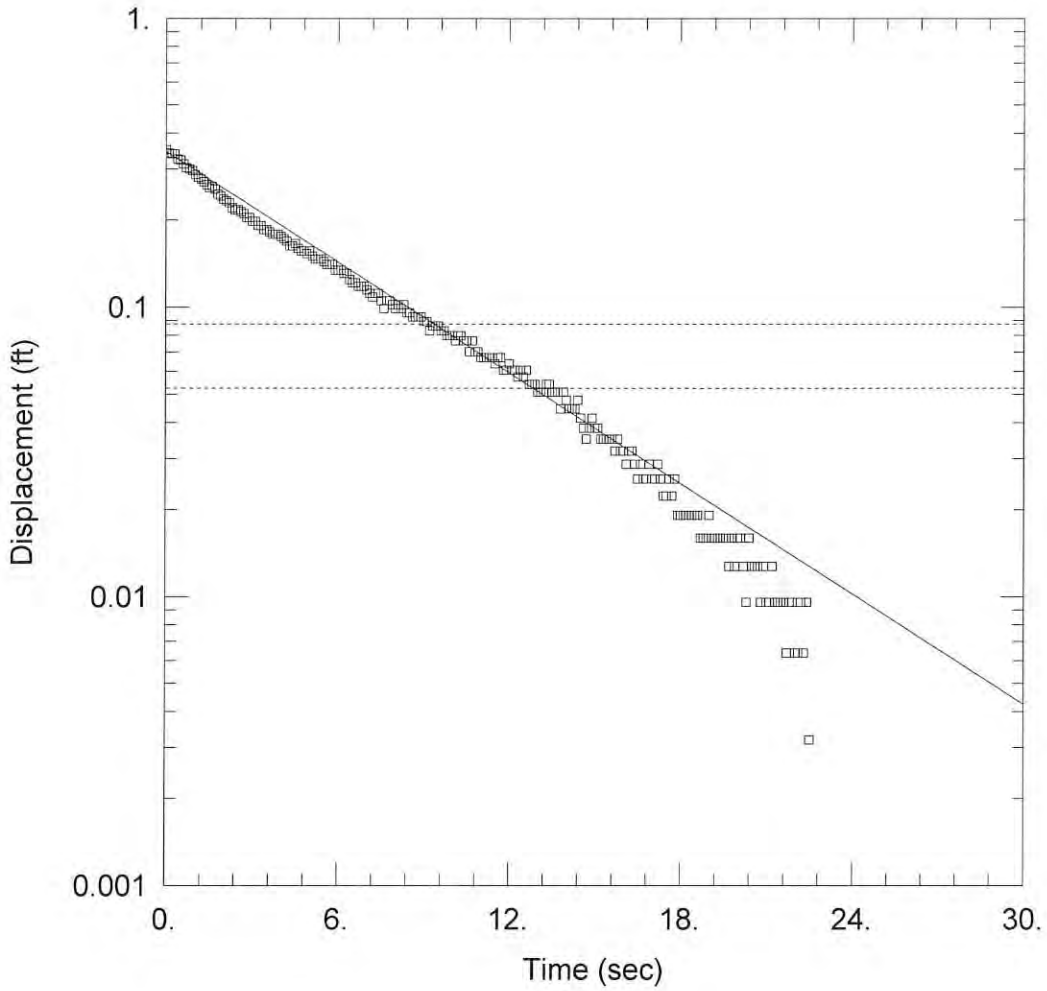
Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-30)

Initial Displacement: 0.3 ft
Total Well Penetration Depth: 12.9 ft
Casing Radius: 0.042 ft
Static Water Column Height: 12.9 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 12.5 ft/day
y0 = 0.3046 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP30 38PSI-1.aqt
Date: 11/29/11 Time: 14:46:56

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-30
Test Date: 1/20/11

AQUIFER DATA

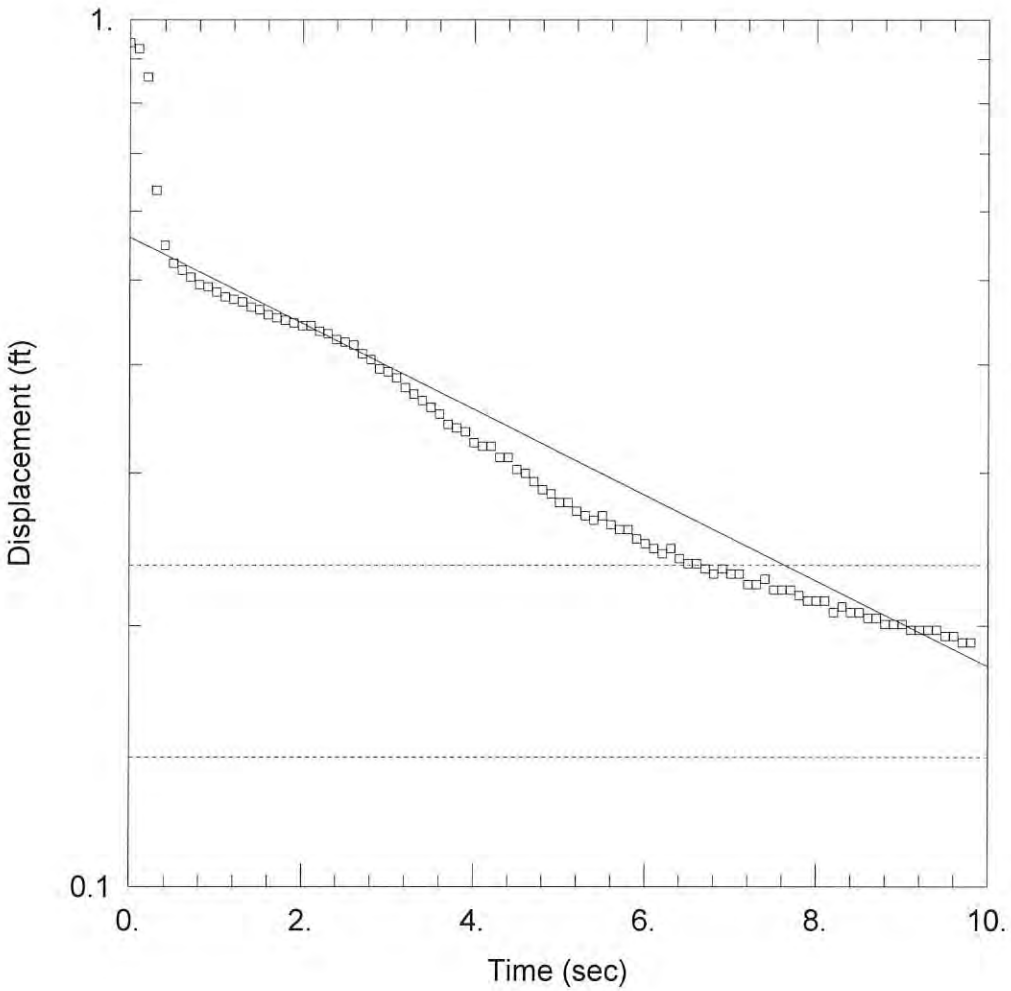
Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-30)

Initial Displacement: 0.35 ft
Total Well Penetration Depth: 12.9 ft
Casing Radius: 0.042 ft
Static Water Column Height: 12.9 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 12.73 ft/day
y0 = 0.3448 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP31 10PSI 2.aqt
Date: 11/29/11 Time: 14:47:02

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-22
Test Date: 1/17/11

AQUIFER DATA

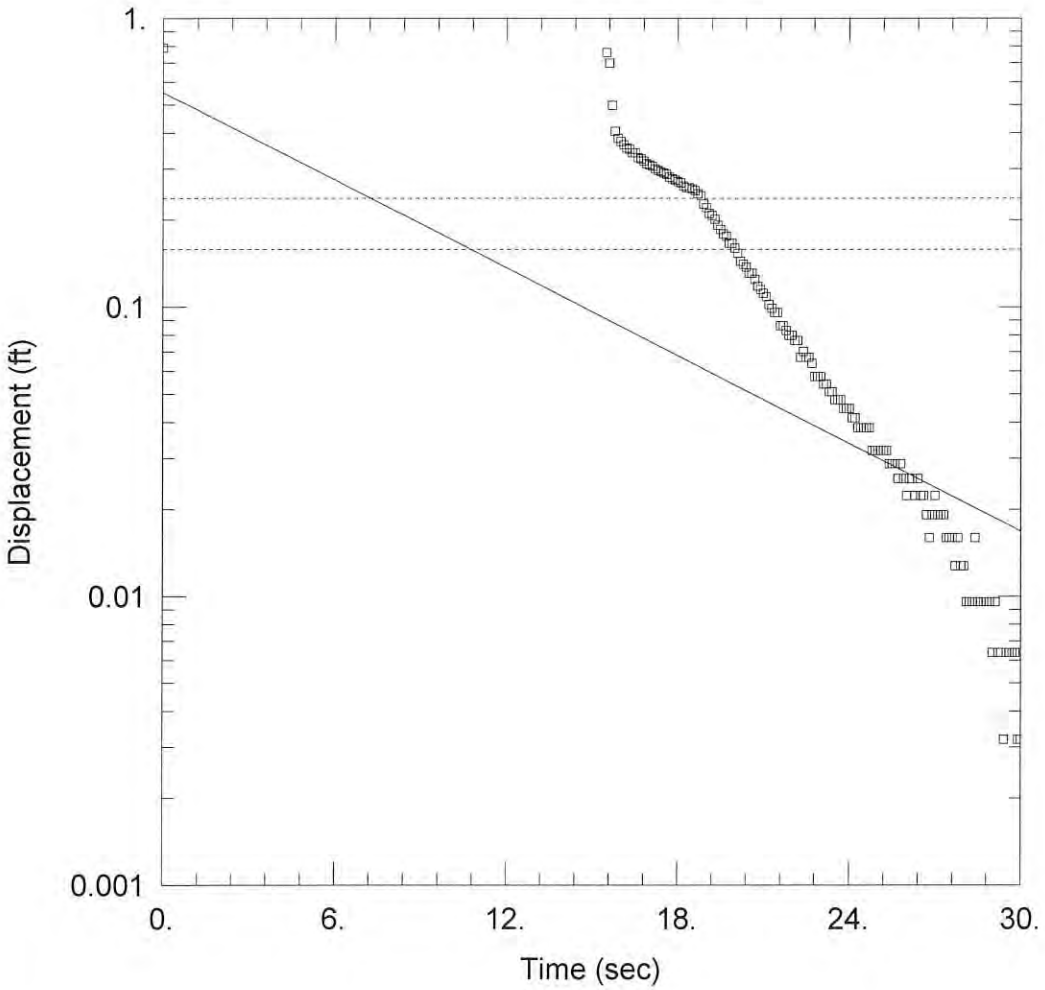
Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-31)

Initial Displacement: 0.94 ft
Total Well Penetration Depth: 8.9 ft
Casing Radius: 0.042 ft
Static Water Column Height: 8.9 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 9.878 ft/day
y0 = 0.56 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP31 10PSI 3.aqt
Date: 11/29/11 Time: 14:47:08

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-31
Test Date: 1/20/2011

AQUIFER DATA

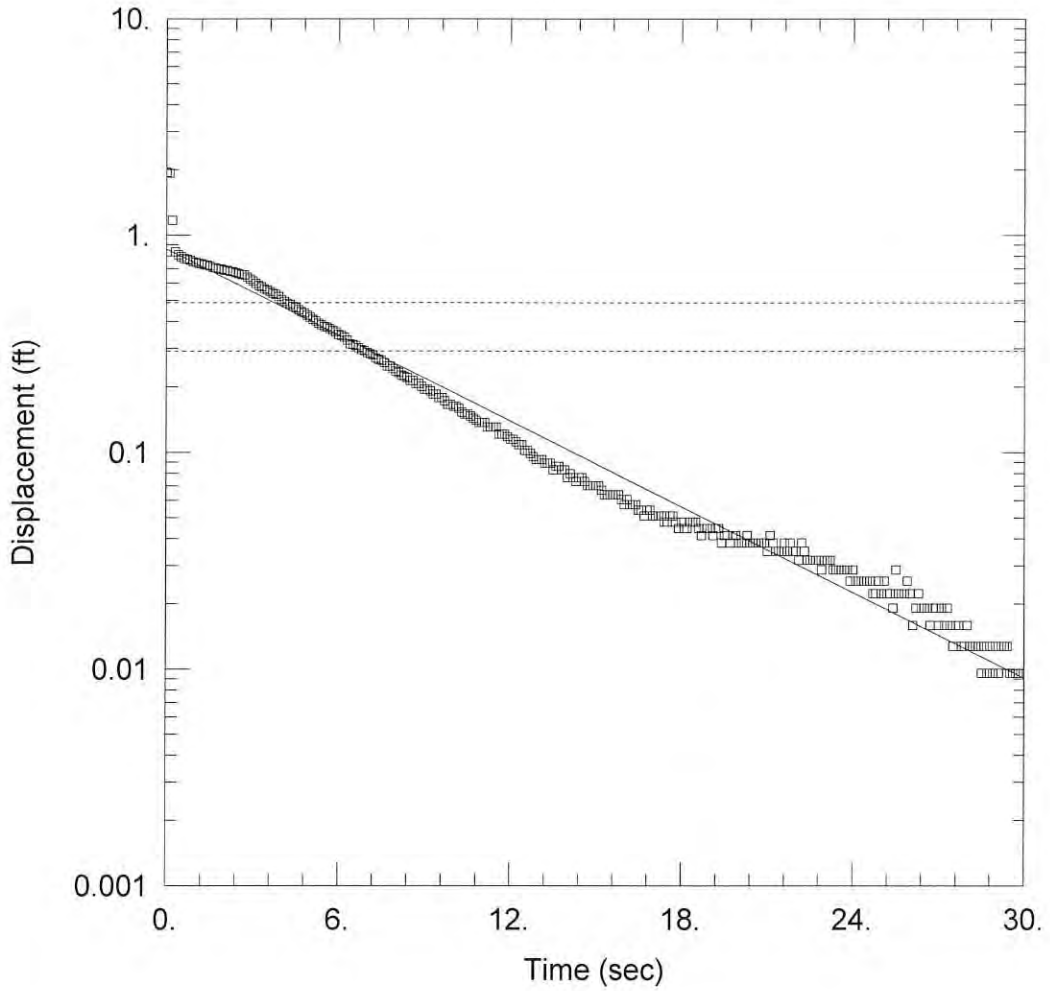
Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-31)

Initial Displacement: 0.79 ft
Total Well Penetration Depth: 8.9 ft
Casing Radius: 0.042 ft
Static Water Column Height: 8.9 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 7.525 ft/day
y0 = 0.551 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP31 20PSI 1.aqt
Date: 11/29/11 Time: 14:47:14

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-31
Test Date: 1/20/2011

AQUIFER DATA

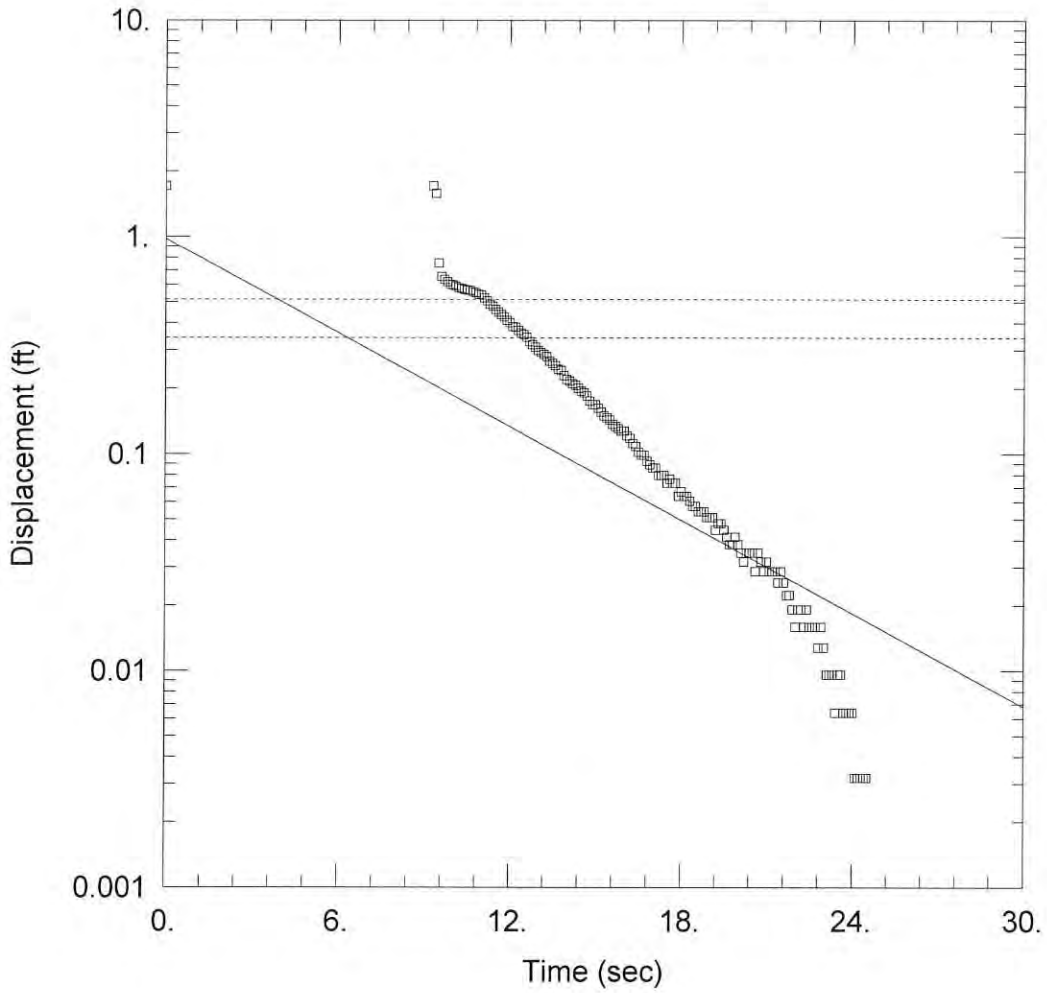
Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-31)

Initial Displacement: 1.95 ft
Total Well Penetration Depth: 8.9 ft
Casing Radius: 0.042 ft
Static Water Column Height: 8.9 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 13.17 ft/day
y0 = 0.8602 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP31 20PSI 3.aqt
Date: 11/29/11 Time: 14:47:21

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-31
Test Date: 1/20/2011

AQUIFER DATA

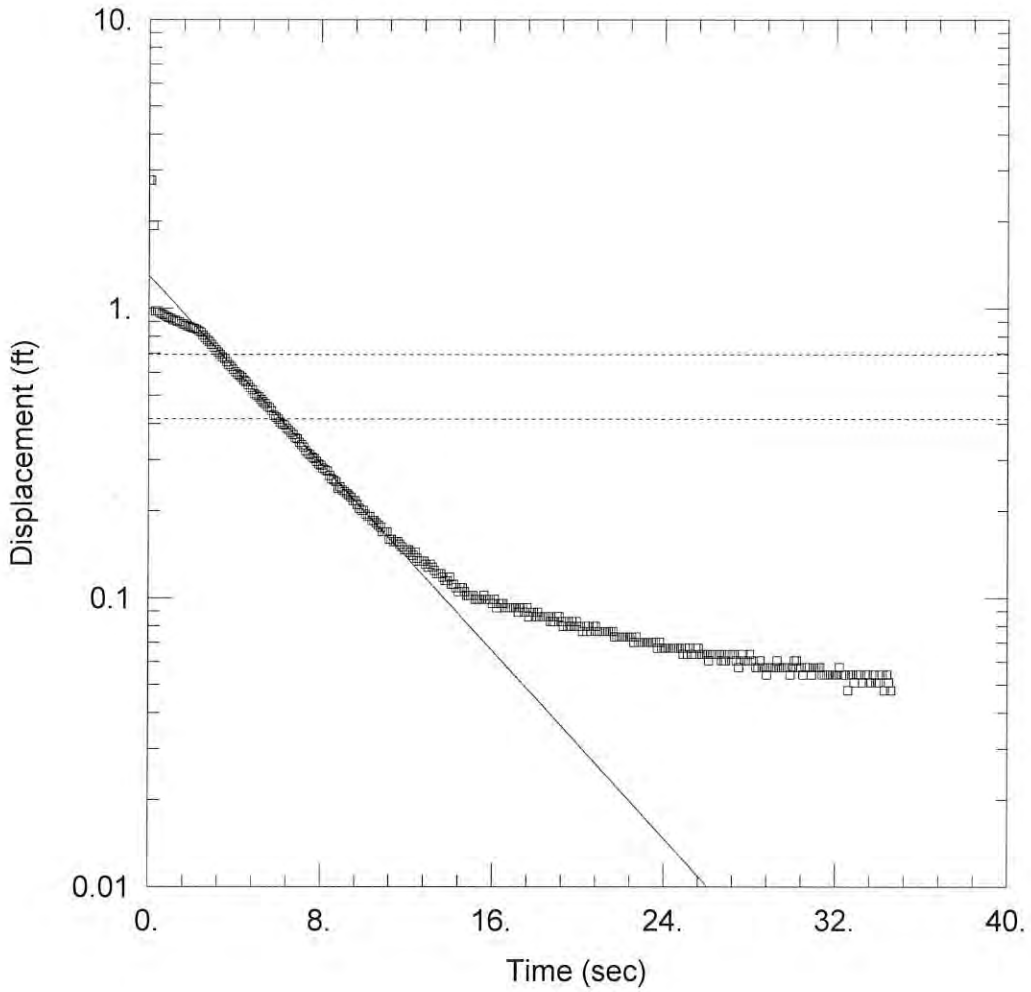
Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-31)

Initial Displacement: 1.71 ft
Total Well Penetration Depth: 8.9 ft
Casing Radius: 0.042 ft
Static Water Column Height: 8.9 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 10.71 ft/day
y0 = 0.9744 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP31 30PSI 1.aqt
Date: 11/29/11 Time: 14:47:28

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-31
Test Date: 1/20/2011

AQUIFER DATA

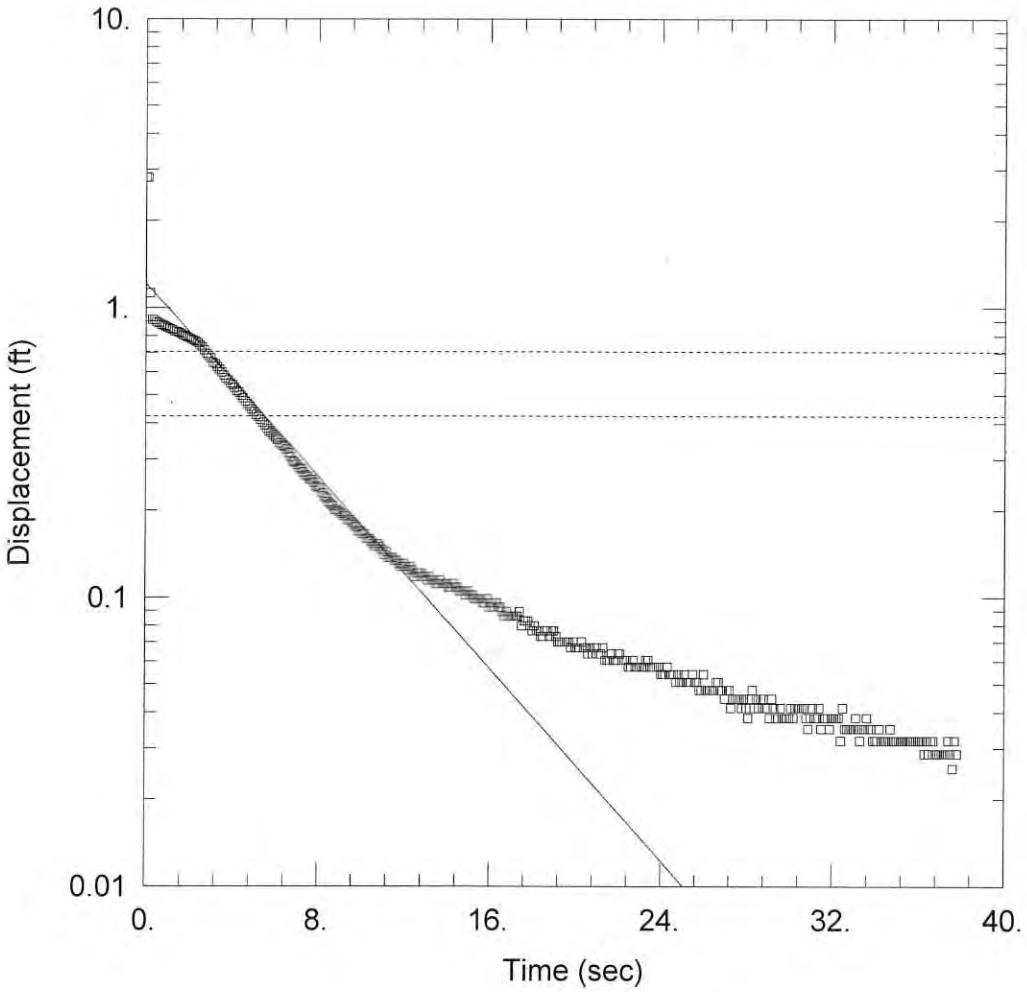
Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-31)

Initial Displacement: 2.77 ft
Total Well Penetration Depth: 8.9 ft
Casing Radius: 0.042 ft
Static Water Column Height: 8.9 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 16.2 ft/day
y0 = 1.297 ft



WELL TEST ANALYSIS

Data Set: P:\...\OCC DP31 30PSI 3.aqt
Date: 11/29/11 Time: 14:47:34

PROJECT INFORMATION

Company: MACTEC
Test Well: DP-31
Test Date: 1/20/2011

AQUIFER DATA

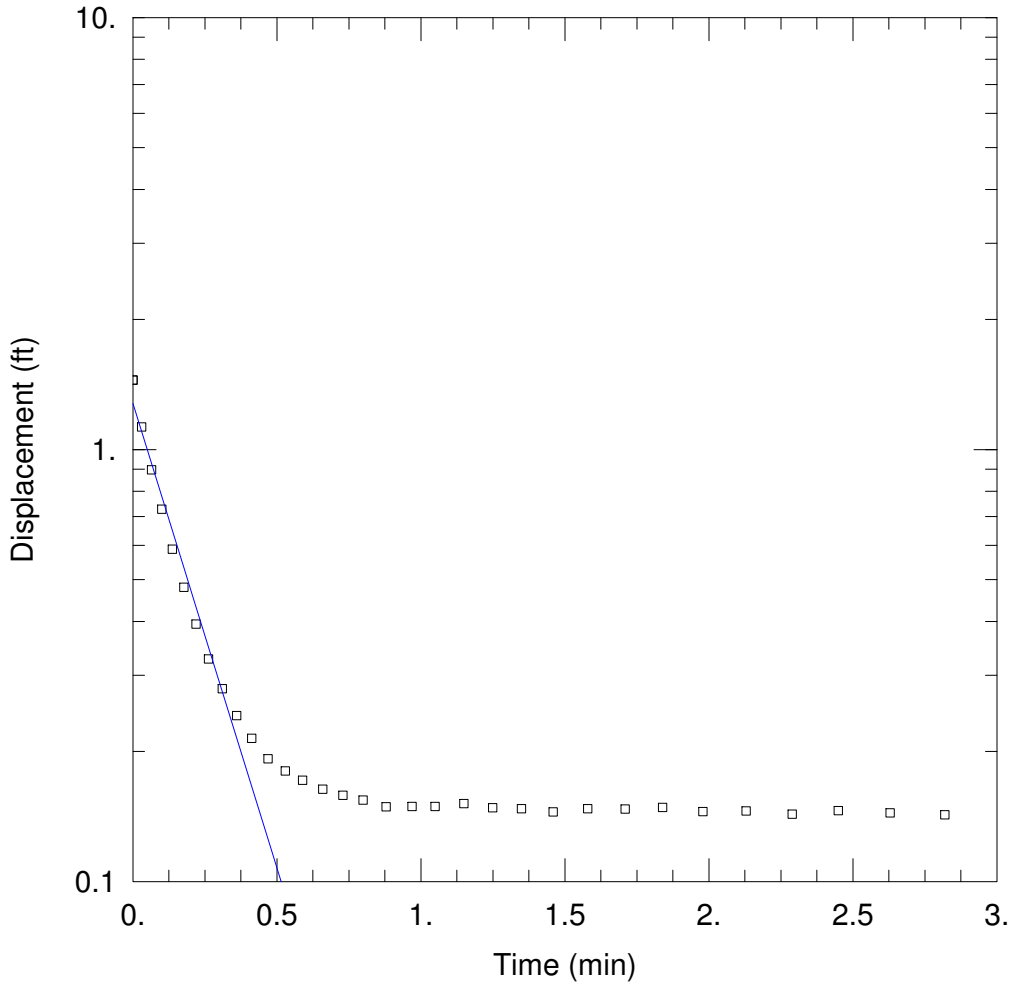
Saturated Thickness: 80. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-31)

Initial Displacement: 2.82 ft
Total Well Penetration Depth: 8.9 ft
Casing Radius: 0.042 ft
Static Water Column Height: 8.9 ft
Screen Length: 4. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 16.6 ft/day
y0 = 1.209 ft



DP-22 FALLING HEAD TEST 1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP22 FHT1.aqt
Date: 12/18/11 Time: 18:46:52

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-22
Test Date: 8/3/2011

AQUIFER DATA

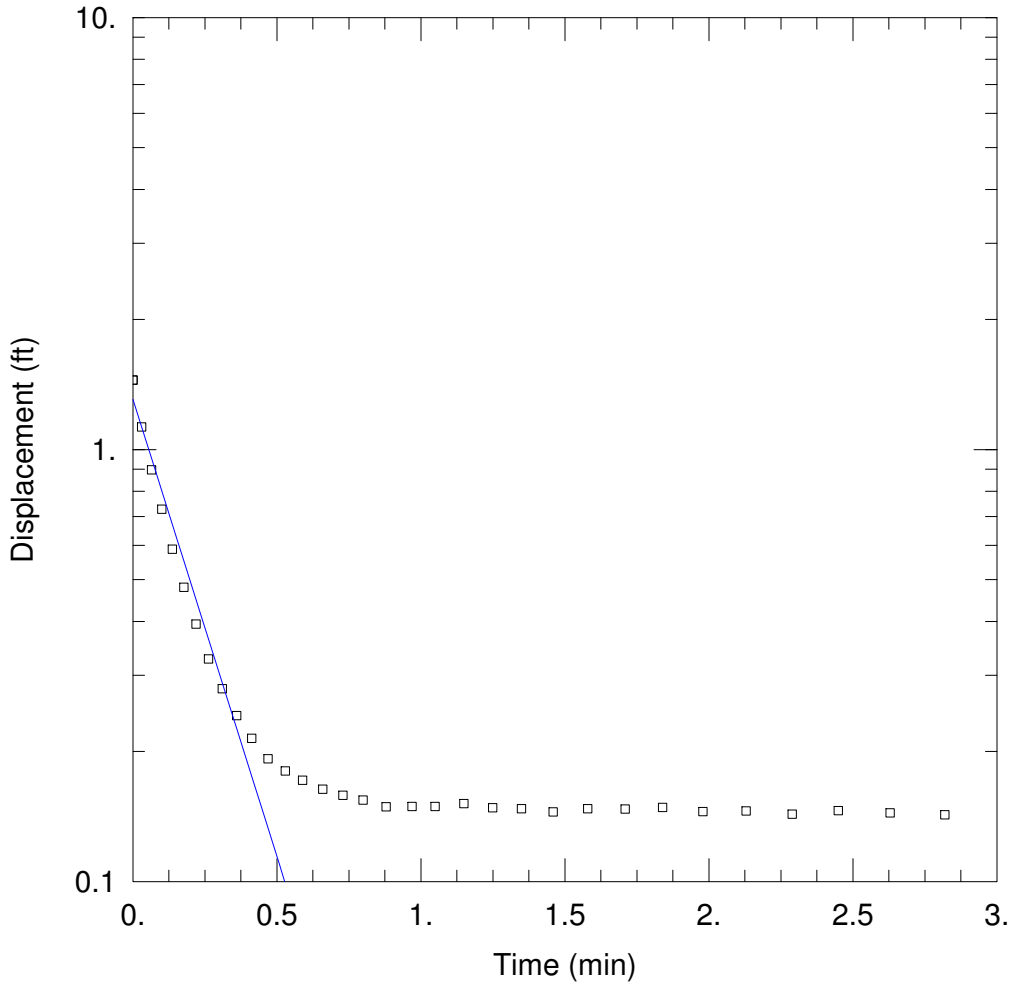
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-22)

Initial Displacement: 1.45 ft
Total Well Penetration Depth: 12.8 ft
Casing Radius: 0.083 ft
Static Water Column Height: 12.8 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 8.215 ft/day
y0 = 1.278 ft



DP-22 FALLING HEAD TEST 1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP22 FHT1.aqt
Date: 12/18/11 Time: 18:48:23

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-22
Test Date: 8/3/2011

AQUIFER DATA

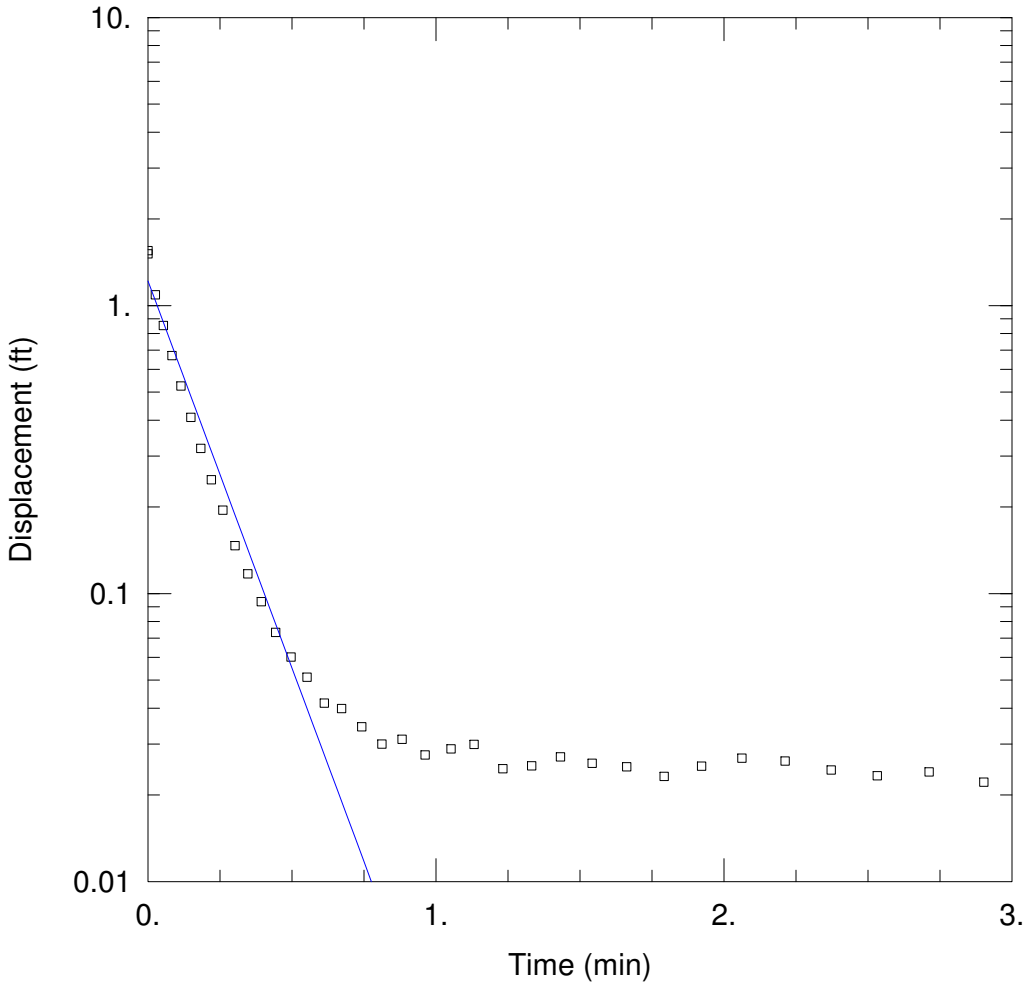
Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-22)

Initial Displacement: 1.45 ft
Total Well Penetration Depth: 12.8 ft
Casing Radius: 0.083 ft
Static Water Column Height: 12.8 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 11.58 ft/day
y0 = 1.306 ft



DP-22 FALLING HEAD TEST 2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP22 FHT2.aqt
Date: 12/18/11 Time: 19:09:45

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-22
Test Date: 11/3/2011

AQUIFER DATA

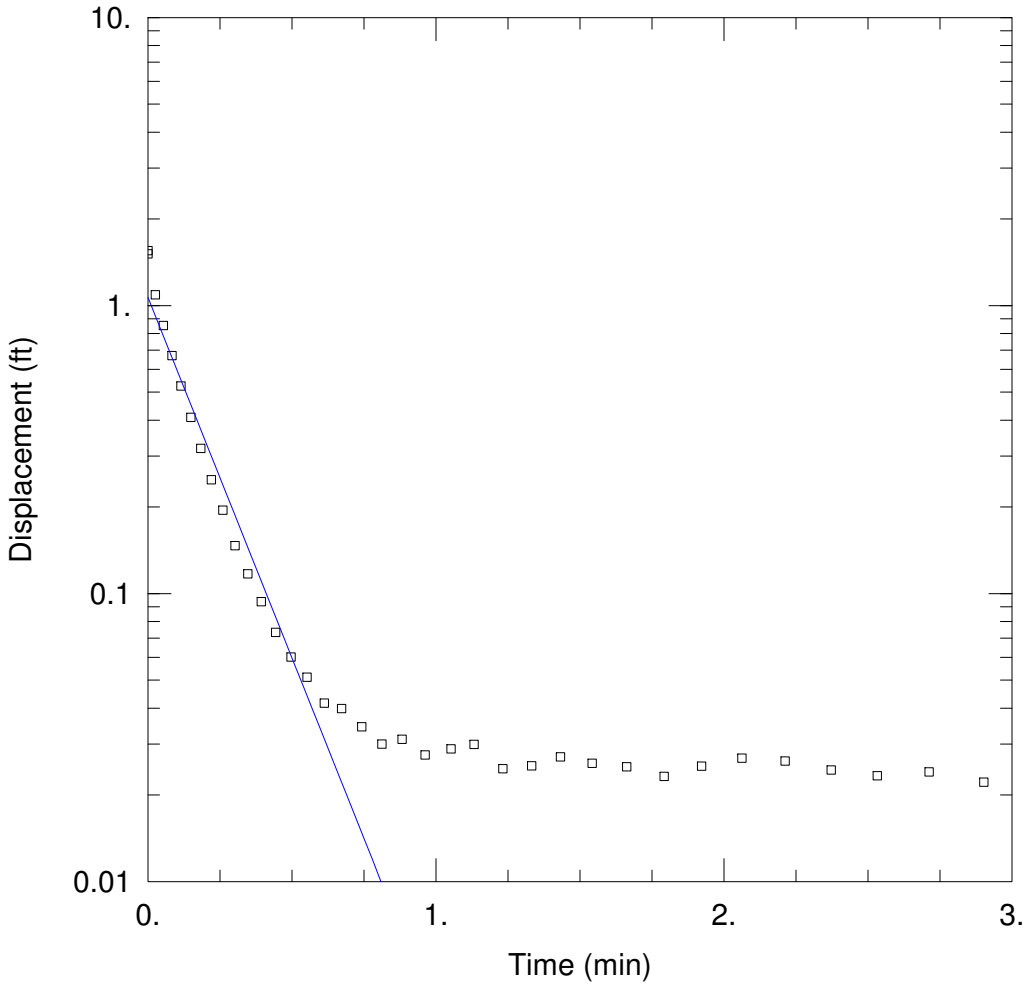
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-22)

Initial Displacement: 1.55 ft
Total Well Penetration Depth: 12.8 ft
Casing Radius: 0.083 ft
Static Water Column Height: 12.8 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 10.26 ft/day
y0 = 1.216 ft



DP-22 FALLING HEAD TEST 2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP22 FHT2.aqt
Date: 12/18/11 Time: 19:08:42

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-22
Test Date: 11/3/2011

AQUIFER DATA

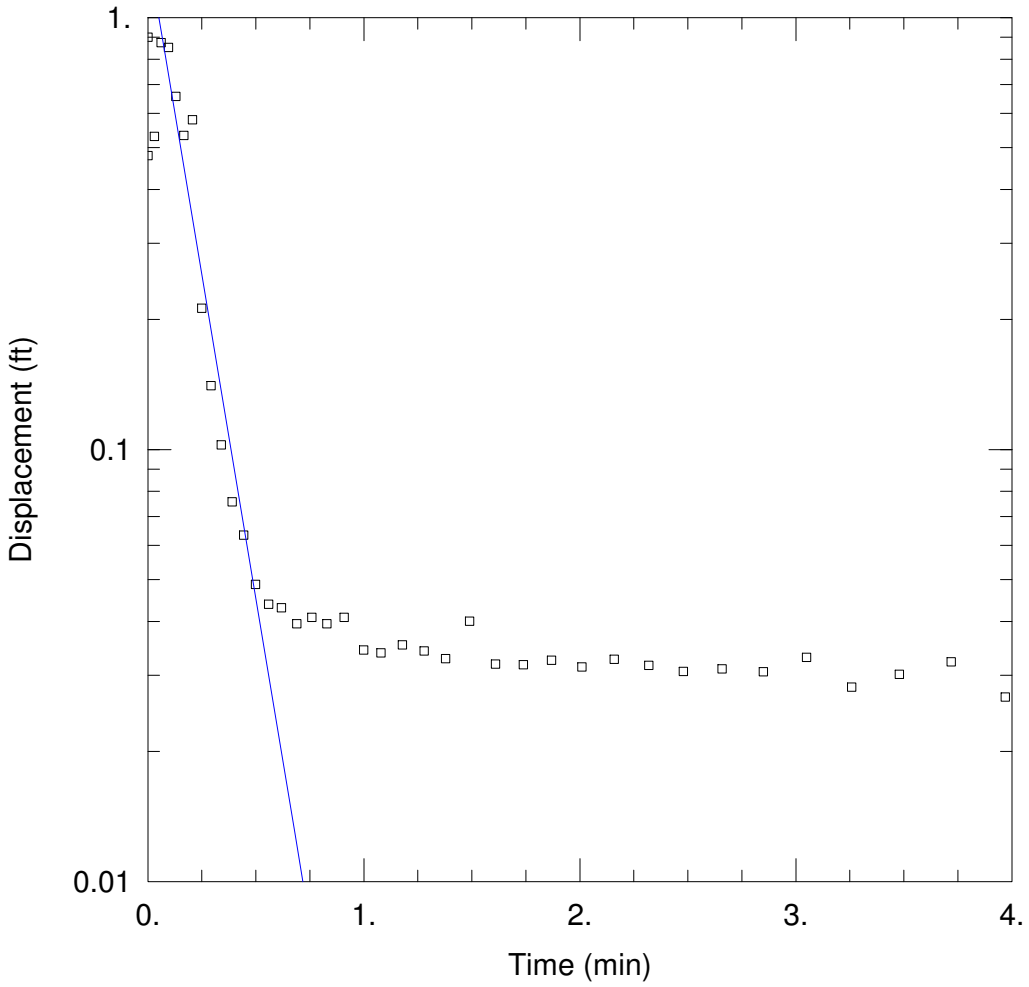
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-22)

Initial Displacement: 1.55 ft
Total Well Penetration Depth: 12.8 ft
Casing Radius: 0.083 ft
Static Water Column Height: 12.8 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 13.7 ft/day
y0 = 1.066 ft



DP-22 RISING HEAD TEST #1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP22 RHT1.aqt
Date: 12/18/11 Time: 19:04:38

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-22
Test Date: 8/3/2011

AQUIFER DATA

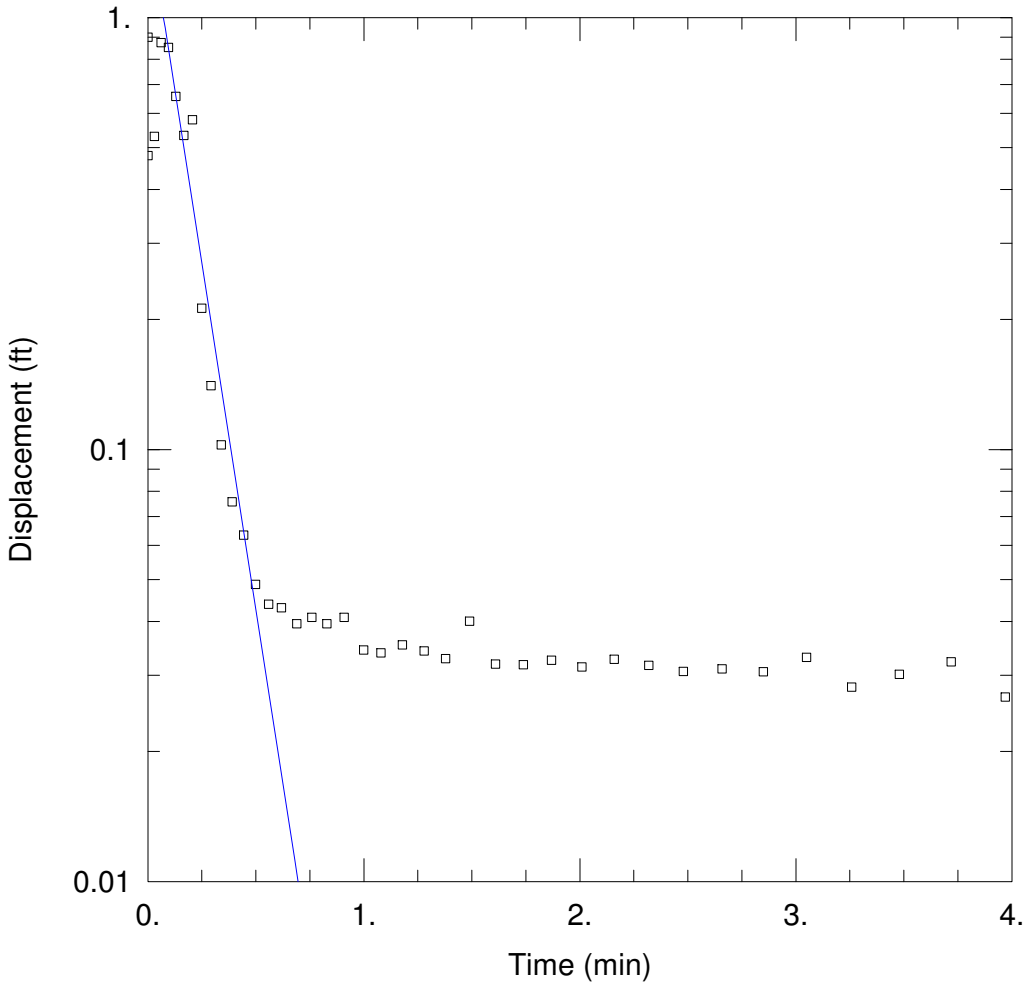
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-22)

Initial Displacement: 0.9 ft
Total Well Penetration Depth: 12.8 ft
Casing Radius: 0.083 ft
Static Water Column Height: 12.8 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 11.46 ft/day
y0 = 1.423 ft



DP-22 RISING HEAD TEST #1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP22 RHT1.aqt
Date: 12/18/11 Time: 19:06:05

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-22
Test Date: 8/3/2011

AQUIFER DATA

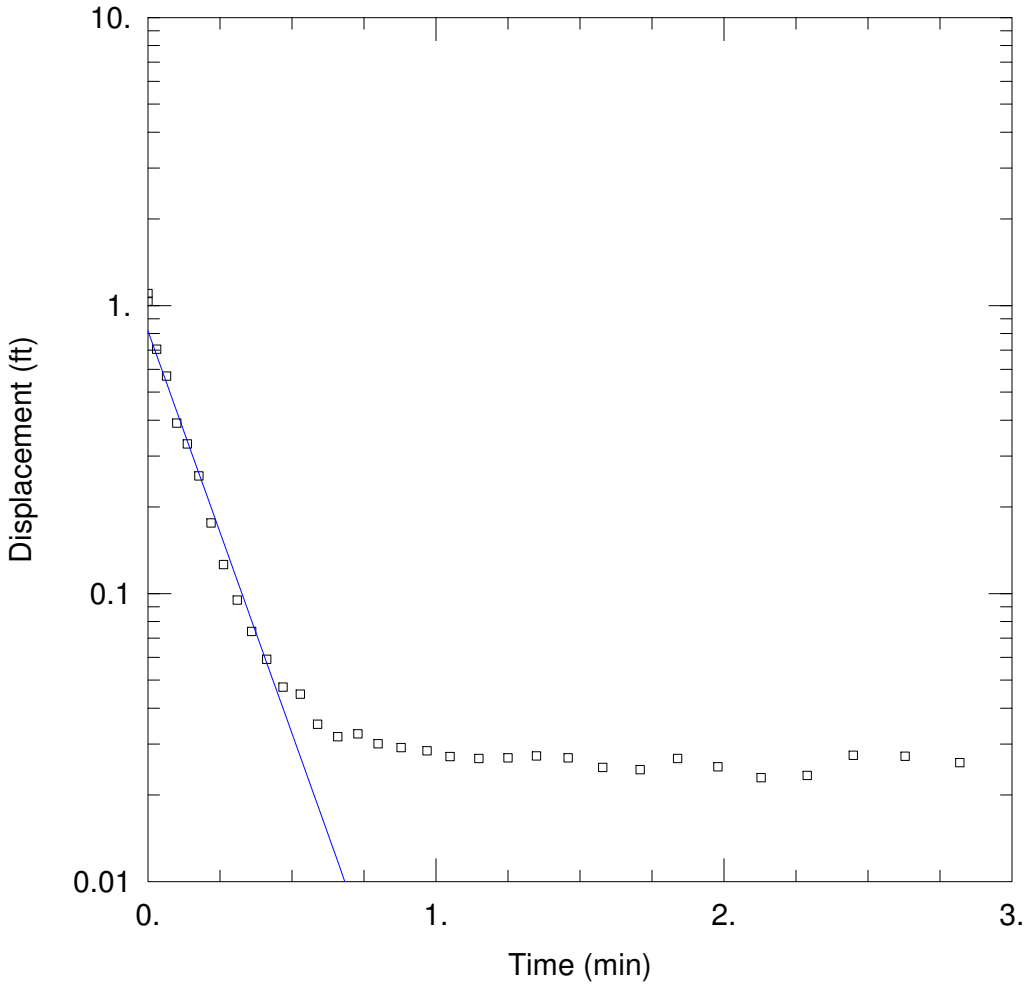
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-22)

Initial Displacement: 0.9 ft
Total Well Penetration Depth: 12.8 ft
Casing Radius: 0.083 ft
Static Water Column Height: 12.8 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 17.57 ft/day
y0 = 1.708 ft



DP-22 RISING HEAD TEST #2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP22 RHT2.aqt
Date: 12/18/11 Time: 19:12:11

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-22
Test Date: 8/3/2011

AQUIFER DATA

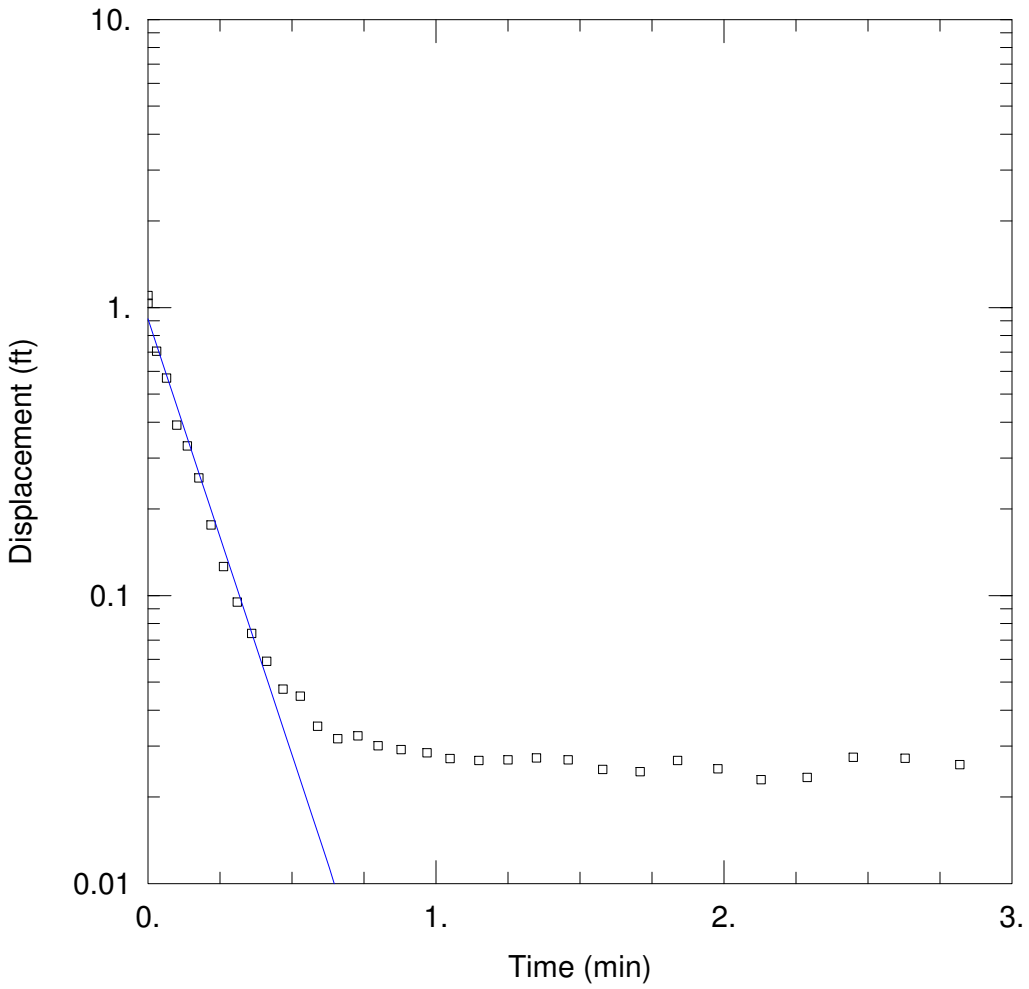
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-22)

Initial Displacement: 1.1 ft
Total Well Penetration Depth: 12.8 ft
Casing Radius: 0.083 ft
Static Water Column Height: 12.8 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 10.67 ft/day
y0 = 0.8152 ft



DP-22 RISING HEAD TEST #2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP22 RHT2.aqt
Date: 12/18/11 Time: 19:13:56

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-22
Test Date: 8/3/2011

AQUIFER DATA

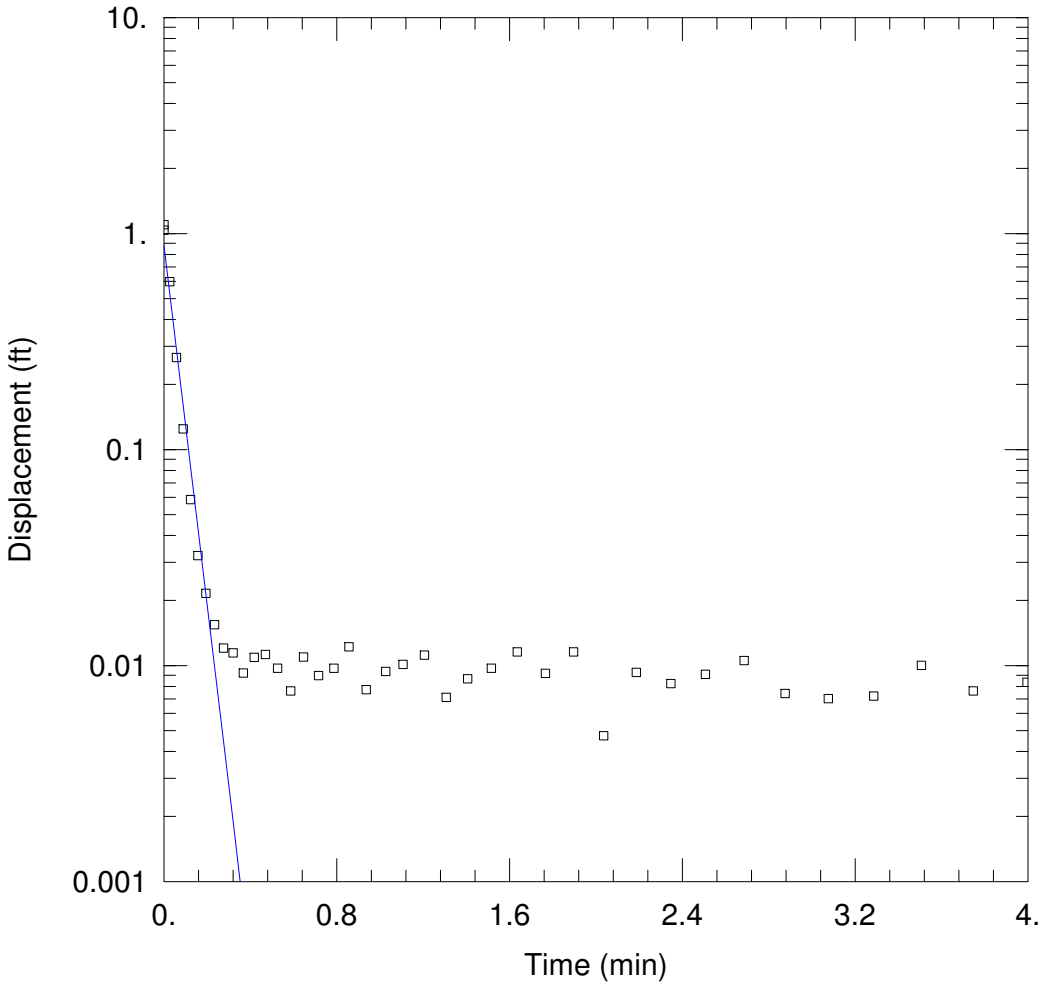
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-22)

Initial Displacement: 1.1 ft
Total Well Penetration Depth: 12.8 ft
Casing Radius: 0.083 ft
Static Water Column Height: 12.8 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 16.56 ft/day
y0 = 0.9123 ft



DP-23 FALLING HEAD TEST #1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP23 FHT1.aqt
Date: 12/18/11 Time: 19:32:30

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-23
Test Date: 8/3/2011

AQUIFER DATA

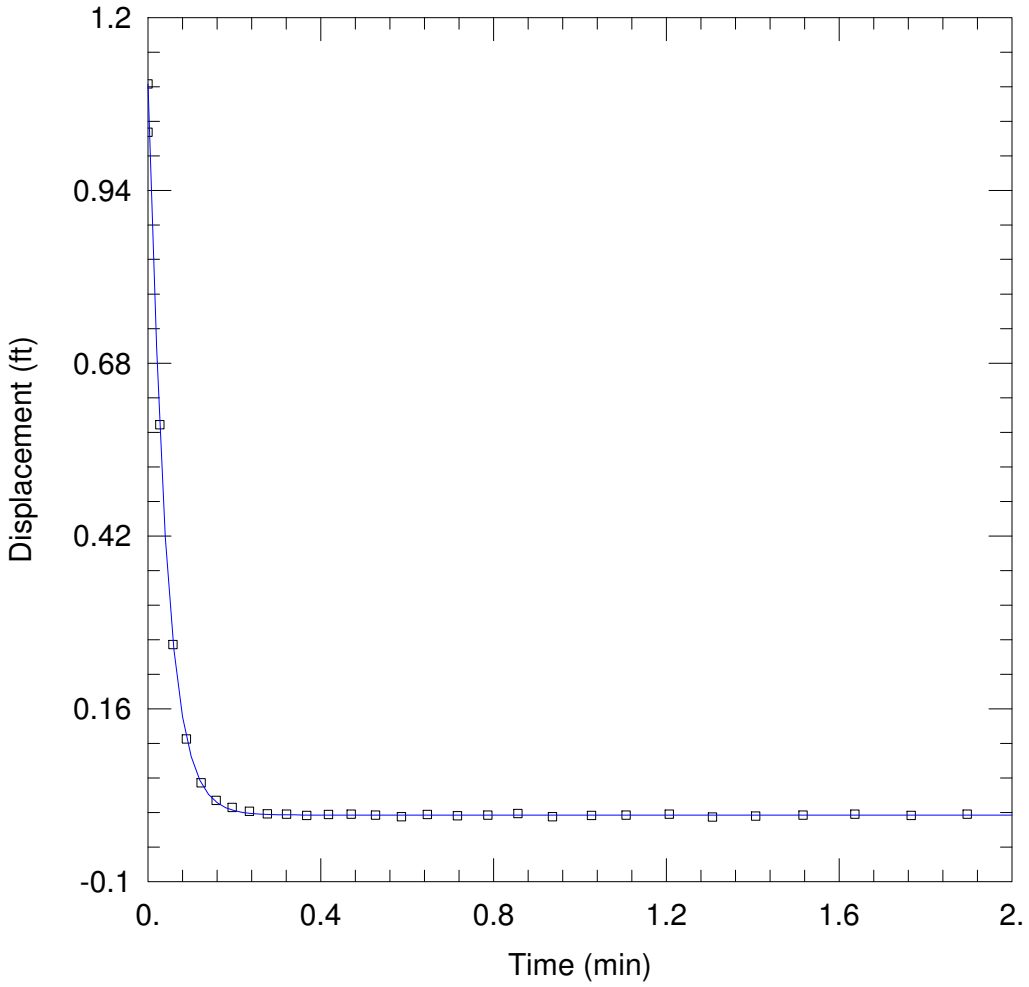
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-23)

Initial Displacement: 1.1 ft
Total Well Penetration Depth: 16.4 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.4 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 32.94 ft/day
y0 = 0.88 ft



DP-23 FALLING HEAD TEST #1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP23 FHT1.aqt
Date: 12/18/11 Time: 19:29:56

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-23
Test Date: 8/3/2011

AQUIFER DATA

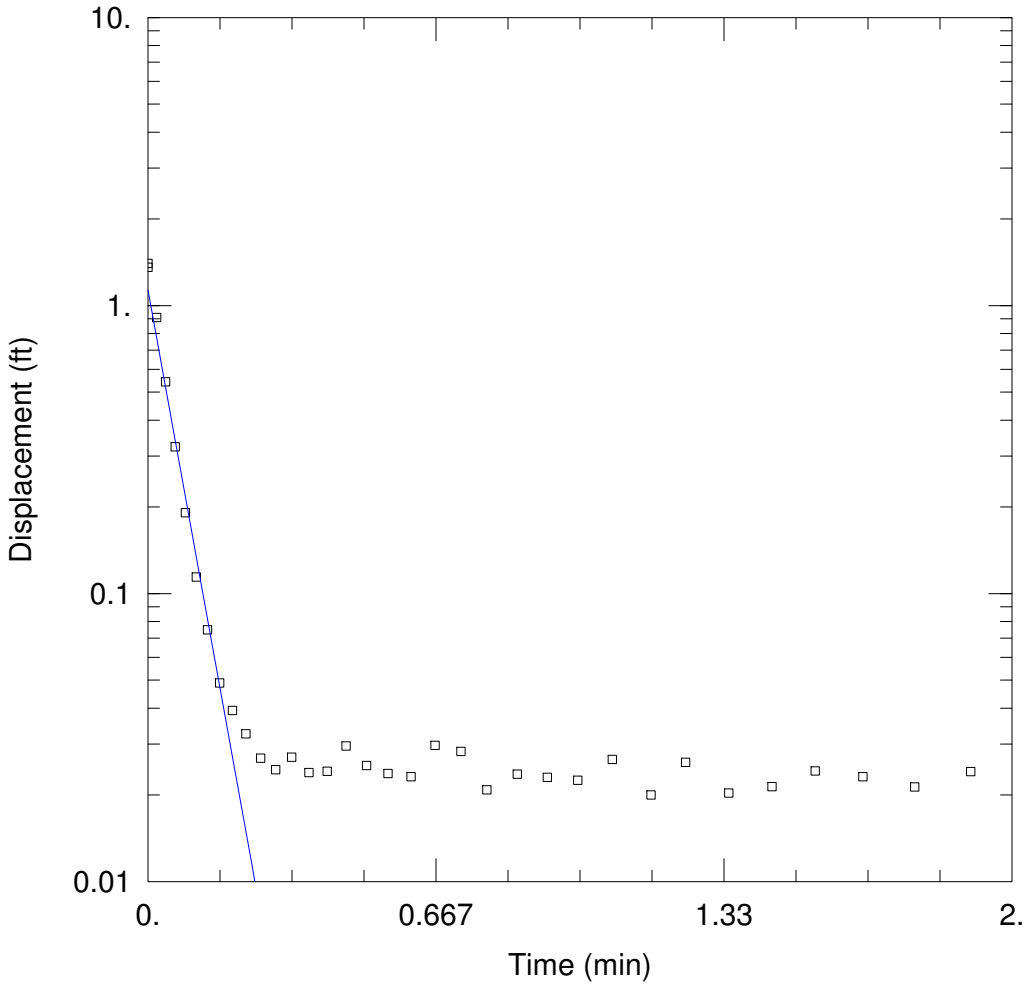
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-23)

Initial Displacement: 1.1 ft
Total Well Penetration Depth: 16.4 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.4 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 41.71 ft/day
Le = 12.02 ft



DP-23 FALLING HEAD TEST #2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP23 FHT2.aqt
Date: 12/18/11 Time: 19:37:19

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-23
Test Date: 8/3/2011

AQUIFER DATA

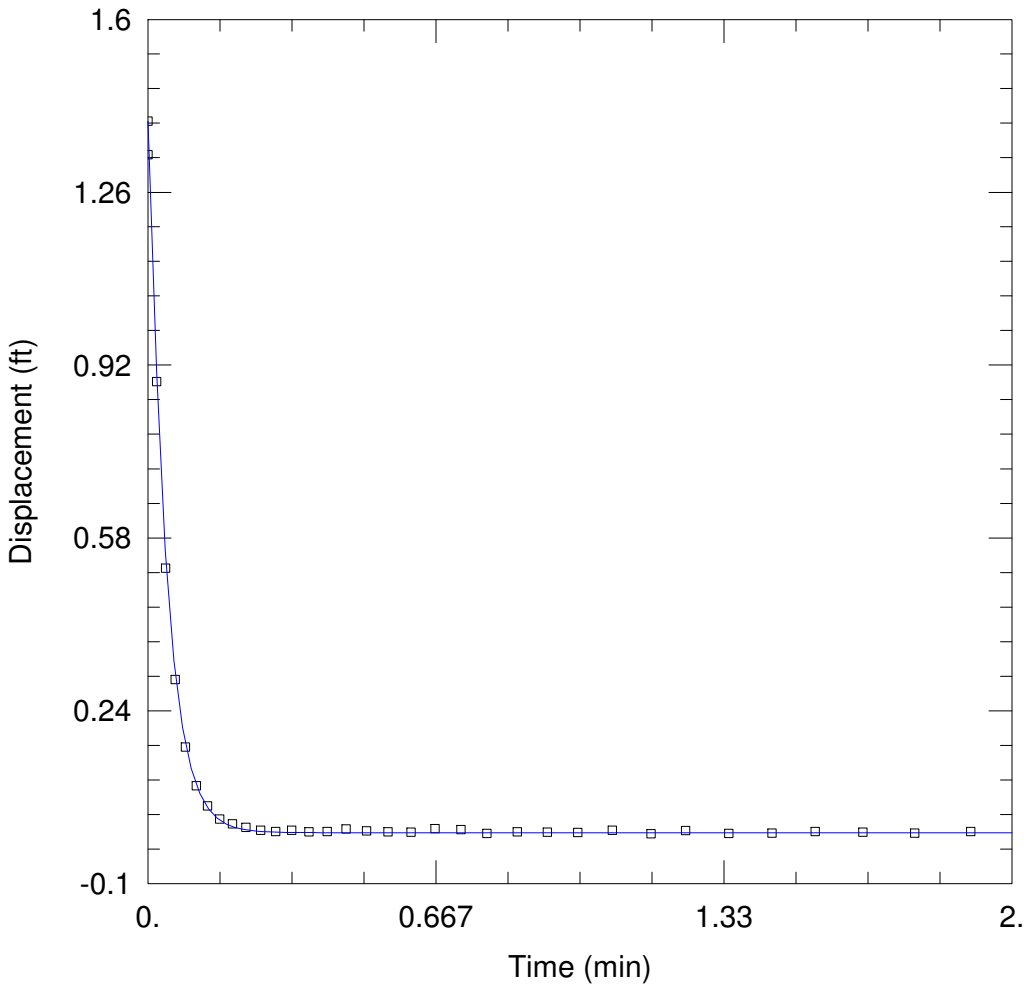
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-23)

Initial Displacement: 1.4 ft
Total Well Penetration Depth: 16.4 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.4 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 32.79 ft/day
y0 = 1.132 ft



DP-23 FALLING HEAD TEST #2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP23 FHT2.aqt
Date: 12/18/11 Time: 19:41:22

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-23
Test Date: 8/3/2011

AQUIFER DATA

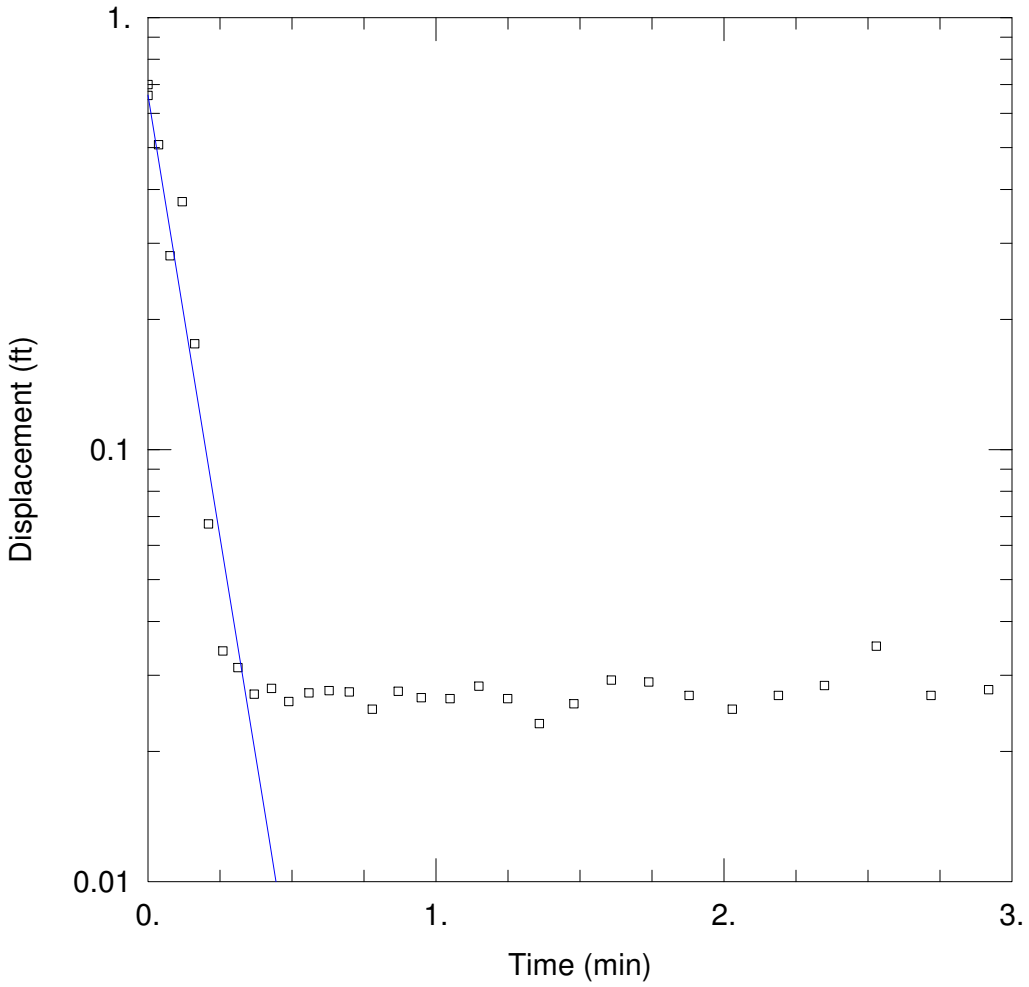
Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-23)

Initial Displacement: 1.4 ft
Total Well Penetration Depth: 16.4 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.4 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 40.02 ft/day
Le = 10.96 ft



DP-23 RISING HEAD TEST #1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP23 RHT1.aqt
Date: 12/18/11 Time: 19:43:28

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-23
Test Date: 8/3/2011

AQUIFER DATA

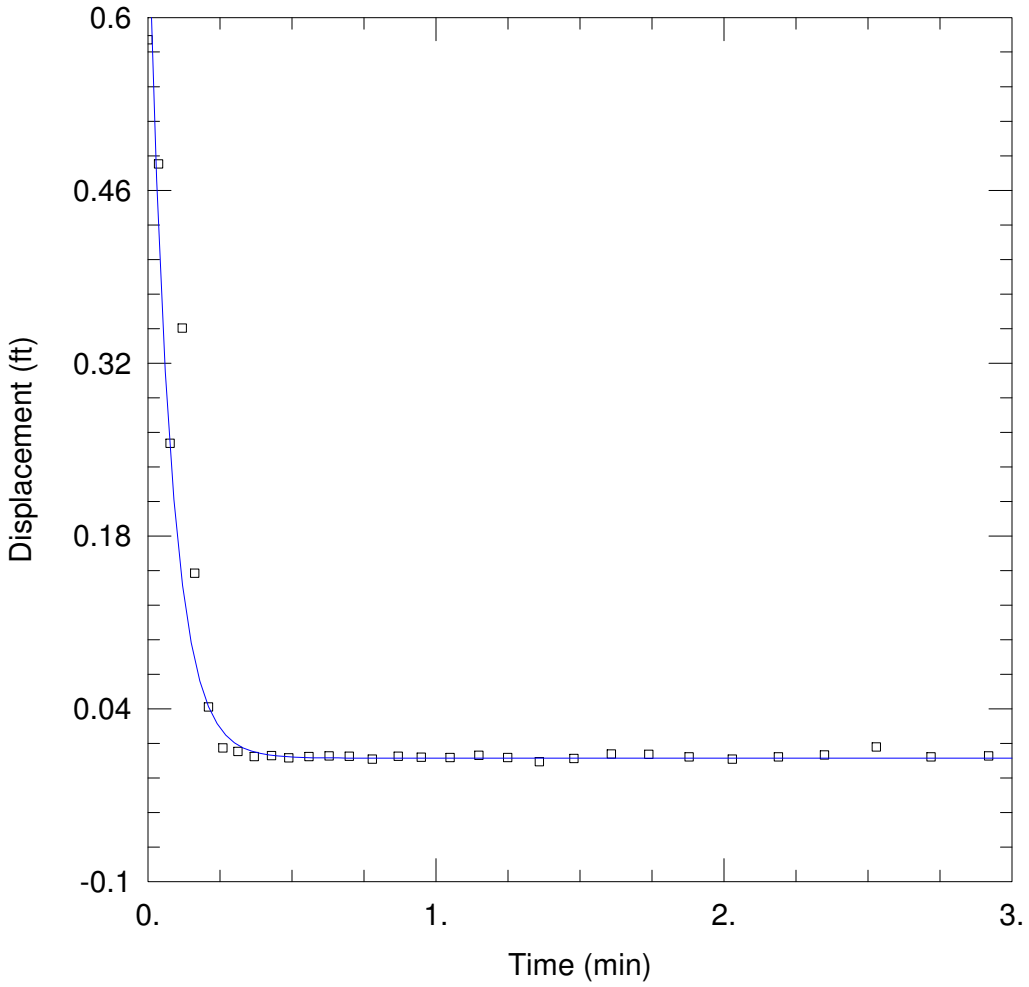
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-23)

Initial Displacement: 0.7 ft
Total Well Penetration Depth: 16.4 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.4 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 16.18 ft/day
y0 = 0.6611 ft



DP-23 RISING HEAD TEST #1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP23 RHT1.aqt
Date: 12/18/11 Time: 19:49:00

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-23
Test Date: 8/3/2011

AQUIFER DATA

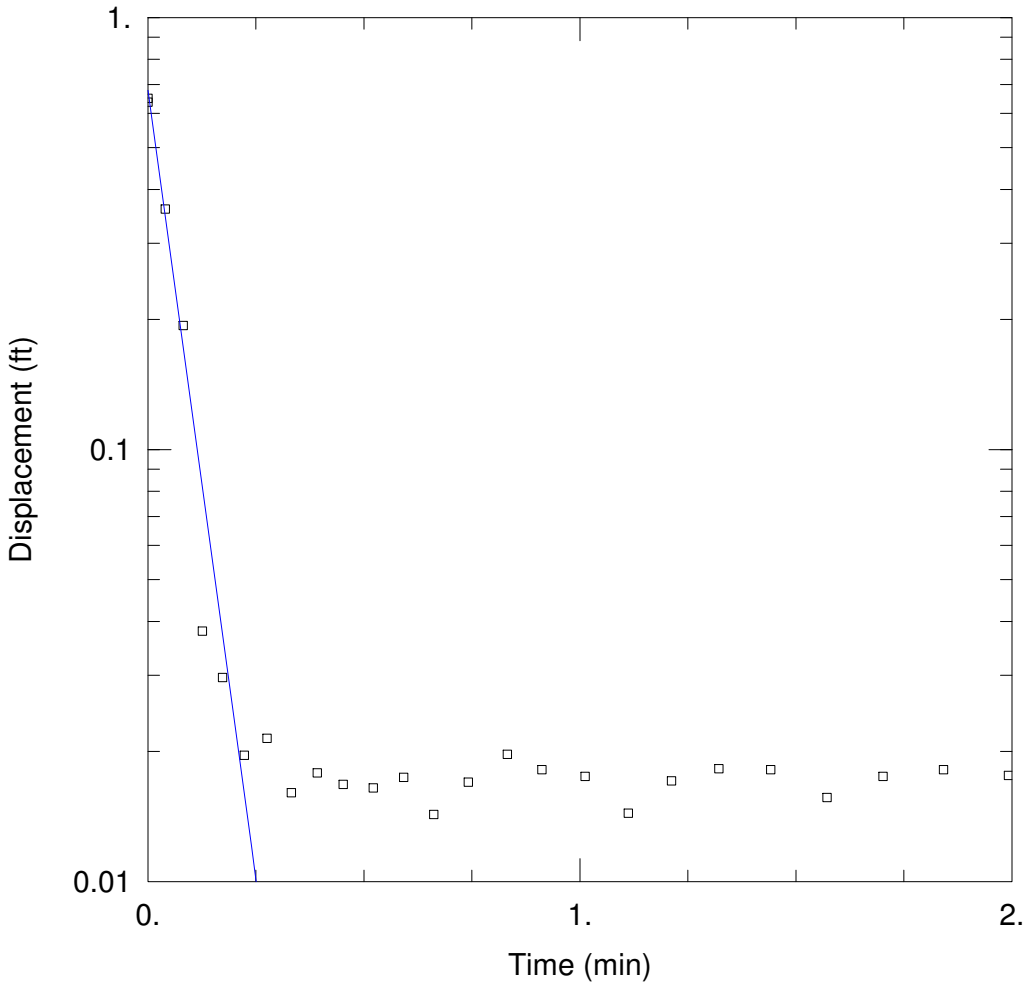
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-23)

Initial Displacement: 0.7 ft
Total Well Penetration Depth: 16.4 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.4 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 23.03 ft/day
Le = 1. ft



DP-23 RISING HEAD TEST #2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP23 RHT2.aqt
Date: 12/18/11 Time: 19:55:46

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-23
Test Date: 8/3/2011

AQUIFER DATA

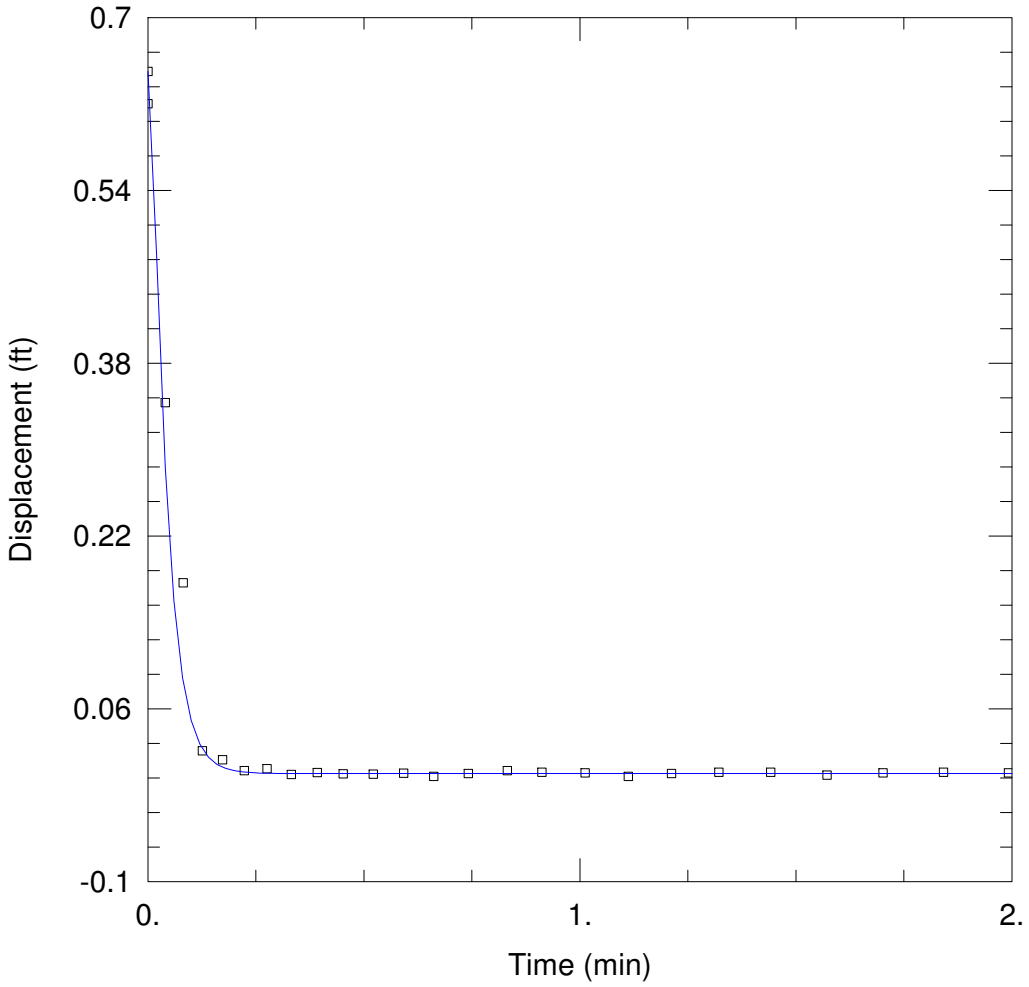
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-23)

Initial Displacement: 0.65 ft
Total Well Penetration Depth: 16.4 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.4 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 28.86 ft/day
y0 = 0.6786 ft



DP-23 RISING HEAD TEST #2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP23 RHT2.aqt
Date: 12/18/11 Time: 19:59:17

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-23
Test Date: 8/3/2011

AQUIFER DATA

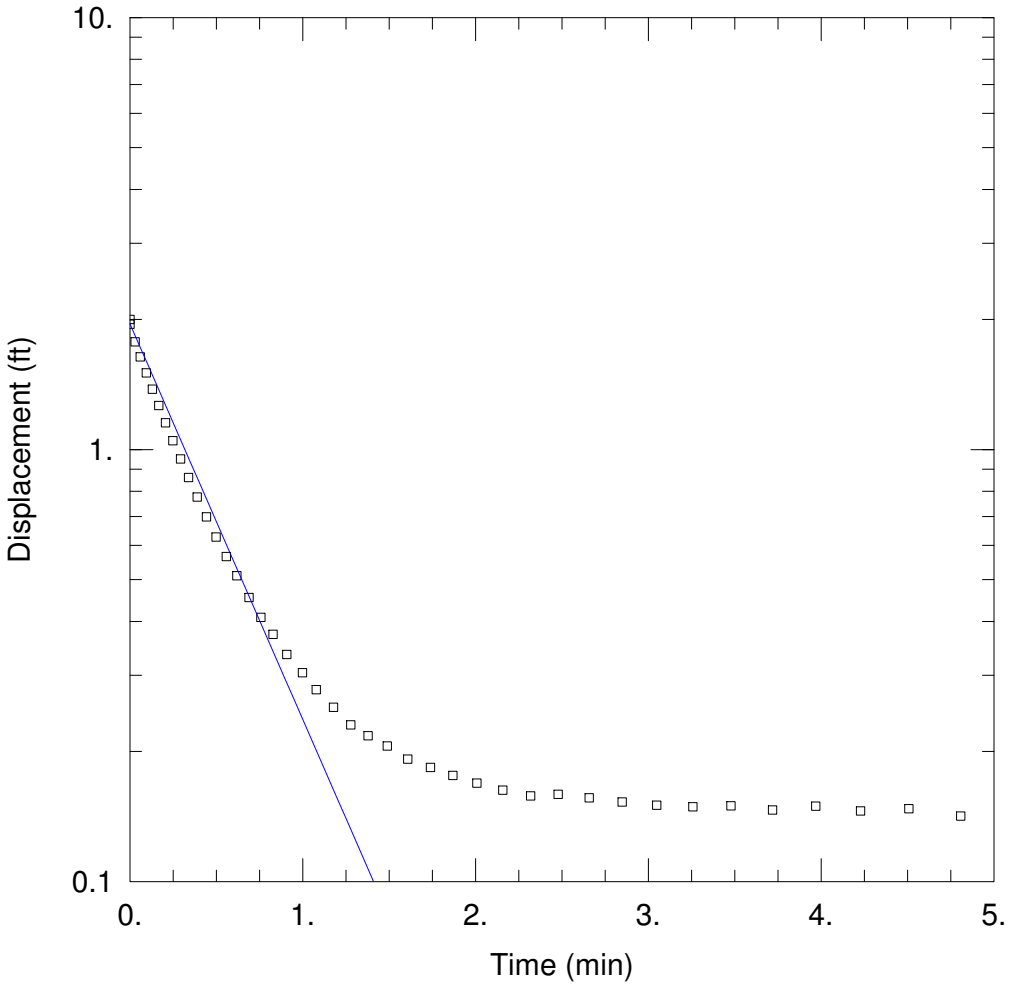
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-23)

Initial Displacement: 0.65 ft
Total Well Penetration Depth: 16.4 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.4 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 38.66 ft/day
Le = 41.69 ft



DP-28 FALLING HEAD TEST #1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP28 FHT1.aqt
Date: 12/18/11 Time: 20:16:54

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-28
Test Date: 8/3/2011

AQUIFER DATA

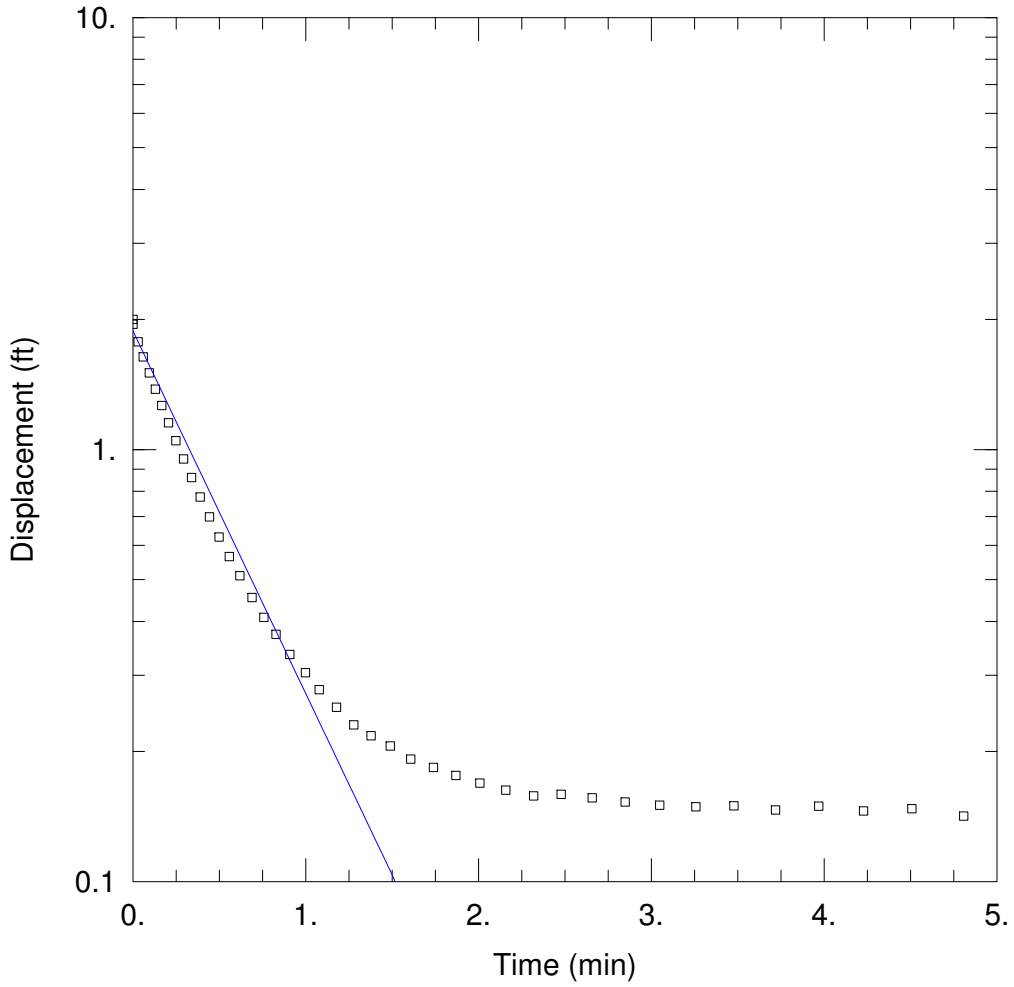
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-28)

Initial Displacement: 2. ft
Total Well Penetration Depth: 14.81 ft
Casing Radius: 0.083 ft
Static Water Column Height: 14.81 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 3.571 ft/day
y0 = 1.954 ft



DP-28 FALLING HEAD TEST #1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP28 FHT1.aqt
Date: 12/18/11 Time: 20:15:57

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-28
Test Date: 8/3/2011

AQUIFER DATA

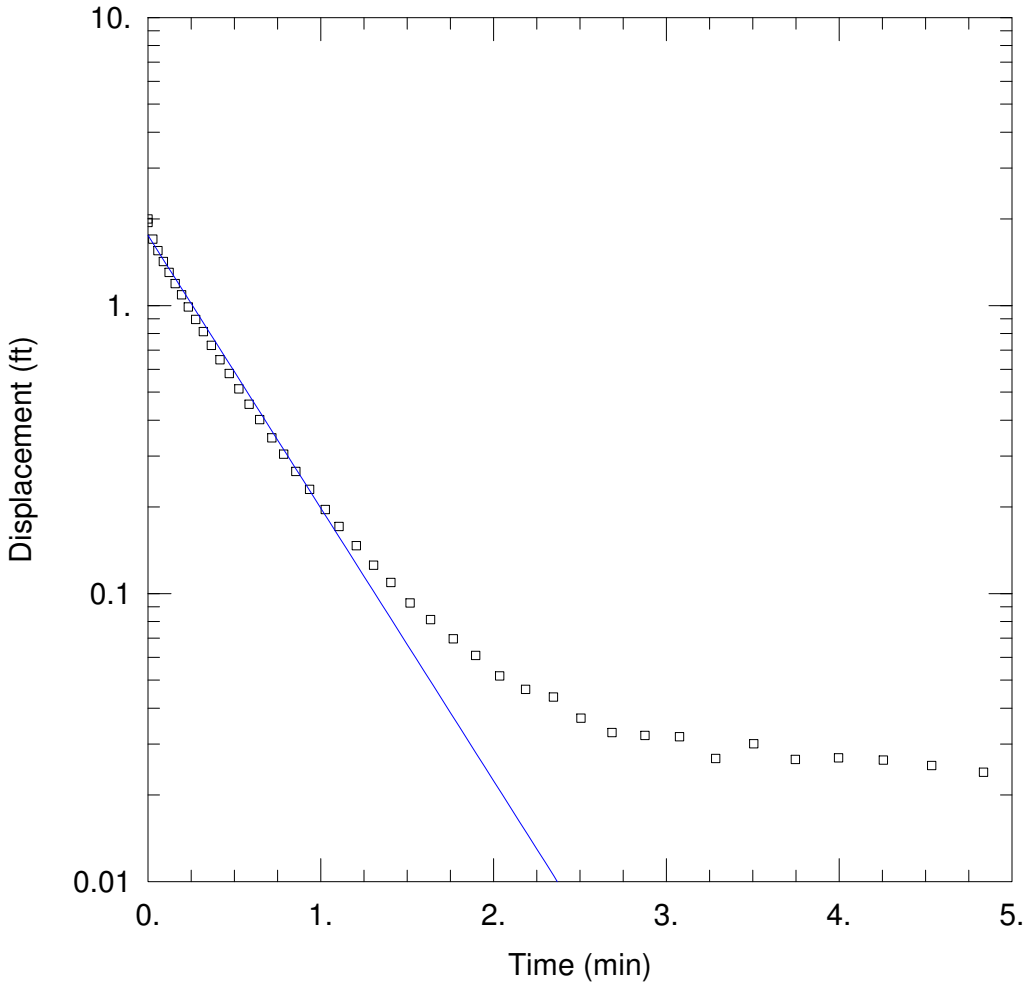
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-28)

Initial Displacement: 2. ft
Total Well Penetration Depth: 14.81 ft
Casing Radius: 0.083 ft
Static Water Column Height: 14.81 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 4.593 ft/day
y0 = 1.88 ft



DP-28 FALLING HEAD TEST #2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP28 FHT2.aqt
Date: 12/18/11 Time: 20:04:31

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-28
Test Date: 8/3/2011

AQUIFER DATA

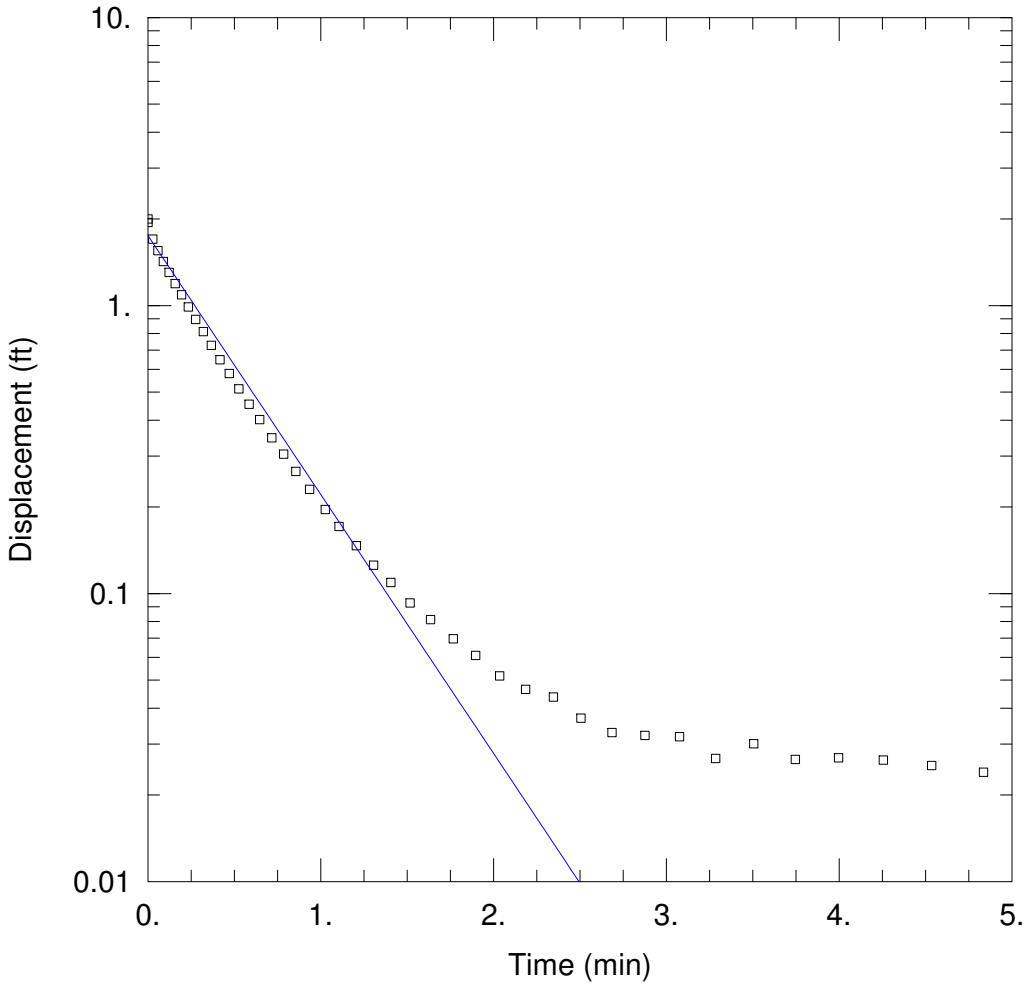
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-28)

Initial Displacement: 2. ft
Total Well Penetration Depth: 14.81 ft
Casing Radius: 0.083 ft
Static Water Column Height: 14.81 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 3.692 ft/day
y0 = 1.752 ft



DP-28 FALLING HEAD TEST #2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP28 FHT2.aqt
Date: 12/18/11 Time: 20:06:18

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-28
Test Date: 8/3/2011

AQUIFER DATA

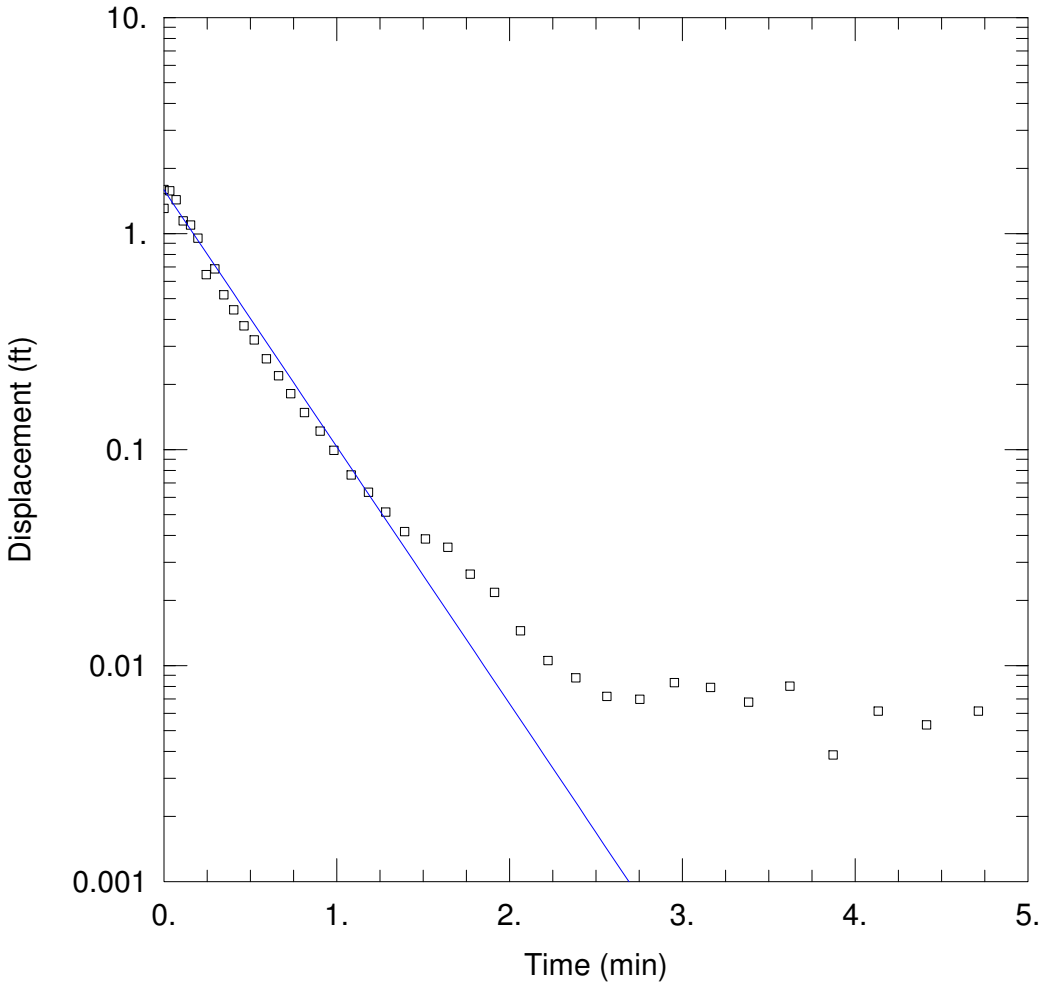
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-28)

Initial Displacement: 2. ft
Total Well Penetration Depth: 14.81 ft
Casing Radius: 0.083 ft
Static Water Column Height: 14.81 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 4.92 ft/day
y0 = 1.749 ft



DP-28 RISING HEAD TEST #1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP28 RHT1.aqt
Date: 12/18/11 Time: 20:08:25

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-28
Test Date: 8/3/2011

AQUIFER DATA

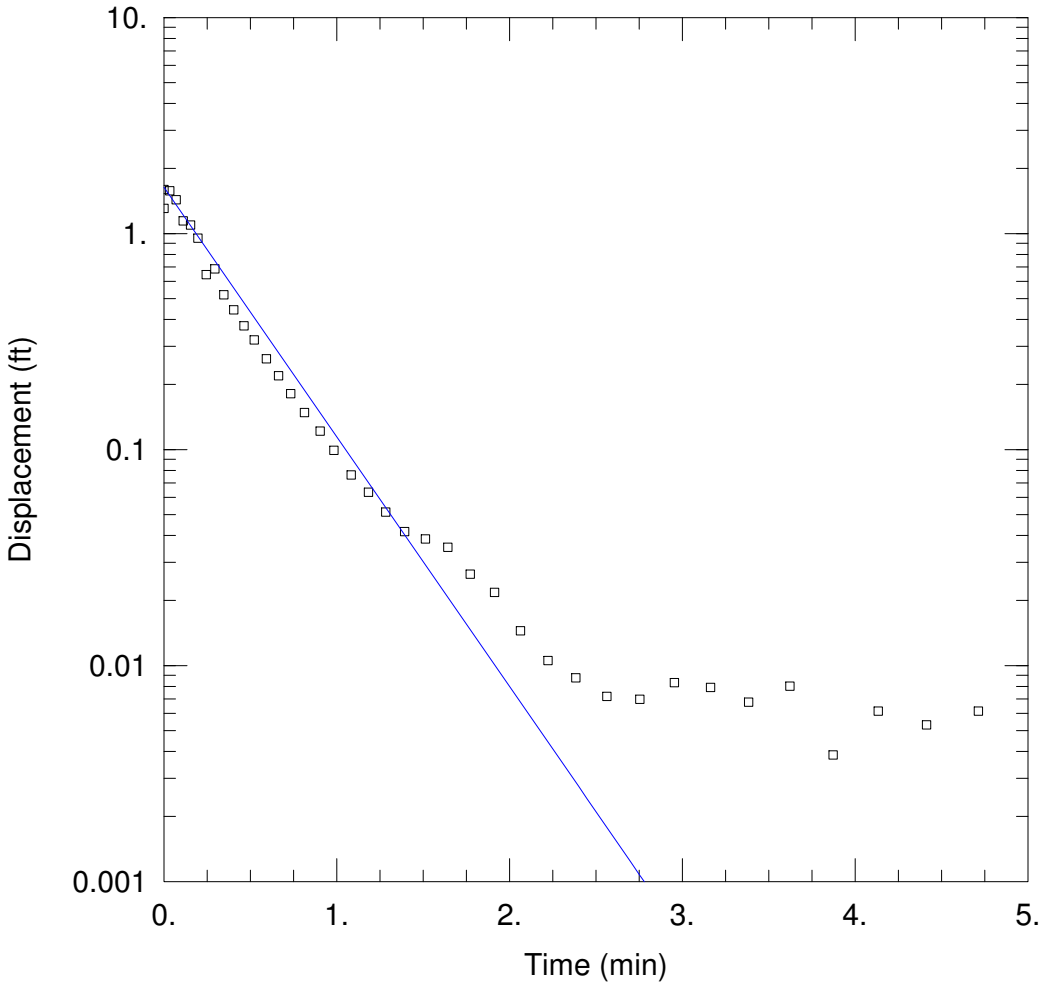
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-28)

Initial Displacement: 1.6 ft
Total Well Penetration Depth: 14.81 ft
Casing Radius: 0.083 ft
Static Water Column Height: 14.81 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 4.638 ft/day
y0 = 1.591 ft



DP-28 RISING HEAD TEST #1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP28 RHT1.aqt
Date: 12/18/11 Time: 20:09:18

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-28
Test Date: 8/3/2011

AQUIFER DATA

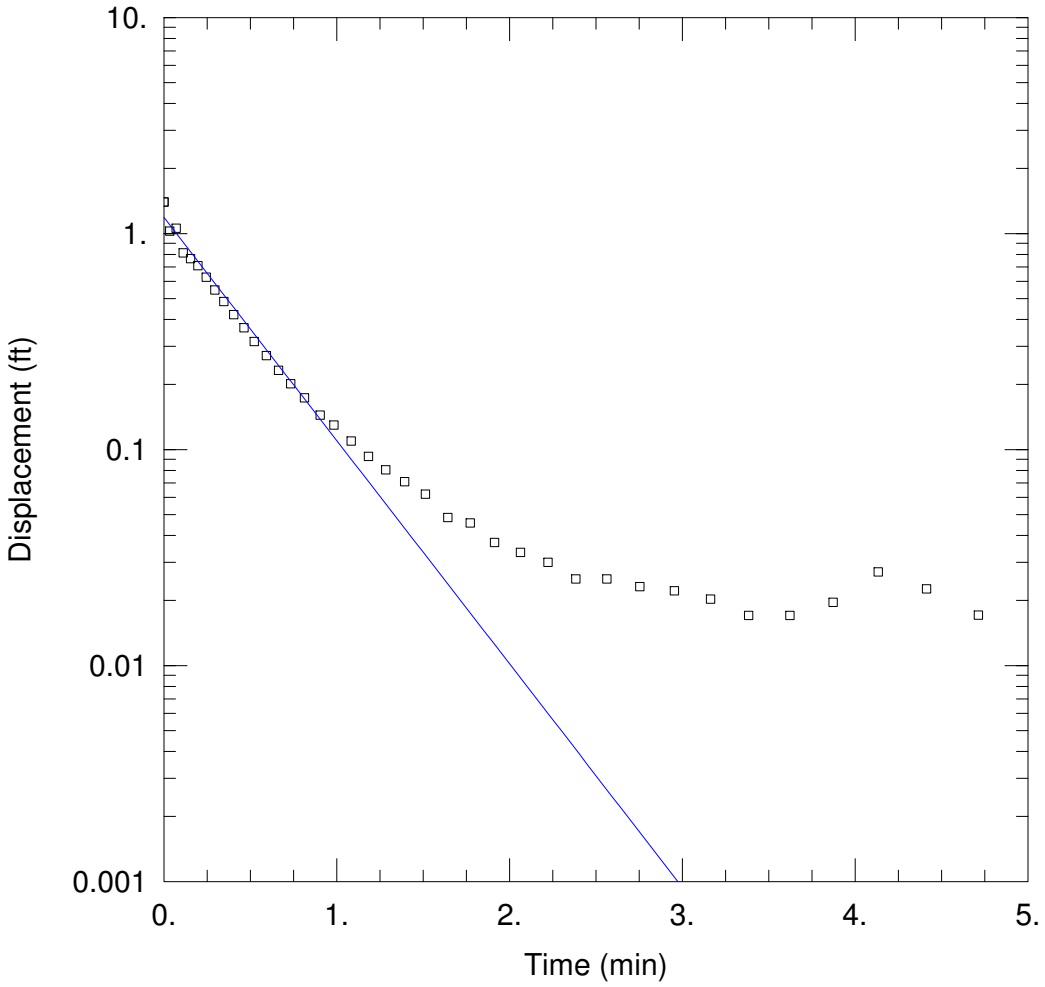
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-28)

Initial Displacement: 1.6 ft
Total Well Penetration Depth: 14.81 ft
Casing Radius: 0.083 ft
Static Water Column Height: 14.81 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 6.325 ft/day
y0 = 1.636 ft



DP-28 RISING HEAD TEST #2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP28 RHT2.aqt
Date: 12/18/11 Time: 20:11:57

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-28
Test Date: 8/3/2011

AQUIFER DATA

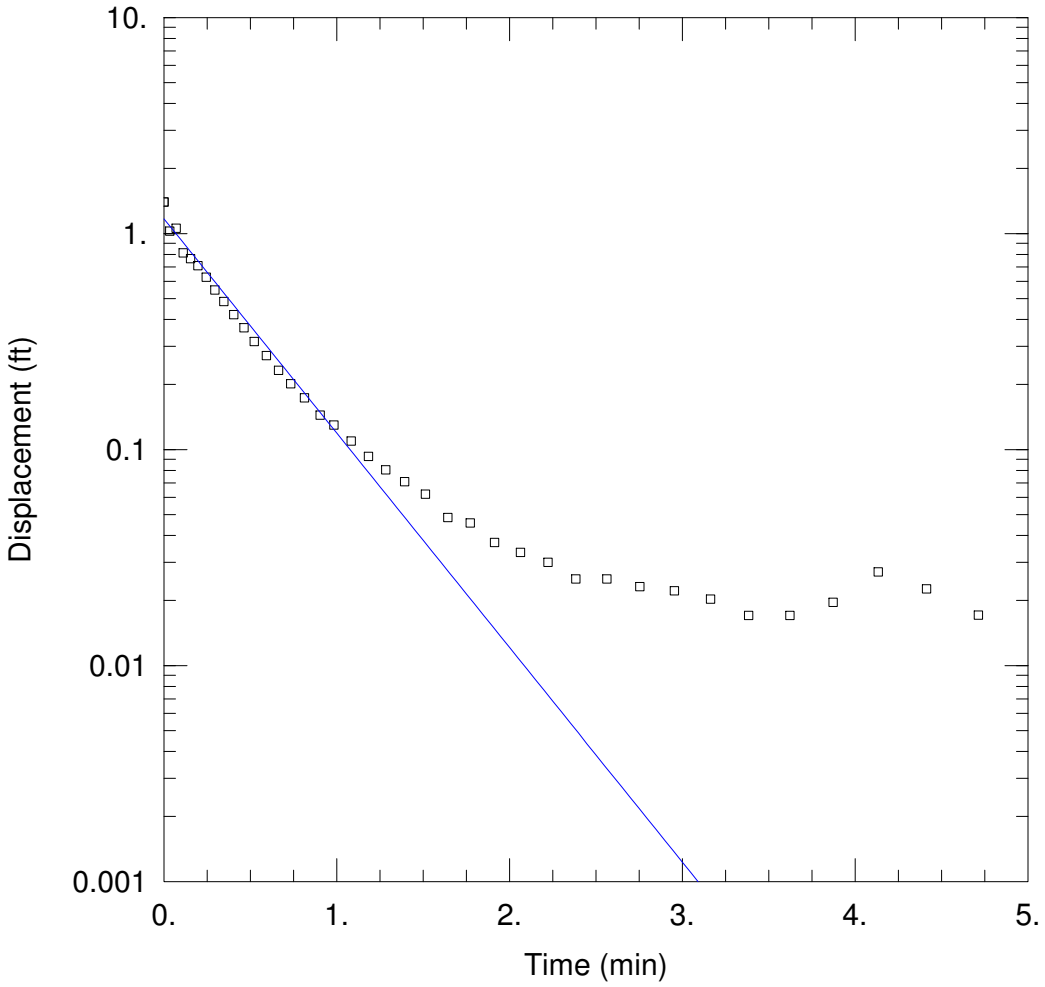
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-28)

Initial Displacement: 1.4 ft
Total Well Penetration Depth: 14.81 ft
Casing Radius: 0.083 ft
Static Water Column Height: 14.81 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 4.029 ft/day
y0 = 1.186 ft



DP-28 RISING HEAD TEST #2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC DP28 RHT2.aqt
Date: 12/18/11 Time: 20:12:58

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: DP-28
Test Date: 8/3/2011

AQUIFER DATA

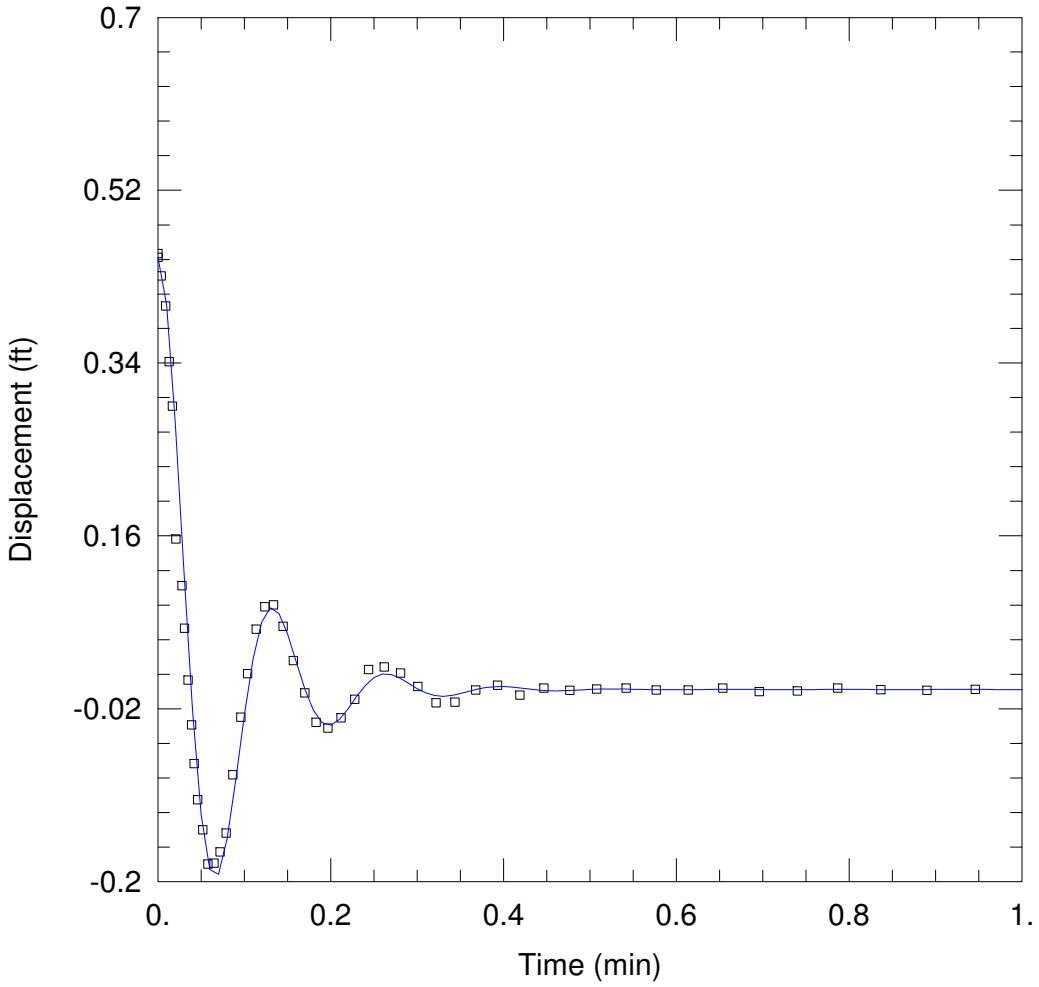
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (DP-28)

Initial Displacement: 1.4 ft
Total Well Penetration Depth: 14.81 ft
Casing Radius: 0.083 ft
Static Water Column Height: 14.81 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 5.43 ft/day
y0 = 1.17 ft



MW-11 FALLING HEAD TEST #1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC MW11 FHT1.aqt
Date: 12/16/11 Time: 12:17:35

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: MW-11
Test Date: 8/3/2011

AQUIFER DATA

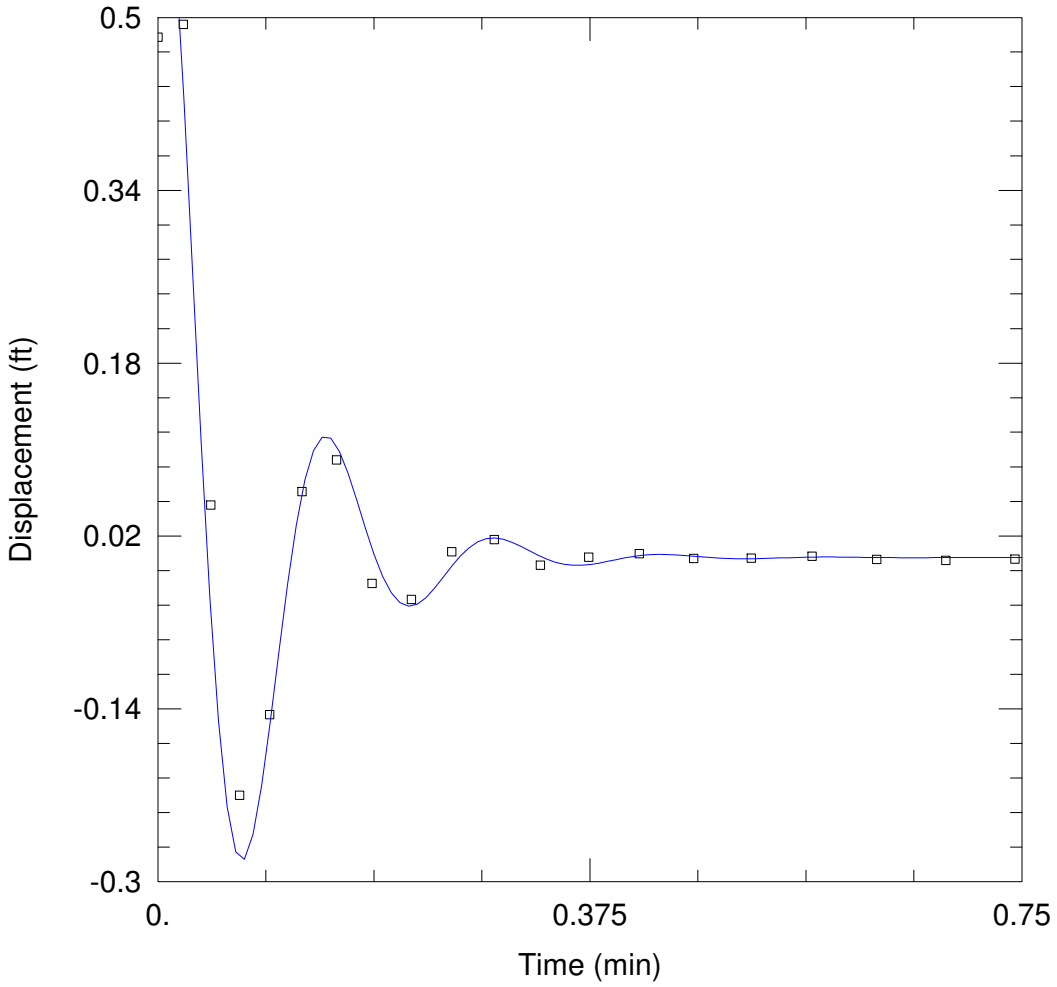
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-11)

Initial Displacement: 0.45 ft
Total Well Penetration Depth: 52.4 ft
Casing Radius: 0.083 ft
Static Water Column Height: 52.4 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 190.6 ft/day
Le = 47.59 ft



MW-11 FALLING HEAD TEST #2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC MW11 FHT2.aqt
Date: 12/16/11 Time: 12:30:20

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: MW-11
Test Date: 8/3/2011

AQUIFER DATA

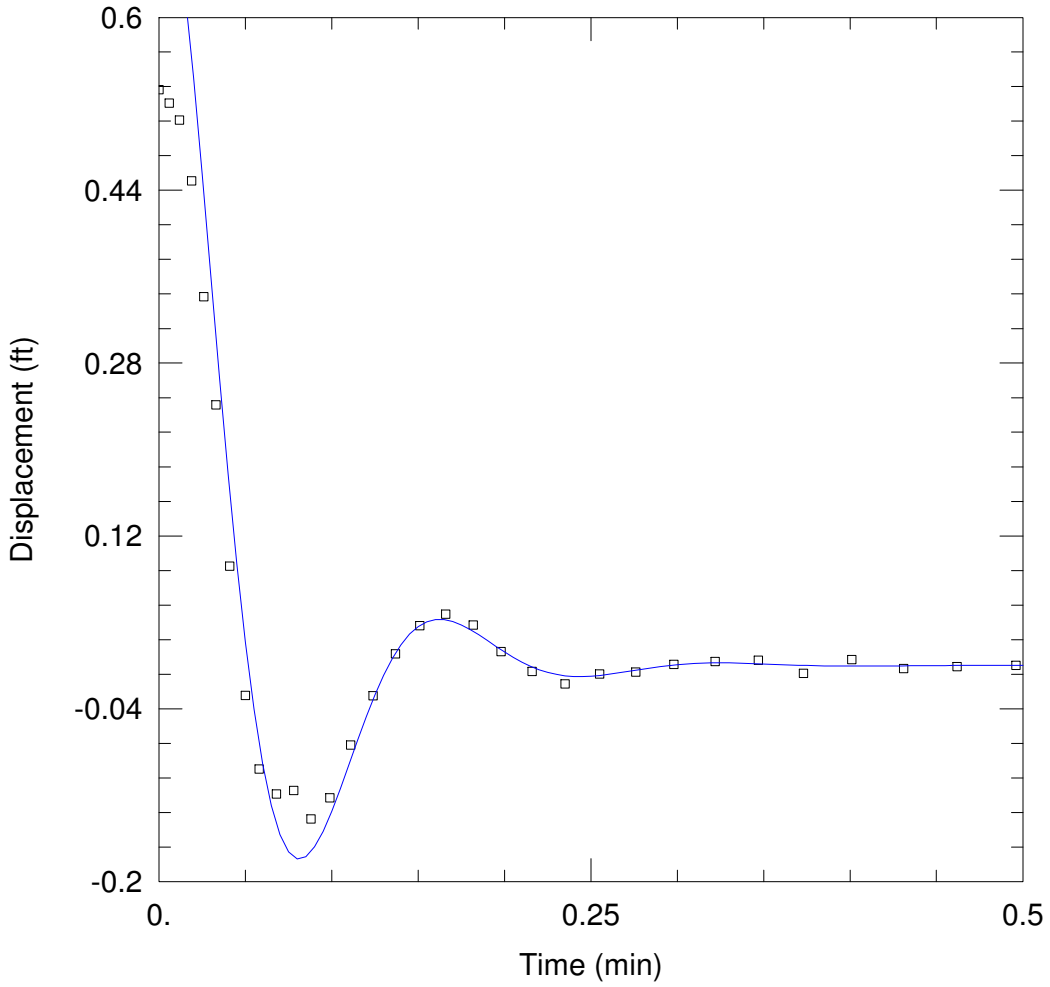
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-11)

Initial Displacement: 0.7 ft
Total Well Penetration Depth: 52.4 ft
Casing Radius: 0.083 ft
Static Water Column Height: 52.4 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 158.8 ft/day
Le = 57.27 ft



MW-11 RISING HEAD TEST #1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC MW11 RHT1.aqt
Date: 12/16/11 Time: 12:35:56

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: MW-11
Test Date: 8/3/2011

AQUIFER DATA

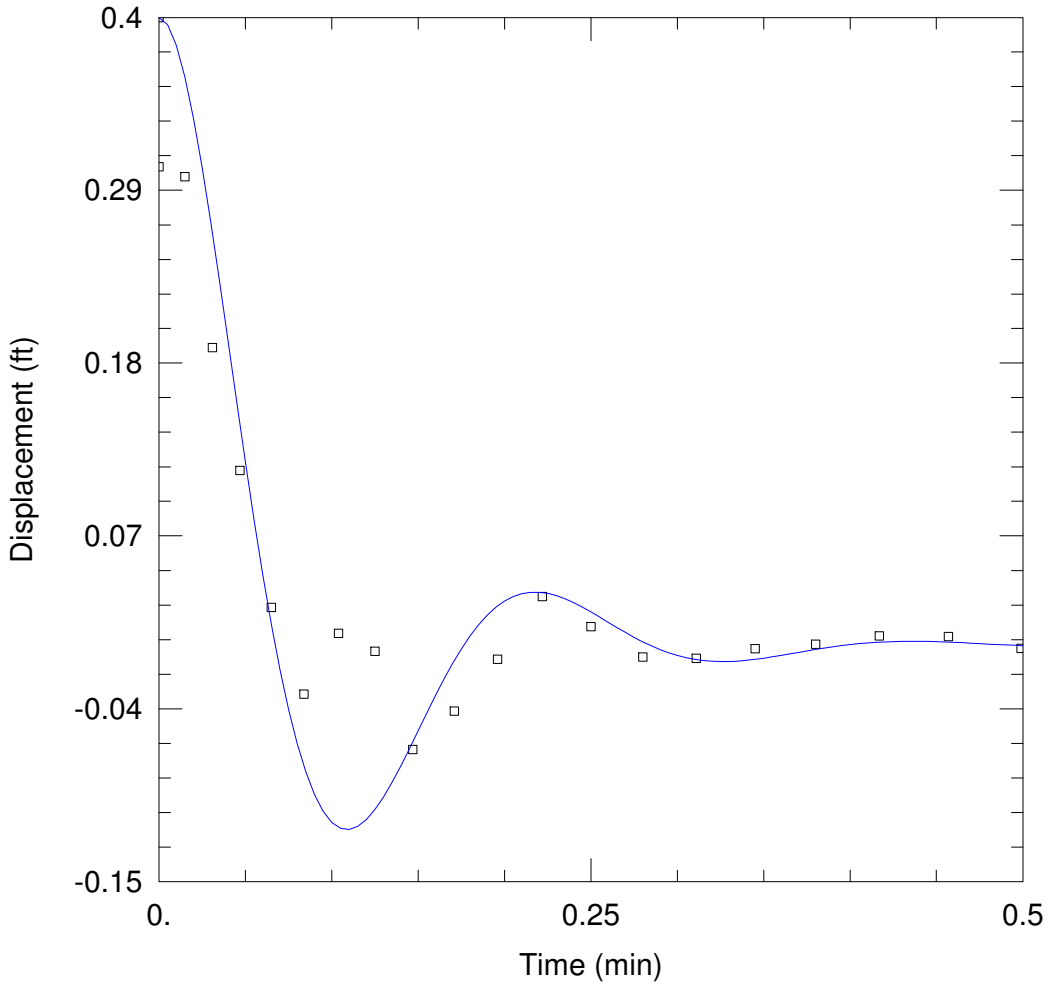
Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-11)

Initial Displacement: 0.75 ft
Total Well Penetration Depth: 52.4 ft
Casing Radius: 0.083 ft
Static Water Column Height: 52.4 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 101.2 ft/day
Le = 64. ft



MW-11 RISING HEAD TEST #2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC MW11 RHT2.aqt
Date: 12/16/11 Time: 12:41:44

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: MW-11
Test Date: 8/3/2011

AQUIFER DATA

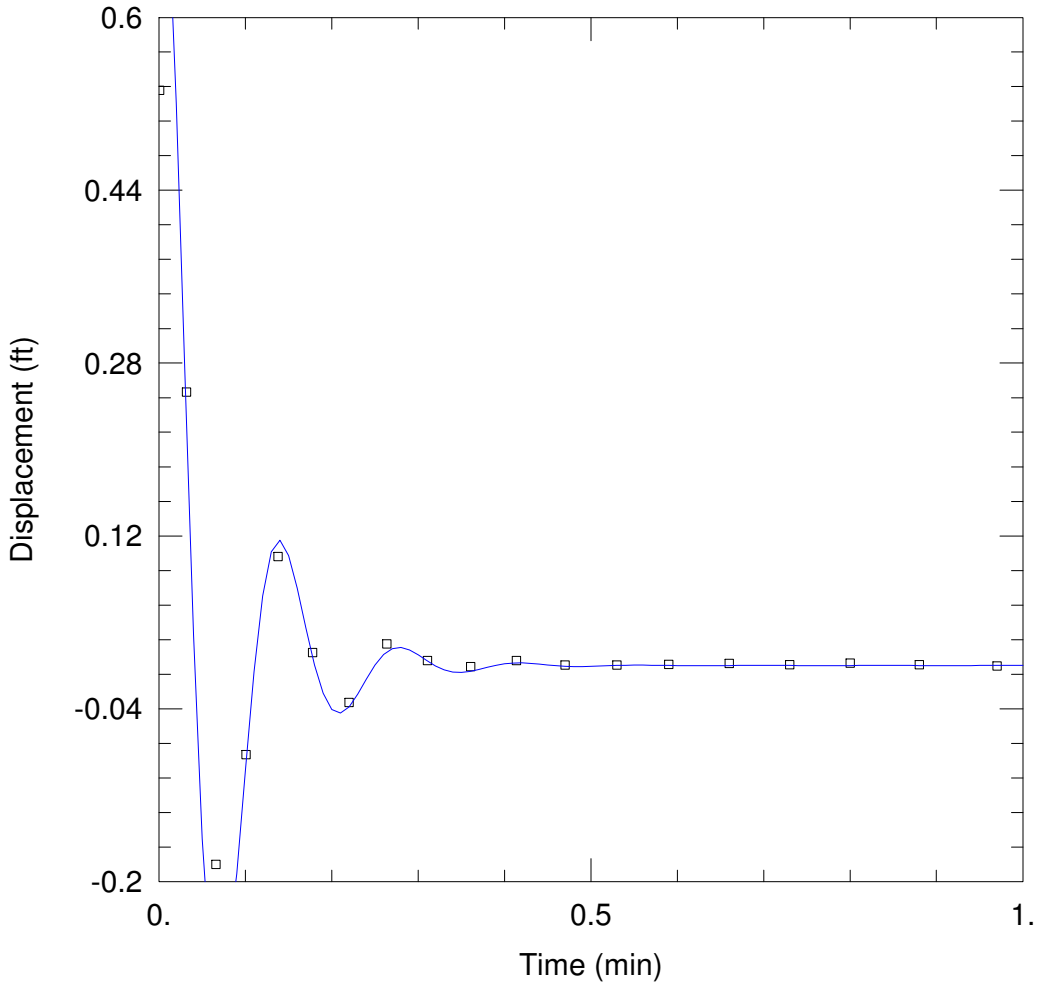
Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-11)

Initial Displacement: 0.4 ft
Total Well Penetration Depth: 52.4 ft
Casing Radius: 0.083 ft
Static Water Column Height: 52.4 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 83.96 ft/day
Le = 120.4 ft



MW-12 FALLING HEAD TEST #1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC MW12 FHT1.aqt
Date: 12/16/11 Time: 12:31:39

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: MW-12
Test Date: 8/3/2011

AQUIFER DATA

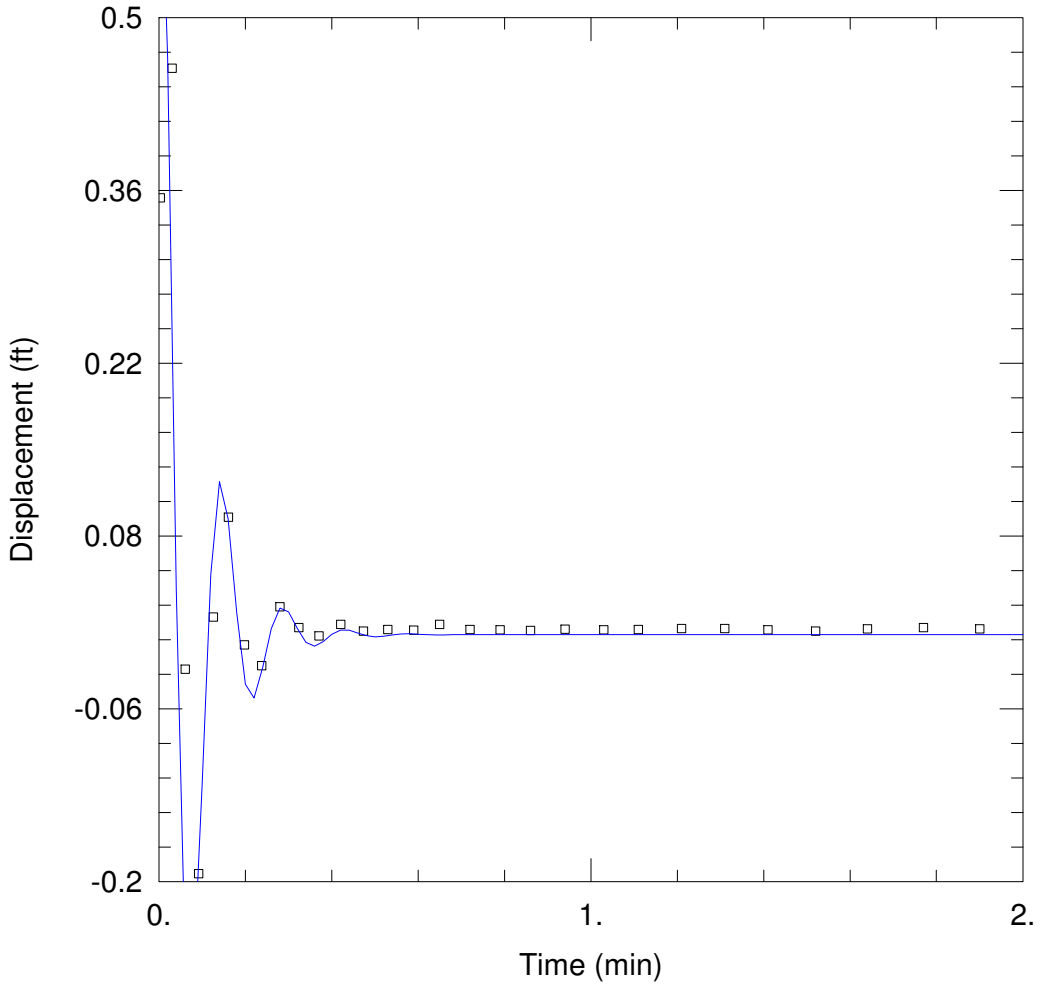
Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-12)

Initial Displacement: 0.8 ft
Total Well Penetration Depth: 52.83 ft
Casing Radius: 0.083 ft
Static Water Column Height: 52.83 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 159.3 ft/day
Le = 51.65 ft



MW-12 FALLING HEAD TEST #2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC MW12 FHT2.aqt
Date: 12/05/11 Time: 15:43:52

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: MW-12
Test Date: 8/3/2011

AQUIFER DATA

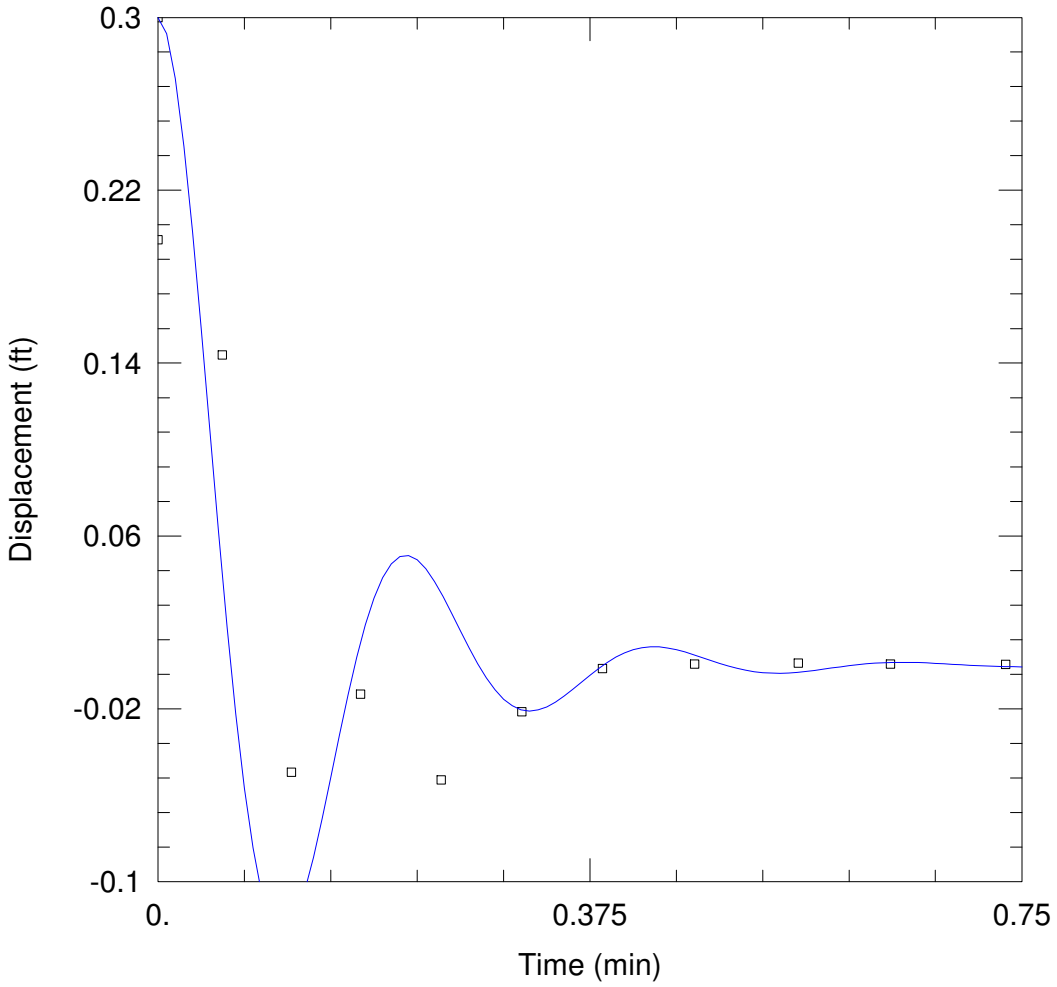
Saturated Thickness: 100. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-12)

Initial Displacement: 0.7 ft
Total Well Penetration Depth: 52.83 ft
Casing Radius: 0.083 ft
Static Water Column Height: 52.83 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 170.2 ft/day
Le = 55.79 ft



MW-12 RISING HEAD TEST #1

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC MW12 RHT1.aqt
Date: 12/16/11 Time: 12:52:44

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: MW-12
Test Date: 8/3/2011

AQUIFER DATA

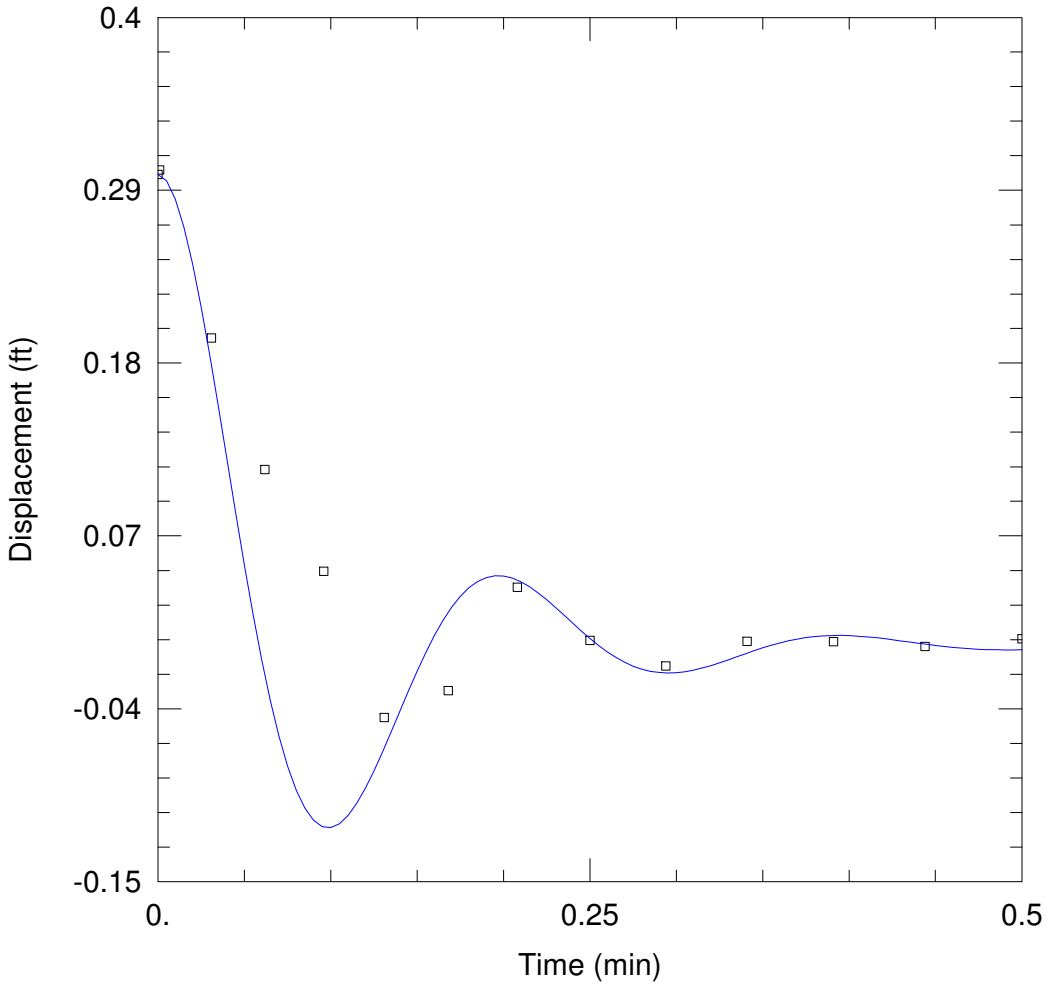
Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-12)

Initial Displacement: 0.3 ft
Total Well Penetration Depth: 52.83 ft
Casing Radius: 0.083 ft
Static Water Column Height: 52.83 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 110.5 ft/day
Le = 125.8 ft



MW-12 RISING HEAD TEST #2

Data Set: C:\NYSDEC\CarClean\Slug Test Data August 2011\OSCC MW12 RHT2.aqt
Date: 12/16/11 Time: 12:54:40

PROJECT INFORMATION

Company: MACTEC
Client: NYS DEC
Project: 3612102168
Location: Penfield, NY
Test Well: MW-12
Test Date: 8/3/2011

AQUIFER DATA

Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-12)

Initial Displacement: 0.3 ft
Total Well Penetration Depth: 52.83 ft
Casing Radius: 0.083 ft
Static Water Column Height: 52.83 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar

K = 113.6 ft/day
Le = 104.1 ft

APPENDIX E

SOIL GRAIN SIZE DATA

CHEMTECH
284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

Cover Page

Order ID : C1178

Project ID : Carriage Cleantown

Client : MACTEC Inc.

Lab Sample Number	Client Sample Number
C1178-01	828131A-DP028015

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : _____

SIEVE DATA SHEET

Project Information:

Project:	C1178	**Client:**	
Borehole ID:		**Description:**	
Sample ID:	C1178-01	**Location:**	
Test ID:	ASTM D422	**Source:**	
Test Date:	1/27/2011	**Northing:**	0
		Easting:	0
		Collected By:	
		User Defined:	

Specifications Data:

Specimen ID:
Specimen Name:
Agency:
Description:

Sieve Data:

Wet Sample & Pan Wt.(g):	578.08
Dry Sample & Pan Wt.(g):	504.72
Pan Weight(g):	10.51
Dry Sample Wt.(g):	494.21
Percent Moisture:	14.84
Split Sample:	No
Split Sieve Size:	

Hydrometer Data

Hydroscopic Data

Dry Sample & Pan Wt.(g):	577.08
Dry Sample Wt.(g):	503.72
Loss of Moisture(g):	73.36
Percent Moisture:	14.56

Weight Data:

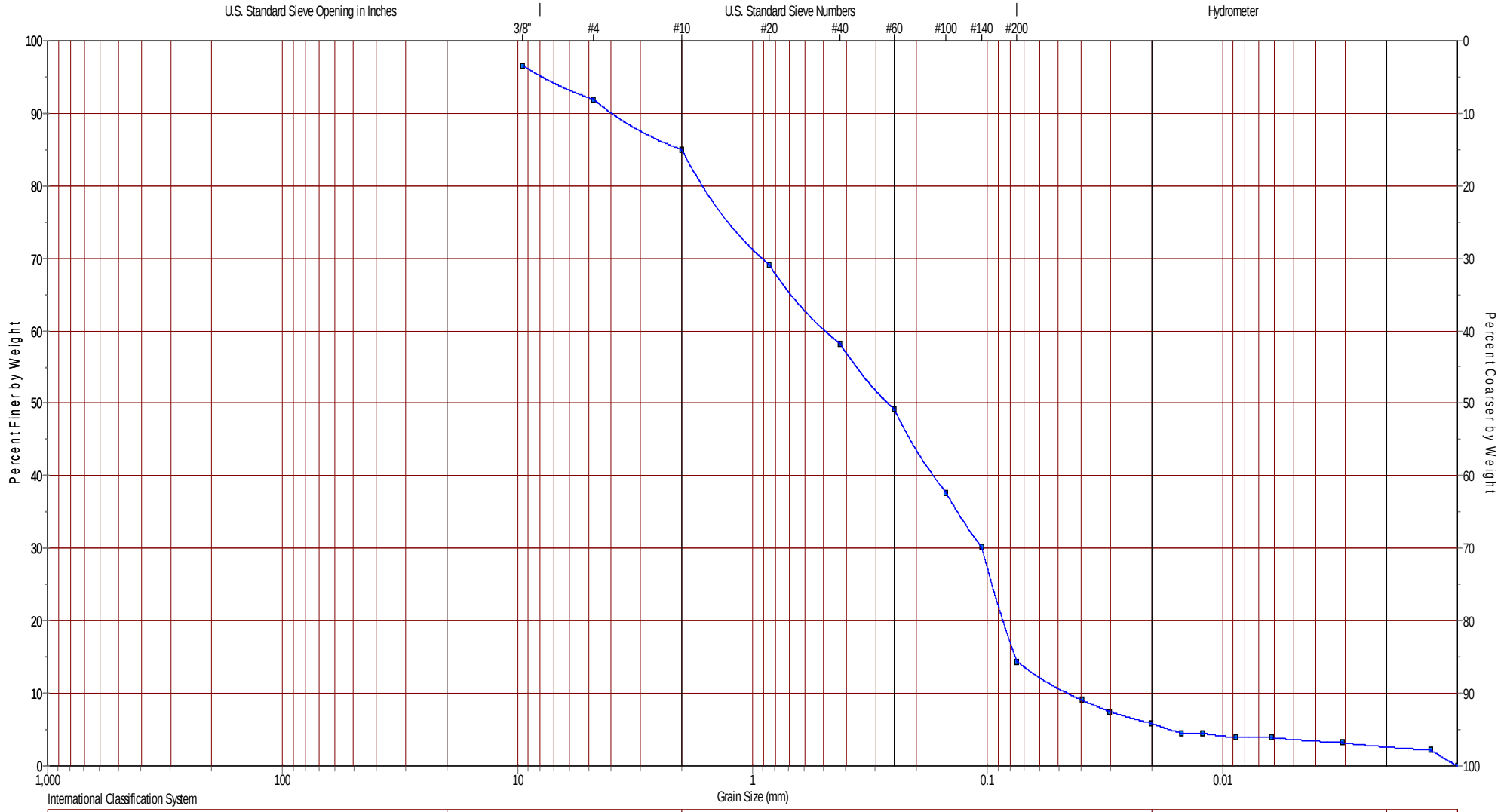
Sample & Pan Wt(g):	504.72
Pan Weight:	10.51
Sample Weight:	494.21
Weight Retained of Total Sample:	74.06
Specific Gravity:	2.5
Hydrometer Type:	151H

Sieve Size Data

Sieve	Size (mm)	Weight Retained	Cumulative Weight	Specs	% Passing
3/8"	9.5	16.76	16.76		96.61
#4	4.75	23.06	39.82		91.94
#10	2	34.24	74.06		85.01
#20	0.85	78.46	152.52		69.14
#40	0.425	53.65	206.17		58.28
#60	0.25	44.86	251.03		49.21
#100	0.15	56.94	307.97		37.68
#140	0.106	36.87	344.84		30.22
#200	0.075	78.16	423		14.41
Pan		71.21			

Hydrometer Data

Time	Reading	Temperature	Soil Diameter (mm)	% Passing
1	1.028	26	0.0397	9.1
2	1.023	26	0.0301	7.5
5	1.018	26	0.0202	5.9
10	1.014	26	0.0149	4.5
15	1.014	26	0.0122	4.5
30	1.012	26	0.0088	3.9
60	1.012	26	0.0062	3.9
250	1.01	26	0.0031	3.2
1440	1.007	27	0.0013	2.2



Symbol	Sample No.	% Clay	% Silt	% Fine Sand	% Coarse Sand	% Gravel	% Stones
■	C1178-01	2.7	3.3	43.3	35.9	11.7	0.0

	Project No.: C1178	GRAINSIZE DISTRIBUTION GRAPH
	Project Name: Carriage Cleantown	Tested By: VZ
	Client:	Test Date: 1/27/2011

CHEMTECH 284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

END OF ANALYTICAL RESULTS

APPENDIX F

DUSR AND VALIDATED LABORATORY RESULTS

DATA USABILITY SUMMARY REPORT
JANUARY 2011 WATER SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

1.0 INTRODUCTION

Water samples were collected at the Off-Site Carriage Cleaners Site (Site) in Penfield, New York, in January 2011 and submitted for off-site laboratory analysis. Samples were analyzed by Chemtech located in Mountainside, New Jersey. Results were reported in the following Sample Delivery Groups (SDGs): C1166 and C1167.

A listing of samples included in this Data Usability Summary Report is presented in Table 1. A summary of the analytical results is presented in Table 2. A summary of sample results qualified during this review is presented in Table 3 (Summary of Validation Actions). Tentatively Identified Compounds (TICs) are presented in Table 4. Samples were analyzed by the following method:

- Volatile organic compounds (VOCs) by USEPA Method 8260B

Deliverables for the off-site laboratory analyses included a Category B deliverable as defined in the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocols (NYSDEC, 2005).

A project chemist review was completed based on NYSDEC Division of Environmental Remediation guidance for Data Usability Summary Reports (NYSDEC, 2010). USEPA Region 2 QC limits were used during the data evaluation unless noted otherwise (USEPA, 2006). The project chemist review included evaluations of sample collection, data package completeness, holding times, QC data (blanks, instrument calibrations, duplicates, surrogate recovery, and spike recovery), data transcription, electronic data reporting, calculations, and data qualification. The following laboratory or data validation qualifiers are used in the final data presentation.

U = target analyte is not detected at the reported detection limit
J = concentration is estimated
UJ = target analyte is not detected at the reported detection limit and is estimated
D = concentration is from a diluted analysis of the sample

Results are interpreted to be usable as reported by the laboratory unless discussed in the following sections.

2.0 VOCS – METHOD 8260B

Matrix Spikes/Matrix Spike Duplicates (MS/MSDs)

SDG C1167

MS/MSD analyses were performed on sample 828131A-DP2907X. Relative percent differences (RPDs) between percent recoveries for the following target analytes were above the Region 2 control limit of 20:

Analyte	MS/MSD RPD
Bromomethane	25
Carbon Tetrachloride	24
Methylcyclohexane	26
Toluene	22
cis-1,3-Dichloropropene	21
Chlorobenzene	22

These analytes were not detected in sample 828131A-DP2907X and quantitation limits were qualified as estimated (UJ).

Field Duplicates

SDG C1166

Inconsistent results were reported for acetone in sample 828131A-DP2407X and field duplicate 828131A-DP2407XDUP. Acetone was not detected in sample 828131A-DP2407X, but was detected above the reporting limit at a concentration of 5.6 ug/L in the field duplicate. The positive and non-detected results for acetone in 828131A-DP2407X and 828131A-DP2407XDUP were qualified as estimated (J/UJ).

Tentatively Identified Compounds

Tentatively identified compounds (TICs) were reported by the laboratory for SDGs C1166 and C1167. TICs being reported as final results in samples are presented in Table 4. If a sample is not listed, no TICs were reported in the sample, or the TICs were removed as blank contaminants or artifacts of the GC/MS instrument system.

Reference:

New York State Department of Environmental Conservation (NYSDEC), 2005. "Analytical Services Protocols"; July 2005.

New York State Department of Environmental Conservation (NYSDEC), 2010. "Technical Guidance for Site Investigation and Remediation-Appendix 2B"; DER-10; Division of Environmental Remediation; May 2010.

USEPA Region 2, 2006. "Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B"; SOP # HW-24, Revision 2, Hazardous Waste Support Branch; October 2006.

Data Validator: Julie Ricardi

Date: 3/3/11 Julie Ricardi

Reviewed by Quality Assurance Officer Chris Ricardi, NRCC-EAC

Chris Ricardi

Date:

3/29/11

TABLE 1
SUMMARY OF SAMPLES AND ANALYTICAL METHODS
DATA USABILITY SUMMARY REPORT
JANUARY 2011 WATER SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

					Class	VOC
					Analysis Method	SW8260B
					Fraction	T
SDG	**Media**	**Location**	**Sample ID**	**Sample Date**	**Qc Code**	
C1166	GW	DP-21	828131A-DP2110X	1/20/2011	FS	X
C1166	GW	DP-21	828131A-DP2120X	1/20/2011	FS	X
C1166	GW	DP-22	828131A-DP2207X	1/17/2011	FS	X
C1166	GW	DP-22	828131A-DP2220X	1/17/2011	FS	X
C1166	GW	DP-23	828131A-DP2307X	1/18/2011	FS	X
C1166	GW	DP-23	828131A-DP2320X	1/18/2011	FS	X
C1166	GW	DP-24	828131A-DP2407X	1/18/2011	FS	X
C1166	GW	DP-24	828131A-DP2407XDUP	1/18/2011	FD	X
C1166	GW	DP-24	828131A-DP2420X	1/18/2011	FS	X
C1166	GW	DP-25	828131A-DP2507X	1/18/2011	FS	X
C1166	GW	DP-25	828131A-DP2520X	1/18/2011	FS	X
C1166	GW	DP-26	828131A-DP2607X	1/18/2011	FS	X
C1166	GW	DP-26	828131A-DP2620X	1/18/2011	FS	X
C1166	GW	DP-27	828131A-DP2707X	1/19/2011	FS	X
C1166	GW	DP-27	828131A-DP2720X	1/19/2011	FS	X
C1166	GW	DP-28	828131A-DP2807X	1/19/2011	FS	X
C1166	GW	DP-28	828131A-DP2807XDUP	1/19/2011	FD	X
C1167	GW	DP-28	828131A-DP2820X	1/19/2011	FS	X
C1167	GW	DP-29	828131A-DP2907X	1/19/2011	FS	X
C1167	GW	DP-29	828131A-DP2920X	1/19/2011	FS	X
C1167	GW	DP-30	828131A-DP3007X	1/20/2011	FS	X
C1167	GW	DP-30	828131A-DP3020X	1/20/2011	FS	X
C1167	GW	DP-31	828131A-DP3120X	1/20/2011	FS	X
C1167	GW	DP-32	828131A-DP3215X	1/20/2011	FS	X
C1167	BW	QC	828131A-TB1RM	1/17/2011	TB	X
C1167	PW	PS-04	828131A-PS0402	1/17/2011	FS	X
C1167	PW	PS-06	828131A-PS0602	1/17/2011	FS	X
C1167	PW	PS-07	828131A-PS0702	1/21/2011	FS	X

FOOTNOTES:

QC CODE

FS = field sample, FD = field duplicate, TB = trip blank

Media

GW = groundwater, BW = blank water, PW = purge water

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JANUARY 2011 WATER SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Sample Delivery Group	C1166		C1166		C1166		C1166		C1166		C1166		C1166		C1166		C1166	
		Location	DP-21		DP-21		DP-22		DP-22		DP-23		DP-23		DP-24		DP-24		DP-24	
		Sample Date	1/20/2011		1/20/2011		1/17/2011		1/17/2011		1/18/2011		1/18/2011		1/18/2011		1/18/2011		1/18/2011	
		Sample ID	828131A-DP2120X		828131A-DP2110X		828131A-DP2220X		828131A-DP2207X		828131A-DP2320X		828131A-DP2307X		828131A-DP2420X		828131A-DP2407X		28131A-DP2407XDU	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS		FD	
Analysis	Param Name	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260B	Tetrachloroethene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Trichloroethene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,1-Trichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2,2-Tetrachloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethene	ug/l	1	U	1	U	1	U	1	U	1.9		1	U	1	U	1	U	1	U
SW8260B	1,2,4-Trichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromo-3-chloropropane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromoethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloropropane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,3-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,4-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	2-Butanone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	2-Hexanone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	4-Methyl-2-pentanone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	Acetic acid, methyl ester	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Acetone	ug/l	6.6		7.6		5.7		6.2		4.2	J	5	U	5.9		5	UJ	5.6	J
SW8260B	Benzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromodichloromethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromoform	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromomethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Carbon disulfide	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Carbon tetrachloride	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chlorodibromomethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloroform	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloromethane	ug/l	0.83	J	1	U	1	U	1	U	1	U	1	U	0.59	J	1	U	1	U
SW8260B	Cis-1,2-Dichloroethene	ug/l	1	U	1	U	1	U	1	U	920	D	30		220	D	40		50	
SW8260B	cis-1,3-Dichloropropene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Cyclohexane	ug/l	1	U	0.54	J	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Dichlorodifluoromethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Ethyl benzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Isopropylbenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Methyl cyclohexane	ug/l	1	U	0.66	J	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Methyl Tertbutyl Ether	ug/l	1	U	1	U	0.8	J	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Methylene chloride	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Styrene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Toluene	ug/l	1	U	0.55	J	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	trans-1,2-Dichloroethene	ug/l	1	U	1	U	0.56	J	1	U	31		1	U	2.2		0.94	J	1	U
SW8260B	trans-1,3-Dichloropropene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Trichlorofluoromethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Vinyl chloride	ug/l	1	U	1	U	260	D	43		110	D	3.3		24		2.4		3.8	
SW8260B	Xylene, m/p	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
SW8260B	Xylene, o	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
ug/L = microgram per liter

Qualifiers-
U = not detected at the reporting limit
J = estimated concentration
D = result is from a diluted analysis

QC Code-
FS = Field Sample, FD = Field Duplicate, TB = trip blank

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JANUARY 2011 WATER SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

	Sample Delivery Group		C1166		C1166		C1166		C1166		C1166		C1166		C1166		C1166		C1167	
	Location		DP-25		DP-25		DP-26		DP-26		DP-27		DP-27		DP-28		DP-28		DP-28	
	Sample Date		1/18/2011		1/18/2011		1/18/2011		1/18/2011		1/19/2011		1/19/2011		1/19/2011		1/19/2011		1/19/2011	
	Sample ID		828131A-DP2520X		828131A-DP2507X		828131A-DP2620X		828131A-DP2607X		828131A-DP2720X		828131A-DP2707X		828131A-DP2807X		28131A-DP2807XDU		828131A-DP2820X	
	Qc Code		FS		FS		FS		FS		FS		FS		FS		FD		FS	
Analysis	Param Name	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260B	Tetrachloroethene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1.1	
SW8260B	Trichloroethene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	0.98	J	0.82	J	2.6	
SW8260B	1,1,1-Trichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2,2-Tetrachloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2,4-Trichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromo-3-chloropropane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromoethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloropropane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,3-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,4-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	2-Butanone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	2.8	J	5	U
SW8260B	2-Hexanone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	4-Methyl-2-pentanone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	Acetic acid, methyl ester	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Acetone	ug/l	6.1		5.2		4.8	J	6.1		5.6		9.1		15		19		5	U
SW8260B	Benzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromodichloromethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromoform	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromomethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Carbon disulfide	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Carbon tetrachloride	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chlorodibromomethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloroform	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloromethane	ug/l	1.1		1	U	1	U	0.86	J	0.54	J	0.61	J	1	U	1	U	1	U
SW8260B	Cis-1,2-Dichloroethene	ug/l	1	U	1	U	110	D	4.1		1.3		1	U	59		46		210	D
SW8260B	cis-1,3-Dichloropropene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Cyclohexane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Dichlorodifluoromethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Ethyl benzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Isopropylbenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Methyl cyclohexane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Methyl Tertbutyl Ether	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Methylene chloride	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Styrene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Toluene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	trans-1,2-Dichloroethene	ug/l	1	U	1	U	2.6		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	trans-1,3-Dichloropropene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Trichlorofluoromethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Vinyl chloride	ug/l	1	U	1	U	3.4		3.5		1.3		1	U	0.85	J	0.57	J	22	
SW8260B	Xylene, m/p	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
SW8260B	Xylene, o	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
ug/L = microgram per liter

Qualifiers-
U = not detected at the reporting limit
J = estimated concentration
D = result is from a diluted analysis

QC Code-
FS = Field Sample, FD = Field Duplicate, TB = trip blank

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JANUARY 2011 WATER SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

	Sample Delivery Group		C1167		C1167		C1167		C1167		C1167		C1167		C1167		C1167		C1167	
	Location		DP-29		DP-29		DP-30		DP-30		DP-31		DP-32		PS-04		PS-06		PS-07	
	Sample Date		1/19/2011		1/19/2011		1/20/2011		1/20/2011		1/20/2011		1/20/2011		1/17/2011		1/17/2011		1/21/2011	
	Sample ID		828131A-DP2920X		828131A-DP2907X		828131A-DP3020X		828131A-DP3007X		828131A-DP3120X		828131A-DP3215X		828131A-PS0402		828131A-PS0602		828131A-PS0702	
	Qc Code		FS		FS		FS		FS		FS		FS		FS		FS		FS	
Analysis	**Param Name**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260B	Tetrachloroethene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Trichloroethene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,1-Trichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2,2-Tetrachloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2,4-Trichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromo-3-chloropropane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromoethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloropropane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,3-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,4-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	2-Butanone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	2-Hexanone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	4-Methyl-2-pentanone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	Acetic acid, methyl ester	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Acetone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	Benzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromodichloromethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromoform	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromomethane	ug/l	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Carbon disulfide	ug/l	1	U	1	U	1	U	1.1		1	U	1	U	1	U	1	U	1	U
SW8260B	Carbon tetrachloride	ug/l	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chlorobenzene	ug/l	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chlorodibromomethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloroform	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloromethane	ug/l	1	U	0.63	J	1	U	1	U	1	U	1	U	1	U	0.58	J	1	U
SW8260B	Cis-1,2-Dichloroethene	ug/l	1	U	1	U	3.5		2.6		0.96	J	1	U	1	U	1	U	1	U
SW8260B	cis-1,3-Dichloropropene	ug/l	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Cyclohexane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Dichlorodifluoromethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Ethyl benzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Isopropylbenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Methyl cyclohexane	ug/l	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Methyl Tertbutyl Ether	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Methylene chloride	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Styrene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Toluene	ug/l	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	trans-1,2-Dichloroethene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	trans-1,3-Dichloropropene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Trichlorofluoromethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Vinyl chloride	ug/l	1	U	1	U	1.1		1	U	7.8		1	U	1	U	1	U	1	U
SW8260B	Xylene, m/p	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
SW8260B	Xylene, o	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
ug/L = microgram per liter

Qualifiers-
U = not detected at the reporting limit
J = estimated concentration
D = result is from a diluted analysis

QC Code-
FS = Field Sample, FD = Field Duplicate, TB = trip blank

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JANUARY 2011 WATER SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Sample Delivery Group	C1167	
		Location	QC	
		Sample Date	1/17/2011	
		Sample ID	828131A-TB1RM	
		Qc Code	TB	
Analysis	**Param Name**	**Units**	Result	Qualifier
SW8260B	Tetrachloroethene	ug/l	1	U
SW8260B	Trichloroethene	ug/l	1	U
SW8260B	1,1,1-Trichloroethane	ug/l	1	U
SW8260B	1,1,2,2-Tetrachloroethane	ug/l	1	U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1	U
SW8260B	1,1,2-Trichloroethane	ug/l	1	U
SW8260B	1,1-Dichloroethane	ug/l	1	U
SW8260B	1,1-Dichloroethene	ug/l	1	U
SW8260B	1,2,4-Trichlorobenzene	ug/l	1	U
SW8260B	1,2-Dibromo-3-chloropropane	ug/l	1	U
SW8260B	1,2-Dibromoethane	ug/l	1	U
SW8260B	1,2-Dichlorobenzene	ug/l	1	U
SW8260B	1,2-Dichloroethane	ug/l	1	U
SW8260B	1,2-Dichloropropane	ug/l	1	U
SW8260B	1,3-Dichlorobenzene	ug/l	1	U
SW8260B	1,4-Dichlorobenzene	ug/l	1	U
SW8260B	2-Butanone	ug/l	5	U
SW8260B	2-Hexanone	ug/l	5	U
SW8260B	4-Methyl-2-pentanone	ug/l	5	U
SW8260B	Acetic acid, methyl ester	ug/l	1	U
SW8260B	Acetone	ug/l	5	U
SW8260B	Benzene	ug/l	1	U
SW8260B	Bromodichloromethane	ug/l	1	U
SW8260B	Bromoform	ug/l	1	U
SW8260B	Bromomethane	ug/l	1	U
SW8260B	Carbon disulfide	ug/l	1	U
SW8260B	Carbon tetrachloride	ug/l	1	U
SW8260B	Chlorobenzene	ug/l	1	U
SW8260B	Chlorodibromomethane	ug/l	1	U
SW8260B	Chloroethane	ug/l	1	U
SW8260B	Chloroform	ug/l	1	U
SW8260B	Chloromethane	ug/l	1	U
SW8260B	Cis-1,2-Dichloroethene	ug/l	1	U
SW8260B	cis-1,3-Dichloropropene	ug/l	1	U
SW8260B	Cyclohexane	ug/l	1	U
SW8260B	Dichlorodifluoromethane	ug/l	1	U
SW8260B	Ethyl benzene	ug/l	1	U
SW8260B	Isopropylbenzene	ug/l	1	U
SW8260B	Methyl cyclohexane	ug/l	1	U
SW8260B	Methyl Tertbutyl Ether	ug/l	1	U
SW8260B	Methylene chloride	ug/l	1	U
SW8260B	Styrene	ug/l	1	U
SW8260B	Toluene	ug/l	1	U
SW8260B	trans-1,2-Dichloroethene	ug/l	1	U
SW8260B	trans-1,3-Dichloropropene	ug/l	1	U
SW8260B	Trichlorofluoromethane	ug/l	1	U
SW8260B	Vinyl chloride	ug/l	1	U
SW8260B	Xylene, m/p	ug/l	2	U
SW8260B	Xylene, o	ug/l	1	U

Notes:
ug/L = microgram per liter

Qualifiers-

U = not detected at the reporting limit
J = estimated concentration
D = result is from a diluted analysis

QC Code-

FS = Field Sample, FD = Field Duplicate, TB = trip blank

TABLE 3
SUMMARY OF DATA VALIDATION ACTIONS
DATA USABILITY SUMMARY REPORT
JANUARY 2011 WATER SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

SDG	Lab Sample Id	Analysis Method	Field Sample ID	Paramater Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Result Units	Lab Id
C1166	C1166-08	SW8260B	828131A-DP2407X	Acetone	5	U	5	UJ	FD	ug/l	CCGE
C1166	C1166-09	SW8260B	828131A-DP2407XDUP	Acetone	5.6		5.6	J	FD	ug/l	CCGE
C1167	C1167-02	SW8260B	828131A-DP2907X	Bromomethane	1	U	1	UJ	MS-RPD	ug/l	CCGE
C1167	C1167-02	SW8260B	828131A-DP2907X	Carbon tetrachloride	1	U	1	UJ	MS-RPD	ug/l	CCGE
C1167	C1167-02	SW8260B	828131A-DP2907X	Chlorobenzene	1	U	1	UJ	MS-RPD	ug/l	CCGE
C1167	C1167-02	SW8260B	828131A-DP2907X	cis-1,3-Dichloropropene	1	U	1	UJ	MS-RPD	ug/l	CCGE
C1167	C1167-02	SW8260B	828131A-DP2907X	Methyl cyclohexane	1	U	1	UJ	MS-RPD	ug/l	CCGE
C1167	C1167-02	SW8260B	828131A-DP2907X	Toluene	1	U	1	UJ	MS-RPD	ug/l	CCGE

Notes:

Validation Qualifiers-

J = estimated concentration

U = not detected

Validation Reason Codes-

MS-RPD = relative percent difference between matrix spike/matrix spike duplicate results exceeds limit

FD = field duplicate results exceed limit

TABLE 4
SUMMARY OF TENTATIVELY IDENTIFIED COMPOUNDS
DATA USABILITY SUMMARY REPORT
JANUARY 2011 WATER SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

SDG	Sample ID	Lab Sample ID	Analytical Method	CAS Number	Compound	Final Result (ug/L)	Qualifier	Analysis Date
C1167	828131A-DP3215X	C1167-09	SW846 8260B	UNKNOWN9.46	unknown9.46	50	JN	1/26/2011

FOOTNOTES:

Qualifiers

JN = estimated value with presumptive evidence that the compound is present in the sample

VOCs

NYSDEC DUSR PROJECT CHEMIST REVIEW RECORD
Project: Carnage Cleanhouse
Method : SW-846 8260B
Laboratory and SDG(s): Chemtech **SDG#** C1166
Date: 2/21/11
Reviewer: Julie Ricardi
Review Level [X] NYSDEC DUSR ☐ USEPA Region II Guideline

See ATTACHED SAMPLE LIST

1. ☑ Case Narrative Review and COC/Data Package Completeness — COMMENTS
   Were problems noted? OC problems noted as summarized below; acetone max conc in
   Where all the samples on the COC analyzed for the requested analyses? (YES) NO (circle one) IRAL is 50 ug/L due to saturation of the detector @ 120 ug/L; no impact since all acetone detections are < 20 ug/L.
   Grain size not evaluated
2. ☑ Holding time and Sample Collection
   All samples were analyzed within the 14 day holding time. Yes; HCl preserved.
3. ☑ QC Blanks
   Are method blanks free of contamination? (YES) NO (circle one)
   Are Trip blanks free of contamination? YES NO (circle one) (N/A)
   Are Rinse blanks free of contamination? YES NO (NA) (circle one)

   ☑ Instrument Tuning
   Were all results were within method criteria. (YES) NO (circle one)

   ☑ Instrument Calibration Were all results within criteria? (YES) NO (circle one)
   Initial Calibration %RSD = 20% **(except 30% for 1,1-DCE, chloroform, 1,2-DCP, toluene, ethylbenzene, and Vinyl Chloride)**
   Continuing Calibration %D = 20% All OK

   ☑ Surrogate Recovery
   Were all results were within laboratory limits? Reg ± 80-120 (YES) NO (circle one)
   Internal Standards: All OK
   ☑ Matrix Spike

   Were MS/MSDs submitted/analyzed? YES (NO)

   Were all results were within laboratory limits? YES NO (NA) (circle one)

   ☑ Duplicates/replicates
   Were Field Duplicates submitted/analyzed? (YES) NO
   DP2407X/X Dup: Acetone ND / 5.6 ug/L (RL = 5.0 ug/L) : (J/UJ) based on professional judgment
   Were all results were within criteria. YES NO NA (circle one)
   DP2807X/X Dup: All OK
   ☑ Laboratory Control Sample Results 70-130
   Were all results were within laboratory limits? (YES) NO (circle one)

4. ☑ Raw Data Review and Calculation Checks
   See SDG C1167 for calculation checks.
5. ☐ Electronic Data Review and Edits
   Does the EDD match the Form I's? (YES) NO (circle one)

6. ☑ TIC Review and DUSR Table 1 (sample Listing), Table 2 (results summary), Table 3 (TIC's).
   Did lab report TICs? None detected in samples (raw data checked)

	Sample Delivery Group	C1166		C1166		C1166		C1166		C1166		C1166		C1166	
	Lab Sample Id	C1166-02		C1166-03		C1166-04		C1166-05		C1166-05DL		C1166-06		C1166-07		C1166-07DL	
	Location	DP-21		DP-21		DP-22		DP-22		DP-22		DP-23		DP-23		DP-23	
	Sample Date	1/20/2011		1/20/2011		1/17/2011		1/17/2011		1/17/2011		1/18/2011		1/18/2011		1/18/2011	
	Sample ID	828131A-DP2110X		828131A-DP2120X		828131A-DP2207X		828131A-DP2220X		828131A-DP2220X		828131A-DP2307X		828131A-DP2320X		828131A-DP2320X	
	Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analysis	Param Name	Units	Result Qualifier	Result Qualifier		Result Qualifier		Result Qualifier		Result Qualifier		Result Qualifier		Result Qualifier		Result Qualifier	
SW8260B	1,1,1-Trichloroethane	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	1,1,2,2-Tetrachloroethane	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	1,1,2-Trichloroethane	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	1,1-Dichloroethane	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	1,1-Dichloroethene	ug/l	1 U	1 U		1 U		1 U				1 U		1.9			
SW8260B	1,2,4-Trichlorobenzene	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	1,2-Dibromo-3-chloropropane	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	1,2-Dibromoethane	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	1,2-Dichlorobenzene	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	1,2-Dichloroethane	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	1,2-Dichloropropane	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	1,3-Dichlorobenzene	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	1,4-Dichlorobenzene	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	2-Butanone	ug/l	5 U	5 U		5 U		5 U				5 U		5 U			
SW8260B	2-Hexanone	ug/l	5 U	5 U		5 U		5 U				5 U		5 U			
SW8260B	4-Methyl-2-pentanone	ug/l	5 U	5 U		5 U		5 U				5 U		5 U			
SW8260B	Acetic acid, methyl ester	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Acetone	ug/l	7.6	6.6		6.2		5.7				5 U		4.2 J			
SW8260B	Benzene	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Bromodichloromethane	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Bromoform	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Bromomethane	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Carbon disulfide	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Carbon tetrachloride	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Chlorobenzene	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Chlorodibromomethane	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Chloroethane	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Chloroform	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Chloromethane	ug/l	1 U	0.83 J		1 U		1 U				1 U		1 U			
SW8260B	Cis-1,2-Dichloroethene	ug/l	1 U	1 U		1 U		1 U				30				920 D	
SW8260B	cis-1,3-Dichloropropene	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Cyclohexane	ug/l	0.54 J	1 U		1 U		1 U				1 U		1 U			
SW8260B	Dichlorodifluoromethane	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Ethyl benzene	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Isopropylbenzene	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Methyl cyclohexane	ug/l	0.66 J	1 U		1 U		1 U				1 U		1 U			
SW8260B	Methyl Tertbutyl Ether	ug/l	1 U	1 U		1 U		0.8 J				1 U		1 U			
SW8260B	Methylene chloride	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Styrene	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Tetrachloroethene	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Toluene	ug/l	0.55 J	1 U		1 U		1 U				1 U		1 U			
SW8260B	trans-1,2-Dichloroethene	ug/l	1 U	1 U		1 U		0.56 J				1 U		31			
SW8260B	trans-1,3-Dichloropropene	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Trichloroethene	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Trichlorofluoromethane	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			
SW8260B	Vinyl chloride	ug/l	1 U	1 U		43				260 D		3.3				110 D	
SW8260B	Xylene, m/p	ug/l	2 U	2 U		2 U		2 U				2 U		2 U			
SW8260B	Xylene, o	ug/l	1 U	1 U		1 U		1 U				1 U		1 U			

Reviewed by
3/2/11

	Sample Delivery Group	C1166		C1166		C1166		C1166		C1166		C1166		C1166		C1166	
	Lab Sample Id	C1166-08		C1166-09		C1166-10		C1166-10DL		C1166-11		C1166-12		C1166-13		C1166-14	
	Location	DP-24		DP-24		DP-24		DP-24		DP-25		DP-25		DP-26		DP-26	
	Sample Date	1/18/2011		1/18/2011		1/18/2011		1/18/2011		1/18/2011		1/18/2011		1/18/2011		1/18/2011	
	Sample ID	828131A-DP2407X		828131A-DP2407XDUP		828131A-DP2420X		828131A-DP2420X		828131A-DP2507X		828131A-DP2520X		828131A-DP2607X		828131A-DP2620X	
	Qc Code	FS		FD		FS		FS		FS		FS		FS		FS	
Analysis	Param Name	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260B	1,1,1-Trichloroethane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	1,1,2,2-Tetrachloroethane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloroethane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethene	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	1,2,4-Trichlorobenzene	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromo-3-chloropropane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromoethane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	1,2-Dichlorobenzene	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloroethane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloropropane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	1,3-Dichlorobenzene	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	1,4-Dichlorobenzene	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	2-Butanone	ug/l	5	U	5	U	5	U			5	U	5	U	5	U	5	U
SW8260B	2-Hexanone	ug/l	5	U	5	U	5	U			5	U	5	U	5	U	5	U
SW8260B	4-Methyl-2-pentanone	ug/l	5	U	5	U	5	U			5	U	5	U	5	U	5	U
SW8260B	Acetic acid, methyl ester	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Acetone	ug/l	5	UJ	5.6	J	5.9				5.2		6.1		6.1		4.8	J
SW8260B	Benzene	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Bromodichloromethane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Bromoform	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Bromomethane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Carbon disulfide	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Carbon tetrachloride	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Chlorobenzene	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Chlorodibromomethane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Chloroethane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Chloroform	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Chloromethane	ug/l	1	U	1	U	0.59	J			1	U	1.1		0.86	J	1	U
SW8260B	Cis-1,2-Dichloroethene	ug/l	40		50				220	D	1	U	1	U	4.1			
SW8260B	cis-1,3-Dichloropropene	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Cyclohexane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Dichlorodifluoromethane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Ethyl benzene	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Isopropylbenzene	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Methyl cyclohexane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Methyl Tertbutyl Ether	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Methylene chloride	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Styrene	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Tetrachloroethene	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Toluene	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	trans-1,2-Dichloroethene	ug/l	0.94	J	1	U	2.2				1	U	1	U	1	U	2.6	
SW8260B	trans-1,3-Dichloropropene	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Trichloroethene	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Trichlorofluoromethane	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U
SW8260B	Vinyl chloride	ug/l	2.4		3.8		24				1	U	1	U	3.5		3.4	
SW8260B	Xylene, m/p	ug/l	2	U	2	U	2	U			2	U	2	U	2	U	2	U
SW8260B	Xylene, o	ug/l	1	U	1	U	1	U			1	U	1	U	1	U	1	U

	Sample Delivery Group	C1166		C1166		C1166		C1166		C1166	
	Lab Sample Id	C1166-14DL		C1166-15		C1166-16		C1166-17		C1166-18	
	Location	DP-26		DP-27		DP-27		DP-28		DP-28	
	Sample Date	1/18/2011		1/19/2011		1/19/2011		1/19/2011		1/19/2011	
	Sample ID	828131A-DP2620X		828131A-DP2707X		828131A-DP2720X		828131A-DP2807X		828131A-DP2807XDUP	
	Qc Code	FS		FS		FS		FS		FD	
Analysis	Param Name	Units	Result Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260B	1,1,1-Trichloroethane	ug/l		1	U	1	U	1	U	1	U
SW8260B	1,1,2,2-Tetrachloroethane	ug/l		1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l		1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloroethane	ug/l		1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethane	ug/l		1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethene	ug/l		1	U	1	U	1	U	1	U
SW8260B	1,2,4-Trichlorobenzene	ug/l		1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromo-3-chloropropane	ug/l		1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromoethane	ug/l		1	U	1	U	1	U	1	U
SW8260B	1,2-Dichlorobenzene	ug/l		1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloroethane	ug/l		1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloropropane	ug/l		1	U	1	U	1	U	1	U
SW8260B	1,3-Dichlorobenzene	ug/l		1	U	1	U	1	U	1	U
SW8260B	1,4-Dichlorobenzene	ug/l		1	U	1	U	1	U	1	U
SW8260B	2-Butanone	ug/l		5	U	5	U	5	U	2.8	J
SW8260B	2-Hexanone	ug/l		5	U	5	U	5	U	5	U
SW8260B	4-Methyl-2-pentanone	ug/l		5	U	5	U	5	U	5	U
SW8260B	Acetic acid, methyl ester	ug/l		1	U	1	U	1	U	1	U
SW8260B	Acetone	ug/l		9.1		5.6		15		19	
SW8260B	Benzene	ug/l		1	U	1	U	1	U	1	U
SW8260B	Bromodichloromethane	ug/l		1	U	1	U	1	U	1	U
SW8260B	Bromoform	ug/l		1	U	1	U	1	U	1	U
SW8260B	Bromomethane	ug/l		1	U	1	U	1	U	1	U
SW8260B	Carbon disulfide	ug/l		1	U	1	U	1	U	1	U
SW8260B	Carbon tetrachloride	ug/l		1	U	1	U	1	U	1	U
SW8260B	Chlorobenzene	ug/l		1	U	1	U	1	U	1	U
SW8260B	Chlorodibromomethane	ug/l		1	U	1	U	1	U	1	U
SW8260B	Chloroethane	ug/l		1	U	1	U	1	U	1	U
SW8260B	Chloroform	ug/l		1	U	1	U	1	U	1	U
SW8260B	Chloromethane	ug/l		0.61	J	0.54	J	1	U	1	U
SW8260B	Cis-1,2-Dichloroethene	ug/l	110 D	1	U	1.3		59		46	
SW8260B	cis-1,3-Dichloropropene	ug/l		1	U	1	U	1	U	1	U
SW8260B	Cyclohexane	ug/l		1	U	1	U	1	U	1	U
SW8260B	Dichlorodifluoromethane	ug/l		1	U	1	U	1	U	1	U
SW8260B	Ethyl benzene	ug/l		1	U	1	U	1	U	1	U
SW8260B	Isopropylbenzene	ug/l		1	U	1	U	1	U	1	U
SW8260B	Methyl cyclohexane	ug/l		1	U	1	U	1	U	1	U
SW8260B	Methyl Tertbutyl Ether	ug/l		1	U	1	U	1	U	1	U
SW8260B	Methylene chloride	ug/l		1	U	1	U	1	U	1	U
SW8260B	Styrene	ug/l		1	U	1	U	1	U	1	U
SW8260B	Tetrachloroethene	ug/l		1	U	1	U	1	U	1	U
SW8260B	Toluene	ug/l		1	U	1	U	1	U	1	U
SW8260B	trans-1,2-Dichloroethene	ug/l		1	U	1	U	1	U	1	U
SW8260B	trans-1,3-Dichloropropene	ug/l		1	U	1	U	1	U	1	U
SW3260B	Trichloroethene	ug/l		1	U	1	U	0.98	J	0.82	J
SW8260B	Trichlorofluoromethane	ug/l		1	U	1	U	1	U	1	U
SW8260B	Vinyl chloride	ug/l		1	U	1.3		0.85	J	0.57	J
SW8260B	Xylene, m/p	ug/l		2	U	2	U	2	U	2	U
SW8260B	Xylene, o	ug/l		1	U	1	U	1	U	1	U

CHEMTECH
284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

Cover Page

Order ID : C1166

Project ID : Carriage Cleantown

Client : MACTEC Inc.

Lab Sample Number	Client Sample Number
C1166-02	828131A-DP2110X
C1166-03	828131A-DP2120X
C1166-04	828131A-DP2207X
C1166-05	828131A-DP2220X
C1166-06	828131A-DP2307X
C1166-07	828131A-DP2320X
C1166-08	828131A-DP2407X
C1166-09	828131A-DP2407XDUP
C1166-10	828131A-DP2420X
C1166-11	828131A-DP2507X
C1166-12	828131A-DP2520X
C1166-13	828131A-DP2607X
C1166-14	828131A-DP2620X
C1166-15	828131A-DP2707X
C1166-16	828131A-DP2720X
C1166-17	828131A-DP2807X
C1166-18	828131A-DP2807XDUP

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.02.03 16:10:01 -05'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CHEMTECH

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C1166 SAS No.: C1166 SDG NO.: C1166

Lab File ID: VG032703.D BFB Injection Date: 01/25/2011

Instrument ID: MSVOAG BFB Injection Time: 13:43

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.3
75	30.0 - 60.0% of mass 95	42.1
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0) 1
174	50.0 - 100.0% of mass 95	67.4
175	5.0 - 9.0% of mass 174	4.9 (7.2) 1
176	95.0 - 101.0% of mass 174	65.4 (96.9) 1
177	5.0 - 9.0% of mass 176	4.8 (7.4) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD050	50 PPB CCC	VG032704.D	01/25/2011	14:15
VBG0125W2	VBG0125W2	VG032706.D	01/25/2011	15:29
BSG0125W3	BSG0125W3	VG032707.D	01/25/2011	15:58
828131A-DP2110X	C1166-02	VG032714.D	01/25/2011	19:18
828131A-DP2120X	C1166-03	VG032715.D	01/25/2011	19:47
828131A-DP2207X	C1166-04	VG032716.D	01/25/2011	20:15
828131A-DP2220X	C1166-05	VG032717.D	01/25/2011	20:44
828131A-DP2320X	C1166-07 OK, no CO	VG032719.D	01/25/2011	21:41
828131A-DP2407XDUP	C1166-09	VG032721.D	01/25/2011	22:38
828131A-DP2420X	C1166-10	VG032722.D	01/25/2011	23:07
828131A-DP2507X	C1166-11 OK, no CO	VG032723.D	01/25/2011	23:35
828131A-DP2520X	C1166-12	VG032724.D	01/26/2011	00:04
828131A-DP2607X	C1166-13	VG032725.D	01/26/2011	00:33
828131A-DP2620X	C1166-14	VG032726.D	01/26/2011	01:01
828131A-DP2707X	C1166-15 OK, no CO	VG032727.D	01/26/2011	01:30

CCAL : All OK

C.O. = Carry over evidence; none apparent in any samples

CHEMTECH

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C1166 SAS No.: C1166 SDG NO.: C1166

Lab File ID: VG032738.D BFB Injection Date: 01/26/2011

Instrument ID: MSVOAG BFB Injection Time: 11:24

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.7
75	30.0 - 60.0% of mass 95	43.1
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0) 1
174	50.0 - 100.0% of mass 95	63.3
175	5.0 - 9.0% of mass 174	4.5 (7) 1
176	95.0 - 101.0% of mass 174	62.4 (98.5) 1
177	5.0 - 9.0% of mass 176	4.1 (6.6) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD050	50 PPB CCC	VG032739.D	01/26/2011	12:47
VBG0126W1	VBG0126W1	VG032741.D	01/26/2011	13:57
BSG0126W1	BSG0126W1	VG032742.D	01/26/2011	14:26
828131A-DP2220XDL	C1166-05DL	VG032744.D	01/26/2011	15:23
828131A-DP2620XDL	C1166-14DL	VG032745.D	01/26/2011	15:52
828131A-DP2307X	C1166-06	VG032747.D	01/26/2011	16:50
828131A-DP2407X	C1166-08	VG032748.D	01/26/2011	17:18
828131A-DP2720X	C1166-16	VG032749.D	01/26/2011	17:47
828131A-DP2807X	C1166-17	VG032750.D	01/26/2011	18:16
828131A-DP2420XDL	C1166-10DL	VG032751.D	01/26/2011	18:45
828131A-DP2807XDUP	C1166-18	VG032752.D	01/26/2011	19:14
828131A-DP2320XDL	C1166-07DL	VG032753.D	01/26/2011	19:42
13SW-5MS	C1185-02MS	VG032759.D	01/26/2011	22:34
13SW-5MSD	C1185-03MSD	VG032760.D	01/26/2011	23:03

CCAL ; All OK

CHEMTECH

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C1166 SAS No.: C1166 SDG NO.: C1166

Lab File ID: VG032626.D BFB Injection Date: 01/20/2011

Instrument ID: MSVOAG BFB Injection Time: 11:10

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.1
75	30.0 - 60.0% of mass 95	43.3
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0) 1
174	50.0 - 100.0% of mass 95	65.8
175	5.0 - 9.0% of mass 174	4.7 (7.2) 1
176	95.0 - 101.0% of mass 174	64.6 (98.2) 1
177	5.0 - 9.0% of mass 176	3.9 (6) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD001	1 PPB ICC	VG032627.D	01/20/2011	12:02
VSTD005	5 PPB ICC	VG032628.D	01/20/2011	12:30
VSTD010	10 PPB ICC	VG032629.D	01/20/2011	12:59
VSTD050	50 PPB ICC	VG032631.D	01/20/2011	13:56
VSTD100	100 PPB ICC	VG032632.D	01/20/2011	14:25
VSTD020	20 PPB ICC	VG032633.D	01/20/2011	16:38

All OK

C1166

All Sequences checked for possible carryover; all OK

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/20/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2110X	SDG No.:	C1166
Lab Sample ID:	C1166-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032714.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	7.6		0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	0.54	J	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.66	J	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	0.55	J	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/20/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2110X	SDG No.:	C1166
Lab Sample ID:	C1166-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032714.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.2		66 - 150		96%	SPK: 50
1868-53-7	Dibromofluoromethane	51.1		76 - 130		102%	SPK: 50
2037-26-5	Toluene-d8	47.3		78 - 121		95%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.8		70 - 131		104%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	707925	3.85				
540-36-3	1,4-Difluorobenzene	1304870	4.65				
3114-55-4	Chlorobenzene-d5	1156190	9.62				
3855-82-1	1,4-Dichlorobenzene-d4	467443	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/20/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2120X	SDG No.:	C1166
Lab Sample ID:	C1166-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032715.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	0.83	J	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	6.6		0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/20/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2120X	SDG No.:	C1166
Lab Sample ID:	C1166-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032715.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	47.5		66 - 150		95%	SPK: 50
1868-53-7	Dibromofluoromethane	52.2		76 - 130		104%	SPK: 50
2037-26-5	Toluene-d8	46.1		78 - 121		92%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.9		70 - 131		100%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	716532	3.85				
540-36-3	1,4-Difluorobenzene	1292100	4.65				
3114-55-4	Chlorobenzene-d5	1117680	9.63				
3855-82-1	1,4-Dichlorobenzene-d4	450657	13.33				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/17/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2207X	SDG No.:	C1166
Lab Sample ID:	C1166-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032716.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	43		0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	6.2		0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/17/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2207X	SDG No.:	C1166
Lab Sample ID:	C1166-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032716.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.2		66 - 150		96%	SPK: 50
1868-53-7	Dibromofluoromethane	50.8		76 - 130		102%	SPK: 50
2037-26-5	Toluene-d8	42.8		78 - 121		86%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.9		70 - 131		100%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	721953	3.85				
540-36-3	1,4-Difluorobenzene	1284650	4.65				
3114-55-4	Chlorobenzene-d5	1101330	9.63				
3855-82-1	1,4-Dichlorobenzene-d4	442474	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/4/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/17/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2220X	SDG No.:	C1166
Lab Sample ID:	C1166-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032717.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	210	E See DL	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5.7		0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.8	J	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.56	J	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/17/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2220X	SDG No.:	C1166
Lab Sample ID:	C1166-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032717.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.5		66 - 150		97%	SPK: 50
1868-53-7	Dibromofluoromethane	51.2		76 - 130		102%	SPK: 50
2037-26-5	Toluene-d8	44.8		78 - 121		90%	SPK: 50
460-00-4	4-Bromofluorobenzene	50		70 - 131		100%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	709370	3.85				
540-36-3	1,4-Difluorobenzene	1294230	4.65				
3114-55-4	Chlorobenzene-d5	1118850	9.63				
3855-82-1	1,4-Dichlorobenzene-d4	444017	13.33				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/17/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2220XDL	SDG No.:	C1166
Lab Sample ID:	C1166-05DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

Use only for Vinyl Chloride

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032744.D	10		01/26/11	vg012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	10	U	2	5	10	ug/L
74-87-3	Chloromethane	10	U	2	5	10	ug/L
75-01-4	Vinyl Chloride	260	D	3.4	5	10	ug/L
74-83-9	Bromomethane	10	U	2	5	10	ug/L
75-00-3	Chloroethane	10	U	2	5	10	ug/L
75-69-4	Trichlorofluoromethane	10	U	3.5	5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U	4.5	5	10	ug/L
75-35-4	1,1-Dichloroethene	10	U	4.7	5	10	ug/L
67-64-1	Acetone	50	U	5	25	50	ug/L
75-15-0	Carbon Disulfide	10	U	2	5	10	ug/L
1634-04-4	Methyl tert-butyl Ether	10	U	3.5	5	10	ug/L
79-20-9	Methyl Acetate	10	U	2	5	10	ug/L
75-09-2	Methylene Chloride	10	U	4.1	5	10	ug/L
156-60-5	trans-1,2-Dichloroethene	10	U	4.1	5	10	ug/L
75-34-3	1,1-Dichloroethane	10	U	3.6	5	10	ug/L
110-82-7	Cyclohexane	10	U	2	5	10	ug/L
78-93-3	2-Butanone	50	U	13	25	50	ug/L
56-23-5	Carbon Tetrachloride	10	U	2	5	10	ug/L
156-59-2	cis-1,2-Dichloroethene	10	U	3.5	5	10	ug/L
67-66-3	Chloroform	10	U	3.4	5	10	ug/L
71-55-6	1,1,1-Trichloroethane	10	U	4	5	10	ug/L
108-87-2	Methylcyclohexane	10	U	2	5	10	ug/L
71-43-2	Benzene	10	U	3.2	5	10	ug/L
107-06-2	1,2-Dichloroethane	10	U	4.8	5	10	ug/L
79-01-6	Trichloroethene	10	U	2.8	5	10	ug/L
78-87-5	1,2-Dichloropropane	10	U	4.6	5	10	ug/L
75-27-4	Bromodichloromethane	10	U	3.6	5	10	ug/L
108-10-1	4-Methyl-2-Pentanone	50	U	21	25	50	ug/L
108-88-3	Toluene	10	U	3.7	5	10	ug/L
10061-02-6	t-1,3-Dichloropropene	10	U	2.9	5	10	ug/L
10061-01-5	cis-1,3-Dichloropropene	10	U	3.1	5	10	ug/L
79-00-5	1,1,2-Trichloroethane	10	U	3.8	5	10	ug/L
591-78-6	2-Hexanone	50	U	19	25	50	ug/L
124-48-1	Dibromochloromethane	10	U	2	5	10	ug/L
106-93-4	1,2-Dibromoethane	10	U	4.1	5	10	ug/L

2/26/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/17/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2220XDL	SDG No.:	C1166
Lab Sample ID:	C1166-05DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032744.D	10		01/26/11	vg012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	10	U	2.7	5	10	ug/L
108-90-7	Chlorobenzene	10	U	4.9	5	10	ug/L
100-41-4	Ethyl Benzene	10	U	2	5	10	ug/L
179601-23-1	m/p-Xylenes	20	U	9.5	10	20	ug/L
95-47-6	o-Xylene	10	U	4.3	5	10	ug/L
100-42-5	Styrene	10	U	3.6	5	10	ug/L
75-25-2	Bromoform	10	U	4.7	5	10	ug/L
98-82-8	Isopropylbenzene	10	U	4.5	5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	10	U	3.1	5	10	ug/L
541-73-1	1,3-Dichlorobenzene	10	U	4.3	5	10	ug/L
106-46-7	1,4-Dichlorobenzene	10	U	3.2	5	10	ug/L
95-50-1	1,2-Dichlorobenzene	10	U	4.5	5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	4.6	5	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	10	U	2	5	10	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.7		66 - 150		97%	SPK: 50
1868-53-7	Dibromofluoromethane	51.9		76 - 130		104%	SPK: 50
2037-26-5	Toluene-d8	47.1		78 - 121		94%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.8		70 - 131		104%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	667602	3.87				
540-36-3	1,4-Difluorobenzene	1249430	4.67				
3114-55-4	Chlorobenzene-d5	1089200	9.65				
3855-82-1	1,4-Dichlorobenzene-d4	447755	13.35				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2307X	SDG No.:	C1166
Lab Sample ID:	C1166-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032747.D	1		01/26/11	vg012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	3.3		0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	30		0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2307X	SDG No.:	C1166
Lab Sample ID:	C1166-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032747.D	1		01/26/11	vg012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.3		66 - 150		97%	SPK: 50
1868-53-7	Dibromofluoromethane	50.4		76 - 130		101%	SPK: 50
2037-26-5	Toluene-d8	46.4		78 - 121		93%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.6		70 - 131		101%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	690597	3.88				
540-36-3	1,4-Difluorobenzene	1265830	4.67				
3114-55-4	Chlorobenzene-d5	1082740	9.65				
3855-82-1	1,4-Dichlorobenzene-d4	439618	13.36				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2320X	SDG No.:	C1166
Lab Sample ID:	C1166-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032719.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	~~Vinyl Chloride~~	~~110~~	~~E~~ See DL	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1.9		0.47	0.5	1	ug/L
67-64-1	Acetone	4.2	J	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	31		0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	~~cis-1,2-Dichloroethene~~	~~650~~	~~E~~ See DL	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/24/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2320X	SDG No.:	C1166
Lab Sample ID:	C1166-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032719.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	47.6		66 - 150		95%	SPK: 50
1868-53-7	Dibromofluoromethane	52.4		76 - 130		105%	SPK: 50
2037-26-5	Toluene-d8	43.3		78 - 121		87%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.1		70 - 131		104%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	664662	3.85				
540-36-3	1,4-Difluorobenzene	1221220	4.65				
3114-55-4	Chlorobenzene-d5	1090770	9.62				
3855-82-1	1,4-Dichlorobenzene-d4	429266	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2320XDL	SDG No.:	C1166
Lab Sample ID:	C1166-07DL Use only for	Matrix:	WATER
Analytical Method:	SW8260B Vinyl chloride and	% Moisture:	100
Sample Wt/Vol:	5 Units: mL cis-1,2-DCE	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032753.D	20		01/26/11	VG012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	20	U	4	10	20	ug/L
74-87-3	Chloromethane	20	U	4	10	20	ug/L
75-01-4	Vinyl Chloride	110	D	6.8	10	20	ug/L
74-83-9	Bromomethane	20	U	4	10	20	ug/L
75-00-3	Chloroethane	20	U	4	10	20	ug/L
75-69-4	Trichlorofluoromethane	20	U	7	10	20	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	20	U	9	10	20	ug/L
75-35-4	1,1-Dichloroethene	20	U	9.4	10	20	ug/L
67-64-1	Acetone	100	U	10	50	100	ug/L
75-15-0	Carbon Disulfide	20	U	4	10	20	ug/L
1634-04-4	Methyl tert-butyl Ether	20	U	7	10	20	ug/L
79-20-9	Methyl Acetate	20	U	4	10	20	ug/L
75-09-2	Methylene Chloride	20	U	8.2	10	20	ug/L
156-60-5	trans-1,2-Dichloroethene	20	U	8.2	10	20	ug/L
75-34-3	1,1-Dichloroethane	20	U	7.2	10	20	ug/L
110-82-7	Cyclohexane	20	U	4	10	20	ug/L
78-93-3	2-Butanone	100	U	26	50	100	ug/L
56-23-5	Carbon Tetrachloride	20	U	4	10	20	ug/L
156-59-2	cis-1,2-Dichloroethene	920	D	7	10	20	ug/L
67-66-3	Chloroform	20	U	6.8	10	20	ug/L
71-55-6	1,1,1-Trichloroethane	20	U	8	10	20	ug/L
108-87-2	Methylcyclohexane	20	U	4	10	20	ug/L
71-43-2	Benzene	20	U	6.4	10	20	ug/L
107-06-2	1,2-Dichloroethane	20	U	9.6	10	20	ug/L
79-01-6	Trichloroethene	20	U	5.6	10	20	ug/L
78-87-5	1,2-Dichloropropane	20	U	9.2	10	20	ug/L
75-27-4	Bromodichloromethane	20	U	7.2	10	20	ug/L
108-10-1	4-Methyl-2-Pentanone	100	U	42	50	100	ug/L
108-88-3	Toluene	20	U	7.4	10	20	ug/L
10061-02-6	t-1,3-Dichloropropene	20	U	5.8	10	20	ug/L
10061-01-5	cis-1,3-Dichloropropene	20	U	6.2	10	20	ug/L
79-00-5	1,1,2-Trichloroethane	20	U	7.6	10	20	ug/L
591-78-6	2-Hexanone	100	U	39	50	100	ug/L
124-48-1	Dibromochloromethane	20	U	4	10	20	ug/L
106-93-4	1,2-Dibromoethane	20	U	8.2	10	20	ug/L

2/24/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2320XDL	SDG No.:	C1166
Lab Sample ID:	C1166-07DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032753.D	20		01/26/11	VG012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	20	U	5.4	10	20	ug/L
108-90-7	Chlorobenzene	20	U	9.8	10	20	ug/L
100-41-4	Ethyl Benzene	20	U	4	10	20	ug/L
179601-23-1	m/p-Xylenes	40	U	19	20	40	ug/L
95-47-6	o-Xylene	20	U	8.6	10	20	ug/L
100-42-5	Styrene	20	U	7.2	10	20	ug/L
75-25-2	Bromoform	20	U	9.4	10	20	ug/L
98-82-8	Isopropylbenzene	20	U	9	10	20	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	20	U	6.2	10	20	ug/L
541-73-1	1,3-Dichlorobenzene	20	U	8.6	10	20	ug/L
106-46-7	1,4-Dichlorobenzene	20	U	6.4	10	20	ug/L
95-50-1	1,2-Dichlorobenzene	20	U	9	10	20	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	20	U	9.2	10	20	ug/L
120-82-1	1,2,4-Trichlorobenzene	20	U	4	10	20	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49.1		66 - 150		98%	SPK: 50
1868-53-7	Dibromofluoromethane	51.6		76 - 130		103%	SPK: 50
2037-26-5	Toluene-d8	46.9		78 - 121		94%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.1		70 - 131		104%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	652677	3.88				
540-36-3	1,4-Difluorobenzene	1228860	4.69				
3114-55-4	Chlorobenzene-d5	1106670	9.65				
3855-82-1	1,4-Dichlorobenzene-d4	440896	13.36				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2407X	SDG No.:	C1166
Lab Sample ID:	C1166-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032748.D	1		01/26/11	vg012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	2.4		0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5	U J	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.94	J	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	40		0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

JC 2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2407X	SDG No.:	C1166
Lab Sample ID:	C1166-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032748.D	1		01/26/11	vg012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49.9		66 - 150		100%	SPK: 50
1868-53-7	Dibromofluoromethane	50.8		76 - 130		102%	SPK: 50
2037-26-5	Toluene-d8	46.8		78 - 121		94%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.4		70 - 131		103%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	660956	3.88				
540-36-3	1,4-Difluorobenzene	1232020	4.68				
3114-55-4	Chlorobenzene-d5	1085110	9.65				
3855-82-1	1,4-Dichlorobenzene-d4	428087	13.36				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

JR 2/24/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2407XDUP	SDG No.:	C1166
Lab Sample ID:	C1166-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032721.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	3.8		0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5.6 J		0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	50		0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2407XDUP	SDG No.:	C1166
Lab Sample ID:	C1166-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032721.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	47.9		66 - 150		96%	SPK: 50
1868-53-7	Dibromofluoromethane	50.4		76 - 130		101%	SPK: 50
2037-26-5	Toluene-d8	46.4		78 - 121		93%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.6		70 - 131		101%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	723519	3.85				
540-36-3	1,4-Difluorobenzene	1324420	4.65				
3114-55-4	Chlorobenzene-d5	1143350	9.63				
3855-82-1	1,4-Dichlorobenzene-d4	464196	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2420X	SDG No.:	C1166
Lab Sample ID:	C1166-10	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032722.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	0.59	J	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	24		0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5.9		0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	2.2		0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	~~cis-1,2-Dichloroethene~~	160	E See DL	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

JF 2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2420X	SDG No.:	C1166
Lab Sample ID:	C1166-10	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032722.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.9		66 - 150		98%	SPK: 50
1868-53-7	Dibromofluoromethane	48.7		76 - 130		97%	SPK: 50
2037-26-5	Toluene-d8	45		78 - 121		90%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.6		70 - 131		99%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	707729	3.86				
540-36-3	1,4-Difluorobenzene	1336390	4.66				
3114-55-4	Chlorobenzene-d5	1129880	9.63				
3855-82-1	1,4-Dichlorobenzene-d4	452902	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2420XDL	SDG No.:	C1166
Lab Sample ID:	C1166-10DL Use only for cis-1,2-DCE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032751.D	10		01/26/11	VG012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	10	U	2	5	10	ug/L
74-87-3	Chloromethane	10	U	2	5	10	ug/L
75-01-4	Vinyl Chloride	30	D	3.4	5	10	ug/L
74-83-9	Bromomethane	10	U	2	5	10	ug/L
75-00-3	Chloroethane	10	U	2	5	10	ug/L
75-69-4	Trichlorofluoromethane	10	U	3.5	5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U	4.5	5	10	ug/L
75-35-4	1,1-Dichloroethene	10	U	4.7	5	10	ug/L
67-64-1	Acetone	50	U	5	25	50	ug/L
75-15-0	Carbon Disulfide	10	U	2	5	10	ug/L
1634-04-4	Methyl tert-butyl Ether	10	U	3.5	5	10	ug/L
79-20-9	Methyl Acetate	10	U	2	5	10	ug/L
75-09-2	Methylene Chloride	10	U	4.1	5	10	ug/L
156-60-5	trans-1,2-Dichloroethene	10	U	4.1	5	10	ug/L
75-34-3	1,1-Dichloroethane	10	U	3.6	5	10	ug/L
110-82-7	Cyclohexane	10	U	2	5	10	ug/L
78-93-3	2-Butanone	50	U	13	25	50	ug/L
56-23-5	Carbon Tetrachloride	10	U	2	5	10	ug/L
156-59-2	cis-1,2-Dichloroethene	220	D	3.5	5	10	ug/L
67-66-3	Chloroform	10	U	3.4	5	10	ug/L
71-55-6	1,1,1-Trichloroethane	10	U	4	5	10	ug/L
108-87-2	Methylcyclohexane	10	U	2	5	10	ug/L
71-43-2	Benzene	10	U	3.2	5	10	ug/L
107-06-2	1,2-Dichloroethane	10	U	4.8	5	10	ug/L
79-01-6	Trichloroethene	10	U	2.8	5	10	ug/L
78-87-5	1,2-Dichloropropane	10	U	4.6	5	10	ug/L
75-27-4	Bromodichloromethane	10	U	3.6	5	10	ug/L
108-10-1	4-Methyl-2-Pentanone	50	U	21	25	50	ug/L
108-88-3	Toluene	10	U	3.7	5	10	ug/L
10061-02-6	t-1,3-Dichloropropene	10	U	2.9	5	10	ug/L
10061-01-5	cis-1,3-Dichloropropene	10	U	3.1	5	10	ug/L
79-00-5	1,1,2-Trichloroethane	10	U	3.8	5	10	ug/L
591-78-6	2-Hexanone	50	U	19	25	50	ug/L
124-48-1	Dibromochloromethane	10	U	2	5	10	ug/L
106-93-4	1,2-Dibromoethane	10	U	4.1	5	10	ug/L

2/14/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2420XDL	SDG No.:	C1166
Lab Sample ID:	C1166-10DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032751.D	10		01/26/11	VG012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	10	U	2.7	5	10	ug/L
108-90-7	Chlorobenzene	10	U	4.9	5	10	ug/L
100-41-4	Ethyl Benzene	10	U	2	5	10	ug/L
179601-23-1	m/p-Xylenes	20	U	9.5	10	20	ug/L
95-47-6	o-Xylene	10	U	4.3	5	10	ug/L
100-42-5	Styrene	10	U	3.6	5	10	ug/L
75-25-2	Bromoform	10	U	4.7	5	10	ug/L
98-82-8	Isopropylbenzene	10	U	4.5	5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	10	U	3.1	5	10	ug/L
541-73-1	1,3-Dichlorobenzene	10	U	4.3	5	10	ug/L
106-46-7	1,4-Dichlorobenzene	10	U	3.2	5	10	ug/L
95-50-1	1,2-Dichlorobenzene	10	U	4.5	5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	4.6	5	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	10	U	2	5	10	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	47.7		66 - 150		95%	SPK: 50
1868-53-7	Dibromofluoromethane	51.5		76 - 130		103%	SPK: 50
2037-26-5	Toluene-d8	46.5		78 - 121		93%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.8		70 - 131		108%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	658012	3.88				
540-36-3	1,4-Difluorobenzene	1201640	4.68				
3114-55-4	Chlorobenzene-d5	1065610	9.65				
3855-82-1	1,4-Dichlorobenzene-d4	428672	13.36				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

JC 2/24/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2507X	SDG No.:	C1166
Lab Sample ID:	C1166-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032723.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5.2		0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2507X	SDG No.:	C1166
Lab Sample ID:	C1166-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032723.D	1		01/25/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49.2		66 - 150		98%	SPK: 50
1868-53-7	Dibromofluoromethane	53.4		76 - 130		107%	SPK: 50
2037-26-5	Toluene-d8	45.9		78 - 121		92%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.3		70 - 131		103%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	704936	3.85				
540-36-3	1,4-Difluorobenzene	1269140	4.65				
3114-55-4	Chlorobenzene-d5	1131530	9.63				
3855-82-1	1,4-Dichlorobenzene-d4	446071	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2520X	SDG No.:	C1166
Lab Sample ID:	C1166-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032724.D	1		01/26/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1.1		0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	6.1		0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2520X	SDG No.:	C1166
Lab Sample ID:	C1166-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032724.D	1		01/26/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49.1		66 - 150		98%	SPK: 50
1868-53-7	Dibromofluoromethane	52		76 - 130		104%	SPK: 50
2037-26-5	Toluene-d8	43.5		78 - 121		87%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.1		70 - 131		106%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	682783	3.86				
540-36-3	1,4-Difluorobenzene	1245080	4.66				
3114-55-4	Chlorobenzene-d5	1084600	9.63				
3855-82-1	1,4-Dichlorobenzene-d4	441630	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/11/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2607X	SDG No.:	C1166
Lab Sample ID:	C1166-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032725.D	1		01/26/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	0.86	J	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	3.5		0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	6.1		0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	4.1		0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2607X	SDG No.:	C1166
Lab Sample ID:	C1166-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032725.D	1		01/26/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.8		66 - 150		98%	SPK: 50
1868-53-7	Dibromofluoromethane	49.8		76 - 130		100%	SPK: 50
2037-26-5	Toluene-d8	46.2		78 - 121		92%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.4		70 - 131		103%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	682648	3.86				
540-36-3	1,4-Difluorobenzene	1283350	4.66				
3114-55-4	Chlorobenzene-d5	1140520	9.63				
3855-82-1	1,4-Dichlorobenzene-d4	462137	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2620X	SDG No.:	C1166
Lab Sample ID:	C1166-14	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032726.D	1		01/26/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	3.4		0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	4.8	J	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	2.6		0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	~~cis-1,2-Dichloroethene~~	~~100~~	~~E~~ See DL	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2620X	SDG No.:	C1166
Lab Sample ID:	C1166-14	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032726.D	1		01/26/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.6		66 - 150		97%	SPK: 50
1868-53-7	Dibromofluoromethane	51.9		76 - 130		104%	SPK: 50
2037-26-5	Toluene-d8	45.7		78 - 121		91%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.6		70 - 131		101%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	699951	3.86				
540-36-3	1,4-Difluorobenzene	1243160	4.66				
3114-55-4	Chlorobenzene-d5	1081190	9.63				
3855-82-1	1,4-Dichlorobenzene-d4	429830	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2620XDL	SDG No.:	C1166
Lab Sample ID:	C1166-14DL Use only for	Matrix:	WATER
Analytical Method:	SW8260B cis-1,2-Dce	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032745.D	10		01/26/11	vg012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	10	U	2	5	10	ug/L
74-87-3	Chloromethane	10	U	2	5	10	ug/L
75-01-4	Vinyl Chloride	10	U	3.4	5	10	ug/L
74-83-9	Bromomethane	10	U	2	5	10	ug/L
75-00-3	Chloroethane	10	U	2	5	10	ug/L
75-69-4	Trichlorofluoromethane	10	U	3.5	5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U	4.5	5	10	ug/L
75-35-4	1,1-Dichloroethene	10	U	4.7	5	10	ug/L
67-64-1	Acetone	50	U	5	25	50	ug/L
75-15-0	Carbon Disulfide	10	U	2	5	10	ug/L
1634-04-4	Methyl tert-butyl Ether	10	U	3.5	5	10	ug/L
79-20-9	Methyl Acetate	10	U	2	5	10	ug/L
75-09-2	Methylene Chloride	10	U	4.1	5	10	ug/L
156-60-5	trans-1,2-Dichloroethene	10	U	4.1	5	10	ug/L
75-34-3	1,1-Dichloroethane	10	U	3.6	5	10	ug/L
110-82-7	Cyclohexane	10	U	2	5	10	ug/L
78-93-3	2-Butanone	50	U	13	25	50	ug/L
56-23-5	Carbon Tetrachloride	10	U	2	5	10	ug/L
156-59-2	cis-1,2-Dichloroethene	110	D	3.5	5	10	ug/L
67-66-3	Chloroform	10	U	3.4	5	10	ug/L
71-55-6	1,1,1-Trichloroethane	10	U	4	5	10	ug/L
108-87-2	Methylcyclohexane	10	U	2	5	10	ug/L
71-43-2	Benzene	10	U	3.2	5	10	ug/L
107-06-2	1,2-Dichloroethane	10	U	4.8	5	10	ug/L
79-01-6	Trichloroethene	10	U	2.8	5	10	ug/L
78-87-5	1,2-Dichloropropane	10	U	4.6	5	10	ug/L
75-27-4	Bromodichloromethane	10	U	3.6	5	10	ug/L
108-10-1	4-Methyl-2-Pentanone	50	U	21	25	50	ug/L
108-88-3	Toluene	10	U	3.7	5	10	ug/L
10061-02-6	t-1,3-Dichloropropene	10	U	2.9	5	10	ug/L
10061-01-5	cis-1,3-Dichloropropene	10	U	3.1	5	10	ug/L
79-00-5	1,1,2-Trichloroethane	10	U	3.8	5	10	ug/L
591-78-6	2-Hexanone	50	U	19	25	50	ug/L
124-48-1	Dibromochloromethane	10	U	2	5	10	ug/L
106-93-4	1,2-Dibromoethane	10	U	4.1	5	10	ug/L

2/24/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/18/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2620XDL	SDG No.:	C1166
Lab Sample ID:	C1166-14DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032745.D	10		01/26/11	vg012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	10	U	2.7	5	10	ug/L
108-90-7	Chlorobenzene	10	U	4.9	5	10	ug/L
100-41-4	Ethyl Benzene	10	U	2	5	10	ug/L
179601-23-1	m/p-Xylenes	20	U	9.5	10	20	ug/L
95-47-6	o-Xylene	10	U	4.3	5	10	ug/L
100-42-5	Styrene	10	U	3.6	5	10	ug/L
75-25-2	Bromoform	10	U	4.7	5	10	ug/L
98-82-8	Isopropylbenzene	10	U	4.5	5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	10	U	3.1	5	10	ug/L
541-73-1	1,3-Dichlorobenzene	10	U	4.3	5	10	ug/L
106-46-7	1,4-Dichlorobenzene	10	U	3.2	5	10	ug/L
95-50-1	1,2-Dichlorobenzene	10	U	4.5	5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	4.6	5	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	10	U	2	5	10	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.7		66 - 150		97%	SPK: 50
1868-53-7	Dibromofluoromethane	50.1		76 - 130		100%	SPK: 50
2037-26-5	Toluene-d8	46.8		78 - 121		94%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.3		70 - 131		105%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	694177	3.87				
540-36-3	1,4-Difluorobenzene	1274700	4.68				
3114-55-4	Chlorobenzene-d5	1155780	9.64				
3855-82-1	1,4-Dichlorobenzene-d4	450411	13.35				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/24/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2707X	SDG No.:	C1166
Lab Sample ID:	C1166-15	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032727.D	1		01/26/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	0.61	J	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	9.1		0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/24/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2707X	SDG No.:	C1166
Lab Sample ID:	C1166-15	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032727.D	1		01/26/11	VG012511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.1		66 - 150		96%	SPK: 50
1868-53-7	Dibromofluoromethane	51.2		76 - 130		102%	SPK: 50
2037-26-5	Toluene-d8	46.8		78 - 121		94%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.8		70 - 131		102%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	716694	3.86				
540-36-3	1,4-Difluorobenzene	1272790	4.66				
3114-55-4	Chlorobenzene-d5	1126490	9.63				
3855-82-1	1,4-Dichlorobenzene-d4	433859	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2720X	SDG No.:	C1166
Lab Sample ID:	C1166-16	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032749.D	1		01/26/11	VG012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	0.54	J	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	1.3		0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5.6		0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1.3		0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2720X	SDG No.:	C1166
Lab Sample ID:	C1166-16	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032749.D	1		01/26/11	VG012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	47.3		66 - 150		95%	SPK: 50
1868-53-7	Dibromofluoromethane	52.5		76 - 130		105%	SPK: 50
2037-26-5	Toluene-d8	45.4		78 - 121		91%	SPK: 50
460-00-4	4-Bromofluorobenzene	53		70 - 131		106%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	624237	3.88				
540-36-3	1,4-Difluorobenzene	1130900	4.68				
3114-55-4	Chlorobenzene-d5	1005680	9.65				
3855-82-1	1,4-Dichlorobenzene-d4	401067	13.36				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2807X	SDG No.:	C1166
Lab Sample ID:	C1166-17	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032750.D	1		01/26/11	VG012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.85	J	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	15		0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	59		0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.98	J	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2807X	SDG No.:	C1166
Lab Sample ID:	C1166-17	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032750.D	1		01/26/11	VG012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49.9		66 - 150		100%	SPK: 50
1868-53-7	Dibromofluoromethane	50.1		76 - 130		100%	SPK: 50
2037-26-5	Toluene-d8	46.4		78 - 121		93%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.2		70 - 131		108%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	651161	3.88				
540-36-3	1,4-Difluorobenzene	1239930	4.68				
3114-55-4	Chlorobenzene-d5	1108060	9.65				
3855-82-1	1,4-Dichlorobenzene-d4	466846	13.36				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2807XDUP	SDG No.:	C1166
Lab Sample ID:	C1166-18	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032752.D	1		01/26/11	VG012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.57	J	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	19		0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	2.8	J	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	46		0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.82	J	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/2/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2807XDUP	SDG No.:	C1166
Lab Sample ID:	C1166-18	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG032752.D	1		01/26/11	VG012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	50.6		66 - 150		101%	SPK: 50
1868-53-7	Dibromofluoromethane	51		76 - 130		102%	SPK: 50
2037-26-5	Toluene-d8	46.8		78 - 121		94%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.1		70 - 131		102%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	681272	3.88				
540-36-3	1,4-Difluorobenzene	1263060	4.68				
3114-55-4	Chlorobenzene-d5	1093820	9.65				
3855-82-1	1,4-Dichlorobenzene-d4	458449	13.36				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/14/11

Checked for completeness of parameters requested.
gn 2/21/11

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ANALYTICAL RESULTS SUMMARY

PROJECT NAME : CARRIAGE CLEANTOWN

MACTEC INC.
1105 Lakewood Parkway
Suite 300
Alpharetta , GA - 30009
Phone No: 7703600600

ORDER ID : **C1166**
ATTENTION : **Tige Cunningham**

VOCs

NYSDEC DUSR PROJECT CHEMIST REVIEW RECORD

Project: Carriage Cleantown
Method : SW-846 8260B
Laboratory and SDG(s): Chemtech **SDG#** C1167
Date: 2/21/11
Reviewer: Julie Ricardi
Review Level [X] NYSDEC DUSR ☐ USEPA Region II Guideline

See ATTACHED SAMPLE LIST

1. ☑ Case Narrative Review and COC/Data Package Completeness COMMENTS
   Were problems noted? QC problems noted as summarized below
   Where all the samples on the COC analyzed for the requested analyses? (YES) NO (circle one)

2. ☑ Holding time and Sample Collection
   All samples were analyzed within the 14 day holding time. Yes

3. ☑ QC Blanks
   Are method blanks free of contamination? (YES) NO (circle one)
   Are Trip blanks free of contamination? (YES) NO (circle one) 828131A - TB1RM : ND
   Are Rinse blanks free of contamination? YES NO (NA) (circle one)

   ☑ Instrument Tuning
   Were all results were within method criteria? (YES) NO (circle one)

   ☑ Instrument Calibration Were all results within criteria? (YES) NO (circle one)
   Initial Calibration %RSD = 20% **(except 30% for 1,1-DCE, chloroform, 1,2-DCP, toluene, ethylbenzene, and Vinyl Chloride)**
   Continuing Calibration %D = 20% All OK

   ☑ Surrogate Recovery
   Were all results were within laboratory limits? Reg 2 80-120 (YES) NO (circle one)
   Internal Standards : All OK
   ☐ Matrix Spike
   DP2907X MS/MSD
   Were MS/MSDs submitted/analyzed? (YES) NO
   Were all results were within laboratory limits? 70-130 YES (NO) NA (circle one)
   See attached summary for (qual) to DP2907X
   ☑ Duplicates/replicates
   Were Field Duplicates submitted/analyzed? YES (NO)

   Were all results were within criteria. YES NO (NA) (circle one)

   ☑ Laboratory Control Sample Results 70-130
   Were all results were within laboratory limits? (YES) NO (circle one)

4. ☑ Raw Data Review and Calculation Checks
   See attached calcs.
5. ☑ Electronic Data Review and Edits
   Does the EDD match the Form I's? (YES) NO (circle one)

6. ☑ TIC Review and DUSR Table 1 (sample Listing), Table 2 (results summary), Table 3 (TIC's).
   Did lab report TICs? None detected in samples (raw data checked) except 1 unknown in -9 OK

	Sample Delivery Group	C1167		C1167		C1167		C1167		C1167		C1167		C1167	
	Lab Sample id	C1167-01		C1167-01DL		C1167-02		C1167-05		C1167-06		C1167-07		C1167-08	
	Location	DP-28		DP-28		DP-29		DP-29		DP-30		DP-30		DP-31	
	Sample Date	1/19/2011		1/19/2011		1/19/2011		1/19/2011		1/20/2011		1/20/2011		1/20/2011	
	Sample ID	828131A-DP2820X		828131A-DP2820X		828131A-DP2907X		828131A-DP2920X		828131A-DP3007X		828131A-DP3020X		828131A-DP3120X	
	Qc Code	FS		FS		FS		FS		FS		FS		FS	
Analysis	Param Name	Units	Result Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260B	1,1,1-Trichloroethane	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1,2,2-Tetrachloroethane	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1,2-Trichloroethane	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1-Dichloroethane	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1-Dichloroethene	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	1,2,4-Trichlorobenzene	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	1,2-Dibromo-3-chloropropane	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	1,2-Dibromoethane	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	1,2-Dichlorobenzene	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	1,2-Dichloroethane	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	1,2-Dichloropropane	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	1,3-Dichlorobenzene	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	1,4-Dichlorobenzene	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	2-Butanone	ug/l	5 U			5 U		5 U		5 U		5 U		5 U	
SW8260B	2-Hexanone	ug/l	5 U			5 U		5 U		5 U		5 U		5 U	
SW8260B	4-Methyl-2-pentanone	ug/l	5 U			5 U		5 U		5 U		5 U		5 U	
SW8260B	Acetic acid, methyl ester	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Acetone	ug/l	5 U			5 U		5 U		5 U		5 U		5 U	
SW8260B	Benzene	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Bromodichloromethane	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Bromoform	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Bromomethane	ug/l	1 U			1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Carbon disulfide	ug/l	1 U			1 U		1 U		1.1		1 U		1 U	
SW8260B	Carbon tetrachloride	ug/l	1 U			1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Chlorobenzene	ug/l	1 U			1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Chlorodibromomethane	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Chloroethane	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Chloroform	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Chloromethane	ug/l	1 U			0.63 J		1 U		1 U		1 U		1 U	
SW8260B	Cis-1,2-Dichloroethene	ug/l		210 D		1 U		1 U		2.6		3.5		0.96 J	
SW8260B	cis-1,3-Dichloropropene	ug/l	1 U			1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Cyclohexane	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Dichlorodifluoromethane	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Ethyl benzene	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Isopropylbenzene	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Methyl cyclohexane	ug/l	1 U			1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Methyl Tertbutyl Ether	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Methylene chloride	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Styrene	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Tetrachloroethene	ug/l	1.1			1 U		1 U		1 U		1 U		1 U	
SW8260B	Toluene	ug/l	1 U			1 UJ		1 U		1 U		1 U		1 U	
SW8260B	trans-1,2-Dichloroethene	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	trans-1,3-Dichloropropene	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Trichloroethene	ug/l	2.6			1 U		1 U		1 U		1 U		1 U	
SW8260B	Trichlorofluoromethane	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	
SW8260B	Vinyl chloride	ug/l	22			1 U		1 U		1 U		1.1		7.8	
SW8260B	Xylene, m/p	ug/l	2 U			2 U		2 U		2 U		2 U		2 U	
SW8260B	Xylene, o	ug/l	1 U			1 U		1 U		1 U		1 U		1 U	

Reviewed by
3/2/11

	Sample Delivery Group	C1167		C1167		C1167		C1167		C1167	
	Lab Sample Id	C1167-09		C1167-10		C1167-11		C1167-12		C1167-13	
	Location	DP-32		PS-04		PS-06		PS-07		QC	
	Sample Date	1/20/2011		1/17/2011		1/17/2011		1/21/2011		1/17/2011	
	Sample ID	828131A-DP3215X		828131A-PS0402		828131A-PS0602		828131A-PS0702		828131A-TB1RM	
	Qc Code	FS		FS		FS		FS		TB	
Analysis	Param Name	Units	Result Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260B	1,1,1-Trichloroethane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	1,1,2,2-Tetrachloroethane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloroethane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	1,2,4-Trichlorobenzene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromo-3-chloropropane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromoethane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichlorobenzene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloroethane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloropropane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	1,3-Dichlorobenzene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	1,4-Dichlorobenzene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	2-Butanone	ug/l	5 U	5	U	5	U	5	U	5	U
SW8260B	2-Hexanone	ug/l	5 U	5	U	5	U	5	U	5	U
SW8260B	4-Methyl-2-pentanone	ug/l	5 U	5	U	5	U	5	U	5	U
SW8260B	Acetic acid, methyl ester	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Acetone	ug/l	5 U	5	U	5	U	5	U	5	U
SW8260B	Benzene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Bromodichloromethane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Bromoform	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Bromomethane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Carbon disulfide	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Carbon tetrachloride	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Chlorobenzene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Chlorodibromomethane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Chloroethane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Chloroform	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Chloromethane	ug/l	1 U	1	U	0.58	J	1	U	1	U
SW8260B	Cis-1,2-Dichloroethene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	cis-1,3-Dichloropropene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Cyclohexane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Dichlorodifluoromethane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Ethyl benzene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Isopropylbenzene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Methyl cyclohexane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Methyl Tertbutyl Ether	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Methylene chloride	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Styrene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Tetrachloroethene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Toluene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	trans-1,2-Dichloroethene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	trans-1,3-Dichloropropene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Trichloroethene	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Trichlorofluoromethane	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Vinyl chloride	ug/l	1 U	1	U	1	U	1	U	1	U
SW8260B	Xylene, m/p	ug/l	2 U	2	U	2	U	2	U	2	U
SW8260B	Xylene, o	ug/l	1 U	1	U	1	U	1	U	1	U

CHEMTECH
284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

Cover Page

Order ID : C1167

Project ID : Carriage Cleantown

Client : MACTEC Inc.

Lab Sample Number	Client Sample Number
C1167-01	828131A-DP2820X
C1167-02	828131A-DP2907X
C1167-03	C1167-02MS
C1167-04	C1167-02MSD
C1167-05	828131A-DP2920X
C1167-06	828131A-DP3007X
C1167-07	828131A-DP3020X
C1167-08	828131A-DP3120X
C1167-09	828131A-DP3215X
C1167-10	828131A-PS0402
C1167-11	828131A-PS0602
C1167-12	828131A-PS0702
C1167-13	828131A-TB1RM

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.02.03 16:07:51 -05'00'

CHEMTECH

(Quals) for Sample DP2907X

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH **Client:** MACTEC Inc.

Lab Code: CHEM **Cas No:** C1167 **SAS No :** C1167 **SDG No:** C1167

Matrix Spike - EPA Sample No : C1167-04 **Analytical Method:** EPA SW846 8260 **Datafile :** VH039394.D

Reg 2

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % (ug/L)	MSD % (ug/L)	QC LIMITS RPD (70-130)	QC LIMITS REC
Dichlorodifluoromethane	50	59	118	9	20	(24-175)
Chloromethane	50	59	117	3	20	(29-190)
Vinyl Chloride	50	64	128	8	20	(39-171)
Bromomethane J (UJ)	50	67	134	25*	20	(34-167)
Chloroethane J+ (NJ)	50	71	142	20	20	(38-170)
Trichlorofluoromethane	50	65	130	13	20	(38-171)
1,1,2-Trichlorotrifluoroethane	50	59	118	15	20	(47-152)
1,1-Dichloroethene	50	58	116	11	20	(47-149)
Acetone	250	270	108	8	20	(28-181)
Carbon Disulfide	50	64	128	12	20	(34-160)
Methyl tert-butyl Ether	50	61	122	14	20	(39-166)
Methyl Acetate	50	59	118	7	20	(29-176)
Methylene Chloride	50	59	118	11	20	(48-149)
trans-1,2-Dichloroethene	50	58	116	7	20	(53-143)
1,1-Dichloroethane	50	60	120	7	20	(57-150)
Cyclohexane	50	57	114	7	20	(42-159)
2-Butanone	250	220	88	9	20	(47-160)
Carbon Tetrachloride J (UJ)	50	61	122	24*	20	(38-158)
cis-1,2-Dichloroethene	50	59	118	17	20	(41-160)
Chloroform	50	62	124	8	20	(56-152)
1,1,1-Trichloroethane	50	62	124	10	20	(57-148)
Methylcyclohexane J (UJ)	50	57	114	26*	20	(41-152)
Benzene	50	57	114	17	20	(59-140)
1,2-Dichloroethane	50	63	126	19	20	(56-151)
Trichloroethene	50	58	116	17	20	(49-146)
1,2-Dichloropropane	50	58	116	19	20	(63-140)
Bromodichloromethane	50	60	120	16	20	(60-144)
4-Methyl-2-Pentanone	250	320	128	17	20	(51-160)
Toluene J (UJ)	50	61	122	22*	20	(60-139)
t-1,3-Dichloropropene	50	61	122	18	20	(51-148)
cis-1,3-Dichloropropene J (UJ)	50	62	124	21*	20	(53-143)
1,1,2-Trichloroethane	50	57	114	19	20	(65-138)
2-Hexanone	250	300	120	14	20	(44-170)

 # Column to be used to flag recovery and RPD values with an asterisk

*** Values outside of QC limits**

2/24/11

RPD : 11 Out of 89 outside limits

Spike Recovery : 6 Out of 178 outside limits

CHEMTECH

(Quals) for Sample DP2907X

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH **Client:** MACTEC Inc.

Lab Code: CHEM **Cas No:** C1167 **SAS No :** C1167 **SDG No:** C1167

Matrix Spike - EPA Sample No : C1167-04 **Analytical Method:** EPA SW846 8260 **Datafile :** VH039394.D

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % (ug/L)	MSD %	QC LIMITS RPD	QC LIMITS REC
Dibromochloromethane	50	59	118	13	20	(56-146)
1,2-Dibromoethane	50	57	114	17	20	(63-142)
Tetrachloroethene	50	45	90	17	20	(23-148)
Chlorobenzene J (UJ)	50	56	112	22*	20	(57-136)
Ethyl Benzene	50	53	106	19	20	(49-146)
m/p-Xylenes	100	110	110	18	20	(51-140)
o-Xylene	50	56	112	20	20	(54-139)
Styrene	50	52	104	14	20	(48-141)
Bromoform	50	57	114	19	20	(48-141)
Isopropylbenzene	50	49	98	11	20	(48-143)
1,1,2,2-Tetrachloroethane	50	50	100	15	20	(52-151)
1,3-Dichlorobenzene	50	48	96	13	20	(63-129)
1,4-Dichlorobenzene	50	48	96	11	20	(57-134)
1,2-Dichlorobenzene	50	50	100	11	20	(57-136)
1,2-Dibromo-3-Chloropropane	50	51	102	15	20	(46-157)
1,2,4-Trichlorobenzene	50	49	98	18	20	(53-137)

Reg 2 70-130

2/21/11

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD : 11 Out of 89 outside limits

Spike Recovery : 6 Out of 178 outside limits

Quantitation Report (QT Reviewed)

Calculation Checks - Sample

Data Path : \\TERASTORAGE\VOASRV\HPCHEM1\MSVOA_H\DATA\VH012611\
Data File : VH039382.D
Acq On : 26 Jan 2011 15:32
Operator : NS
Sample : C1167-01
Misc : 5mL MSVOA_H
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 26 17:58:04 2011
Quant Method : W:\HPCHEM1\MSVOA_H\METHOD\82H012511W.M
Quant Title : SW846 8260
QLast Update : Wed Jan 26 13:13:16 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	4.09	168	1828832	50.00	ug/l		0.00
35) 1,4-Difluorobenzene	4.61	114	2755005	50.00	ug/l		0.01
64) Chlorobenzene-d5	7.96	117	2347274	50.00	ug/l		0.00
73) 1,4-Dichlorobenzene-d4	10.45	152	1135821	50.00	ug/l		0.00
System Monitoring Compounds							
34) 1,2-Dichloroethane-d4	4.12	65	1300298	48.16	ug/l		0.00
Spiked Amount 50.000	Range 66 - 150		Recovery = 96.32%				
36) Dibromofluoromethane	3.65	113	1037598	51.45	ug/l		0.00
Spiked Amount 50.000	Range 76 - 130		Recovery = 102.90%				
49) Toluene-d8	6.08	98	3049479	48.09	ug/l		0.01
Spiked Amount 50.000	Range 78 - 121		Recovery = 96.18%				
63) 4-Bromofluorobenzene	9.38	95	1183180	49.35	ug/l		0.00
Spiked Amount 50.000	Range 70 - 131		Recovery = 98.70%				
Target Compounds							Qvalue
4) Vinyl Chloride	1.21	62	723613	22.24	ug/l		98
28) cis-1,2-Dichloroethene	3.24	96	5726699	208.29	ug/l		99
44) Trichloroethene	4.57	130	52474	2.59	ug/l	#	1
65) Tetrachloroethene	6.60	164	19215	1.10	ug/l		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Conc Vinyl Chloride = $\frac{723613}{1828832} \times \frac{50}{.890} = 22.23$ ug/L

OK

JR

3/13/11

Quantitation Report (QT Reviewed) Sample (DL)

Data Path : \\TERASTORAGE\VOASRV\HPCHEM1\MSVOA_H\DATA\VH012611\
Data File : VH039396.D
Acq On : 26 Jan 2011 22:43
Operator : NS
Sample : C1167-01DL 5X
Misc : 5mL MSVOA_H
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jan 27 05:02:02 2011
Quant Method : W:\HPCHEM1\MSVOA_H\METHOD\82H012511W.M
Quant Title : SW846 8260
QLast Update : Wed Jan 26 13:13:16 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene	4.11	168	1885141	50.00 ug/l	0.01
35) 1,4-Difluorobenzene	4.62	114	2776367	50.00 ug/l	0.02
64) Chlorobenzene-d5	7.98	117	2356899	50.00 ug/l	0.02
73) 1,4-Dichlorobenzene-d4	10.46	152	1240729	50.00 ug/l	0.01
System Monitoring Compounds					
34) 1,2-Dichloroethane-d4	4.14	65	1337364	48.06 ug/l	0.02
Spiked Amount 50.000	Range 66 - 150		Recovery =	96.12%	
36) Dibromofluoromethane	3.67	113	1070110	52.66 ug/l	0.02
Spiked Amount 50.000	Range 76 - 130		Recovery =	105.32%	
49) Toluene-d8	6.10	98	3081579	48.22 ug/l	0.03
Spiked Amount 50.000	Range 78 - 121		Recovery =	96.44%	
63) 4-Bromofluorobenzene	9.39	95	1187472	49.15 ug/l	0.01
Spiked Amount 50.000	Range 70 - 131		Recovery =	98.30%	
Target Compounds					Qvalue
4) Vinyl Chloride	1.21	62	149320	4.45 ug/l	99
28) cis-1,2-Dichloroethene	3.26	96	1209772	42.69 ug/l	94
44) Trichloroethene	4.58	130	10798	0.53 ug/l #	1

(#) = qualifier out of range (m) = manual integration (+) = signals summed

$$\text{Conc}_{\text{cis-1,2-DCE}} = \frac{1209772}{1885141} \times \frac{50}{.752} \times 5$$

$$= 213.34 \frac{\text{ug}}{\text{L}} \quad \text{OK}$$

3/11/11

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Quantitation Report (QT Reviewed)

Data Path : \\TERRASTORAGE\VOASRV\HPCHEM1\MSVOA_H\DATA\VHC12611\
Data File : VH039393.D
Acq On : 26 Jan 2011 21:11 Matrix Spike
Operator : NS
Sample : C1167-03MS
Misc : 5mL MSVOA_H
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jan 27 04:55:29 2011
Quant Method : W:\HPCHEM1\MSVOA_H\METHOD\82H012511W.M
Quant Title : SW846 8260
QLast Update : Wed Jan 26 13:13:16 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	4.10	168	1599877	50.00	ug/l		0.00
35) 1,4-Difluorobenzene	4.62	114	2665422	50.00	ug/l		0.02
64) Chlorobenzene-d5	7.98	117	2238784	50.00	ug/l		0.02
73) 1,4-Dichlorobenzene-d4	10.46	152	1179915	50.00	ug/l		0.01
System Monitoring Compounds							
34) 1,2-Dichloroethane-d4	4.13	65	1385902	58.68	ug/l		0.02
Spiked Amount 50.000	Range 66 - 150		Recovery = 117.36%				
36) Dibromofluoromethane	3.66	113	989130	50.70	ug/l		0.01
Spiked Amount 50.000	Range 76 - 130		Recovery = 101.40%				
49) Toluene-d8	6.09	98	3179061	51.82	ug/l		0.02
Spiked Amount 50.000	Range 78 - 121		Recovery = 103.64%				
63) 4-Bromofluorobenzene	9.38	95	1160849	50.04	ug/l		0.00
Spiked Amount 50.000	Range 70 - 131		Recovery = 100.08%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.10	85	987773	53.92	ug/l		100
3) Chloromethane	1.17	50	1933926	57.31	ug/l		98
4) Vinyl Chloride	1.22	62	1669813	58.66	ug/l		99
5) Bromomethane	1.40	94	705049	52.11	ug/l		99
6) Chloroethane	1.47	64	879088	58.17	ug/l		98
7) Trichlorofluoromethane	1.57	101	1145228m	56.74	ug/l		
8) Tert butyl alcohol	2.52	59	1110443	317.03	ug/l	#	95
9) Diethyl Ether	1.70	74	806054	56.93	ug/l		99
10) Diisopropyl ether	2.73	45	5197669	56.38	ug/l		99
11) 1,1-Dichloroethene	1.82	96	949666	52.34	ug/l		92
12) Methyl Iodide	1.91	142	1756642m	52.60	ug/l		
13) Acrolein	2.04	56	1283167	256.03	ug/l		98
14) 1,1,2-Trichlorotrifluoroet	1.89	101	876012	51.17	ug/l		99
15) Acrylonitrile	2.83	53	3557609	290.25	ug/l		99
16) Allyl Chloride	2.14	41	2749608	60.99	ug/l		98
17) Acetone	2.24	43	2784924	248.36	ug/l		98
18) Carbon Disulfide	1.84	76	3757994	57.21	ug/l		99
19) Methyl Acetate	2.34	43	2297790	55.24	ug/l		99
20) Methyl tert-butyl Ether	2.42	73	3190211	53.36	ug/l		98
21) Methylene Chloride	2.22	84	1120231	53.49	ug/l		97
22) trans-1,2-Dichloroethene	2.34	96	956159	53.98	ug/l		93
24) Vinyl Acetate	3.02	43	16155467	354.04	ug/l		98
25) 1,1-Dichloroethane	2.81	63	2251582	55.92	ug/l		97
26) 2-Butanone	3.76	43	5754854	244.10	ug/l		100
27) 2,2-Dichloropropane	3.33	77	1004163	53.54	ug/l		100
28) cis-1,2-Dichloroethene	3.26	96	1213366	50.45	ug/l		92
29) Bromochloromethane	3.43	128	490488	48.52	ug/l		92
30) Chloroform	3.50	83	1772526	56.58	ug/l		96
31) Ethyl Acetate	3.62	43	2601774	55.36	ug/l	#	98
32) Cyclohexane	3.43	56	1884660	52.55	ug/l		94
33) 1,1,1-Trichloroethane	3.66	97	1236307	55.52	ug/l		98
37) 1,1-Dichloropropene	3.78	75	1538200	50.76	ug/l		96
38) Carbon Tetrachloride	3.60	117	1130713	47.51	ug/l		95
39) Benzene	4.00	78	4184270	47.85	ug/l		98

JR 3/12/11

274

Conc Vinyl Chloride = $\frac{1669813}{1599877} \times \frac{50}{.89} = 58.64$ ug/L OK

$\%R = \frac{58.64}{50}$ (reported 118) = 117% OK

Quantitation Report (QT Reviewed)

Data Path : \\TERASTORAGE\VOASRV\HPCHEM1\MSVOA_H\DATA\VH012611\
Data File : VH039380.D
Acq On : 26 Jan 2011 14:30 LCS
Operator : MS
Sample : BSH0126W1
Misc : 5mL MSVOA_H
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 26 16:34:35 2011
Quant Method : W:\HPCHEM1\MSVOA_H\METHOD\82H012511W.M
Quant Title : SW846 8260
QLast Update : Wed Jan 26 13:13:16 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene	4.10	168	1623900	50.00 ug/l	0.00
35) 1,4-Difluorobenzene	4.61	114	2386896	50.00 ug/l	0.01
64) Chlorobenzene-d5	7.96	117	1994041	50.00 ug/l	0.00
73) 1,4-Dichlorobenzene-d4	10.44	152	1103348	50.00 ug/l	0.00

System Monitoring Compounds

34) 1,2-Dichloroethane-d4	4.12	65	1105996	46.14 ug/l	0.00
Spiked Amount 50.000	Range 66 - 150		Recovery =	92.28%	
36) Dibromofluoromethane	3.65	113	910236	52.10 ug/l	0.00
Spiked Amount 50.000	Range 76 - 130		Recovery =	104.20%	
49) Toluene-d8	6.08	98	2779797	50.60 ug/l	0.00
Spiked Amount 50.000	Range 78 - 121		Recovery =	101.20%	
63) 4-Bromofluorobenzene	9.37	95	1017877	49.00 ug/l	0.00
Spiked Amount 50.000	Range 70 - 131		Recovery =	98.00%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.09	85	261960	15.68 ug/l	91
3) Chloromethane	1.15	50	529190	15.45 ug/l	98
4) Vinyl Chloride	1.20	62	486377	16.83 ug/l	99
5) Bromomethane	1.38	94	258929	18.85 ug/l	92
6) Chloroethane	1.46	64	291135	18.98 ug/l	93
7) Trichlorofluoromethane	1.55	101	392165m	19.14 ug/l	
8) Tert butyl alcohol	2.52	59	358423	100.82 ug/l #	96
9) Diethyl Ether	1.69	74	282318	19.65 ug/l	98
10) Diisopropyl ether	2.72	45	1855758	19.83 ug/l	99
11) 1,1-Dichloroethene	1.81	96	326756	17.74 ug/l	89
12) Methyl Iodide	1.90	142	626260m	18.48 ug/l	
13) Acrolein	2.03	56	594658	107.19 ug/l	100
14) 1,1,2-Trichlorotrifluoroet	1.88	101	342685	19.72 ug/l	97
15) Acrylonitrile	2.82	53	1294589	104.06 ug/l	99
16) Allyl Chloride	2.13	41	984760	18.51 ug/l	95
17) Acetone	2.24	43	1053633	79.47 ug/l	100
18) Carbon Disulfide	1.83	76	1054100	15.81 ug/l #	93
19) Methyl Acetate	2.34	43	903517	21.40 ug/l	98
20) Methyl tert-butyl Ether	2.42	73	1204634	19.85 ug/l	97
21) Methylene Chloride	2.21	84	425790	20.03 ug/l	98
22) trans-1,2-Dichloroethene	2.33	96	353197	19.65 ug/l	98
24) Vinyl Acetate	3.00	43	6138337	107.13 ug/l	97
25) 1,1-Dichloroethane	2.79	63	837442	20.49 ug/l	99
26) 2-Butanone	3.75	43	2341476	97.85 ug/l	99
27) 2,2-Dichloropropane	3.32	77	408639	21.47 ug/l	99
28) cis-1,2-Dichloroethene	3.24	96	474581	19.44 ug/l	99
29) Bromochloromethane	3.41	128	235328	22.94 ug/l	98
30) Chloroform	3.49	83	667711	21.00 ug/l	99
31) Ethyl Acetate	3.61	43	923120	19.35 ug/l #	98
32) Cyclohexane	3.41	56	675269	18.55 ug/l	94
33) 1,1,1-Trichloroethane	3.65	97	455927	20.17 ug/l	99
37) 1,1-Dichloropropene	3.77	75	544907	20.08 ug/l	98
38) Carbon Tetrachloride	3.60	117	439121	20.60 ug/l	90
39) Benzene	3.99	78	1496375	19.11 ug/l	99

3/12/11

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Conc Vinyl Chloride = 486377 / 1623900 × 50 / .89 = 16.83 45 OK

%r = 16.83 / 20 = 84% OK

(reported 85)

Quantitation Report (QT Reviewed)

Data Path : \\TERASTORAGE\VOASRV\HPCHEM1\MSVOA_H\DATA\VH012611\
Data File : VH012611W.D
Acq On : 26 Jan 2011 13:56
Operator : MF
Sample : VBH0126W1
Misc : 5ML MSVOA_H
ALS Vial : 4 Sample Multiplier: 1

Method Blank

Quant Time: Jan 26 15:25:03 2011
Quant Method : W:\HPCHEM1\MSVOA_H\METHOD\82H012511W.M
Quant Title : SW846 8260
QLast Update : Wed Jan 26 13:13:16 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene	4.09	168	1672003	50.00 ug/l	0.00
35) 1,4-Difluorobenzene	4.61	114	2608221	50.00 ug/l	0.00
64) Chlorobenzene-d5	7.95	117	2365756	50.00 ug/l	0.00
73) 1,4-Dichlorobenzene-d4	10.45	152	1167604	50.00 ug/l	0.00
System Monitoring Compounds					
34) 1,2-Dichloroethane-d4	4.12	65	1246880	50.52 ug/l	0.00
Spiked Amount 50.000	Range 66 - 150		Recovery = 101.04%		
36) Dibromofluoromethane	3.65	113	989388	51.82 ug/l	0.00
Spiked Amount 50.000	Range 76 - 130		Recovery = 103.64%		
49) Toluene-d8	6.08	98	3053738	50.87 ug/l	0.00
Spiked Amount 50.000	Range 78 - 121		Recovery = 101.74%		
63) 4-Bromofluorobenzene	9.38	95	1177369	51.87 ug/l	0.00
Spiked Amount 50.000	Range 70 - 131		Recovery = 103.74%		

Target Compounds (ND) Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

$$\text{Conc}_{\text{Tol-d8}} = \frac{3053738}{2608221} \times \frac{50}{1.151} = 50.86 \text{ ug/L}$$ OK

$$\%R = \frac{50.86}{50} = 101.7\%$$ OK

MF 3/12/11

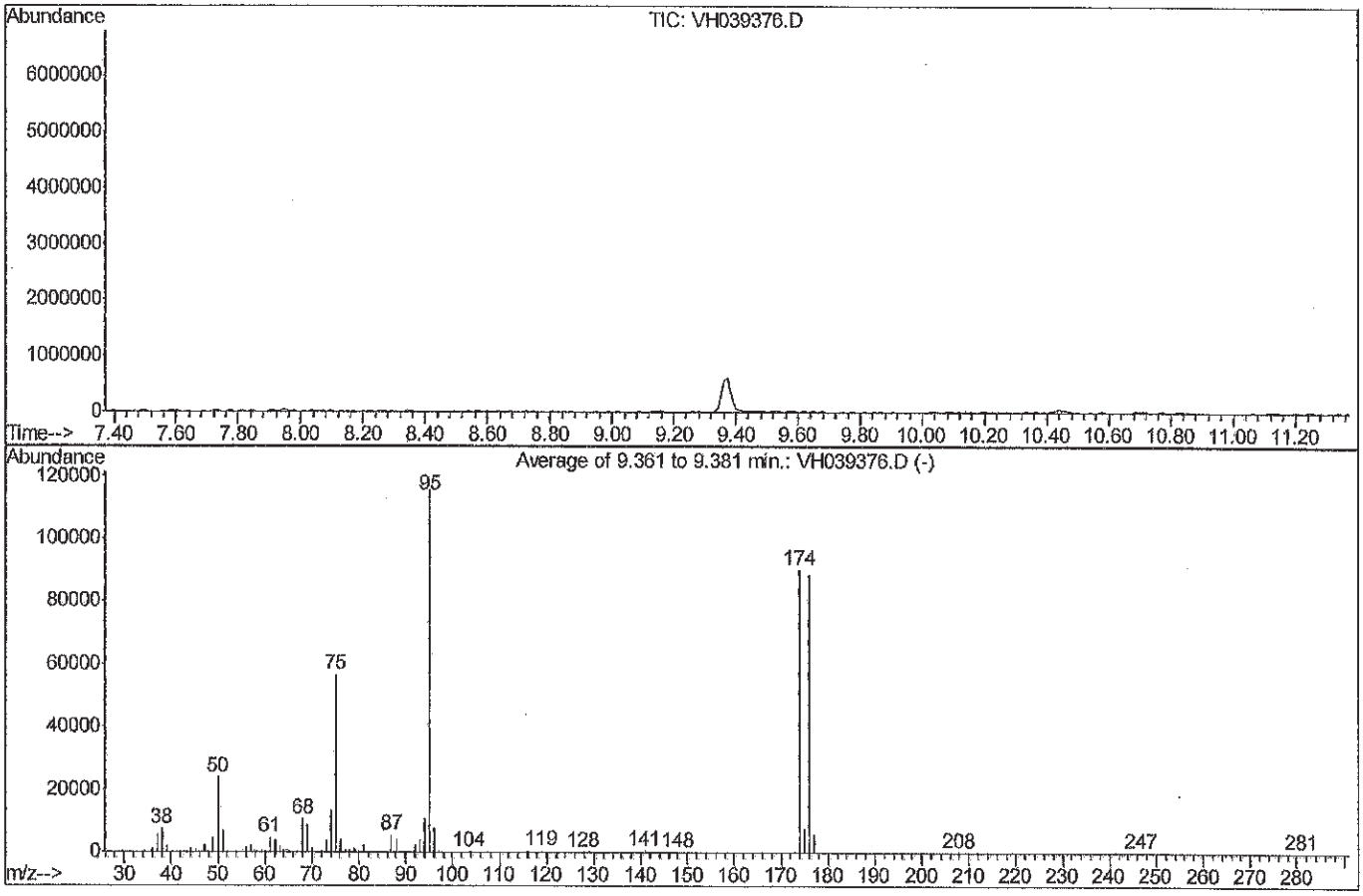
260

BFB

Data Path : W:\HPCHEM1\Msvoa H\Data\VH012611\
Data File : VH039376.D
Acq On : 26 Jan 2011 11:28
Operator : NS
Sample : BFB TUNE CHECK
Misc : 5mL MSVOA H
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : W:\HPCHEM1\MSVOA_H\METHOD\82H012511W.M
Title : SW846 8260
Last Update : Wed Jan 26 10:22:31 2011



AutoFind: Scans 879, 880, 881; Background Corrected with Scan 874

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.7 ✓	23853	PASS
75	95	30	60	49.0	56557	PASS
95	95	100	100	100.0	115397	PASS
96	95	5	9	6.7	7782	PASS
173	174	0.00	2	0.5	440	PASS
174	95	50	100	78.1	90114	PASS
175	174	5	9	8.4	7590	PASS
176	174	95	101	98.3	88554	PASS
177	176	5	9	6.4	5666	PASS

m/z $\frac{50}{95} = \frac{23853}{115397} = 20.67\%$ OK

3/12/11

Evaluate Continuing Calibration Report

Data Path : W:\HPCHEM1\MSVOA_H\DATA\VH012611\ CCAL
Data File : VH039377.D
Acq On : 26 Jan 2011 12:48
Operator : NS
Sample : 50 PPB CCC
Misc : 5mL MSVOA_H
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 26 13:12:43 2011
Quant Method : W:\HPCHEM1\MSVOA_H\METHOD\82H012511W.M
Quant Title : SW846 8260
QLast Update : Wed Jan 26 10:22:31 2011
Response via : Initial Calibration

$\%D_{VC} = \frac{.29 - 1.020}{.29} = -14.62\%$ OK

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	92	0.00
2	T	Dichlorodifluoromethane	0.511	0.661	-29.4#	108	0.00
3	P	Chloromethane	1.055	1.165	-10.4	101	0.00
4	CM	Vinyl Chloride	0.890	1.020	-14.6#	109	0.00
5	T	Bromomethane	0.423	0.432	-2.1	93	0.00
6	T	Chloroethane	0.472	0.551	-16.7	106	0.00
7	T	Trichlorofluoromethane	0.631	0.737	-16.8	101	0.00
8	T	Tert butyl alcohol	0.109	0.125	-14.7	96	0.00
9	T	Diethyl Ether	0.442	0.490	-10.9	95	0.00
10	T	Diisopropyl ether	2.881	3.061	-6.2	101	0.00
11	CM	1,1-Dichloroethene	0.567	0.634	-11.8#	104	0.00
12	T	Methyl Iodide	1.044	1.111	-6.4	97	0.00
13	T	Acrolein	0.214	0.162	24.3#	96	0.00
14	T	1,1,2-Trichlorotrifluoroeth	0.535	0.620	-15.9	108	0.00
15	T	Acrylonitrile	0.383	0.425	-11.0	102	0.00
16	T	Allyl Chloride	1.995	1.558	21.9#	94	0.00
17	T	Acetone	0.399	0.354	11.3	90	0.00
18	T	Carbon Disulfide	2.053	2.264	-10.3	99	0.00
19	T	Methyl Acetate	1.300	1.303	-0.2	103	0.00
20	T	Methyl tert-butyl Ether	1.868	1.973	-5.6	99	0.00
21	T	Methylene Chloride	0.654	0.720	-10.1	102	0.00
22	T	trans-1,2-Dichloroethene	0.554	0.597	-7.8	98	0.00
23	T	Acetonitrile	0.000	0.000	0.0	0#	-2.56#
24	T	Vinyl Acetate	1.600	1.840	-15.0	106	0.00
25	P	1,1-Dichloroethane	1.258	1.354	-7.6	103	0.00
26	TM	2-Butanone	0.737	0.733	0.5	102	0.00
27	T	2,2-Dichloropropane	0.586	0.619	-5.6	108	0.00
28	T	cis-1,2-Dichloroethene	0.752	0.802	-6.6	98	0.00
29	T	Bromochloromethane	0.316	0.285	9.8	86	0.00
30	CM	Chloroform	0.979	1.108	-13.2#	103	0.00
31	T	Ethyl Acetate	1.469	1.519	-3.4	103	0.00
32	T	Cyclohexane	1.121	1.213	-8.2	103	0.00
33	T	1,1,1-Trichloroethane	0.696	0.754	-8.3	99	0.00
34	S	1,2-Dichloroethane-d4	0.738	0.681	7.7	95	0.00
35	I	1,4-Difluorobenzene	1.000	1.000	0.0	92	0.00
36	S	Dibromofluoromethane	0.366	0.348	4.9	91	0.00
37	T	1,1-Dichloropropene	0.568	0.623	-9.7	102	0.00
38	TM	Carbon Tetrachloride	0.446	0.480	-7.6	101	0.00
39	TM	Benzene	1.640	1.688	-2.9	97	0.00
40	T	Methacrylonitrile	0.463	0.499	-7.8	102	0.00
41	TM	1,2-Dichloroethane	0.535	0.560	-4.7	99	0.00
42	T	Isobutyl Alcohol	0.000	0.000	0.0	0#	-4.31#
43	T	Isopropyl Acetate	1.259	1.376	-9.3	106	0.00
44	TM	Trichloroethene	0.367	0.399	-8.7	96	0.00
45	T	Methylcyclohexane	0.500	0.471	5.8	97	0.00

JR 3/14/11

RRF Vinyl chloride $= \frac{1867322}{1831291} \times \frac{50}{50} = 1.0197$ OK

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_H\DATA\VH012611\ CCAL
Data File : VH039377.D
Acq On : 26 Jan 2011 12:48
Operator : NS
Sample : 50 PPB CCC
Misc : 5mL MSVOA_H
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 26 13:12:43 2011
Quant Method : W:\HPCHEM1\MSVOA_H\METHOD\82H012511W.M
Quant Title : SW846 8260
QLast Update : Wed Jan 26 10:22:31 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	4.09	168	1831291	50.00	ug/l		0.02
35) 1,4-Difluorobenzene	4.60	114	2795526	50.00	ug/l		0.01
64) Chlorobenzene-d5	7.96	117	2276156	50.00	ug/l		0.03
73) 1,4-Dichlorobenzene-d4	10.44	152	1094230	50.00	ug/l		0.02
System Monitoring Compounds							
34) 1,2-Dichloroethane-d4	4.11	65	1246850	46.12	ug/l		0.01
Spiked Amount 50.000	Range 66 - 150		Recovery = 92.24%				
36) Dibromofluoromethane	3.65	113	972608	47.53	ug/l		0.02
Spiked Amount 50.000	Range 76 - 130		Recovery = 95.06%				
49) Toluene-d8	6.07	98	2997189	46.58	ug/l		0.02
Spiked Amount 50.000	Range 78 - 121		Recovery = 93.16%				
63) 4-Bromofluorobenzene	9.37	95	1078477	44.33	ug/l		0.02
Spiked Amount 50.000	Range 70 - 131		Recovery = 88.66%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.09	85	1209752	57.54	ug/l		97
3) Chloromethane	1.16	50	2132869	55.21	ug/l		98
4) Vinyl Chloride	1.21	62	1867322	57.30	ug/l		98
5) Bromomethane	1.39	94	790991	51.07	ug/l		98
6) Chloroethane	1.46	64	1009136	58.34	ug/l		93
7) Trichlorofluoromethane	1.56	101	1349946	58.44	ug/l	#	70
8) Tert butyl alcohol	2.52	59	1140139	284.38	ug/l		97
9) Diethyl Ether	1.69	74	897582	55.39	ug/l		91
10) Diisopropyl ether	2.72	45	5605489	53.12	ug/l		99
11) 1,1-Dichloroethene	1.82	96	1161284	55.92	ug/l		97
12) Methyl Iodide	1.91	142	2034613m	53.23	ug/l		
13) Acrolein	2.02	56	1487776	259.57	ug/l		99
14) 1,1,2-Trichlorotrifluoroet	1.88	101	1134642	57.91	ug/l		94
15) Acrylonitrile	2.82	53	3889036	277.20	ug/l		100
16) Allyl Chloride	2.12	41	2853962	54.87	ug/l		94
17) Acetone	2.23	43	3242493	252.98	ug/l		99
18) Carbon Disulfide	1.87	76	4146646	55.15	ug/l		98
19) Methyl Acetate	2.33	43	2387005	50.14	ug/l		98
20) Methyl tert-butyl Ether	2.41	73	3613816	52.81	ug/l		99
21) Methylene Chloride	2.20	84	1319292	55.04	ug/l		96
22) trans-1,2-Dichloroethene	2.32	96	1092724	53.90	ug/l		98
24) Vinyl Acetate	3.01	43	16844731	310.06	ug/l		100
25) 1,1-Dichloroethane	2.79	63	2479518	53.80	ug/l		99
26) 2-Butanone	3.75	43	6709239	248.62	ug/l		98
27) 2,2-Dichloropropane	3.32	77	1133986	52.83	ug/l		98
28) cis-1,2-Dichloroethene	3.24	96	1467876	53.32	ug/l		98
29) Bromochloromethane	3.41	128	521842	45.10	ug/l		93
30) Chloroform	3.49	83	2028754	56.58	ug/l		93
31) Ethyl Acetate	3.61	43	2781906	51.72	ug/l	#	99
32) Cyclohexane	3.41	56	2221346	54.11	ug/l		99
33) 1,1,1-Trichloroethane	3.65	97	1380600	54.17	ug/l		96
37) 1,1-Dichloropropene	3.77	75	1740510	54.76	ug/l		98
38) Carbon Tetrachloride	3.59	117	1342145	53.77	ug/l		87
39) Benzene	3.99	78	4719071	51.45	ug/l		98

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_H\DATA\VH012511\ ICAL
Data File : VH039364.D
Acq On : 25 Jan 2011 14:04
Operator : NS
Sample : 20 PPB ICC
Misc : 5mL MSVOA_H
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 25 16:13:38 2011
Quant Method : W:\HPCHEM1\MSVOA_H\METHOD\82H012511W.M
Quant Title : SW846 8260
QLast Update : Tue Jan 25 15:55:42 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	4.08	168	1852534	50.00	ug/l		0.00
35) 1,4-Difluorobenzene	4.59	114	2831636	50.00	ug/l		0.00
64) Chlorobenzene-d5	7.93	117	2290989	50.00	ug/l		0.00
73) 1,4-Dichlorobenzene-d4	10.43	152	1157359	50.00	ug/l		0.00
System Monitoring Compounds							
34) 1,2-Dichloroethane-d4	4.10	65	609660	25.91	ug/l		0.00
Spiked Amount 50.000	Range 66 - 150		Recovery = 51.82%#				
36) Dibromofluoromethane	3.63	113	465236	23.97	ug/l		0.00
Spiked Amount 50.000	Range 76 - 130		Recovery = 47.94%#				
49) Toluene-d8	6.06	98	1387505	23.49	ug/l		0.00
Spiked Amount 50.000	Range 78 - 121		Recovery = 46.98%#				
63) 4-Bromofluorobenzene	9.36	95	518936	23.98	ug/l		0.00
Spiked Amount 50.000	Range 70 - 131		Recovery = 47.96%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.08	85	293714	18.15	ug/l		92
3) Chloromethane	1.15	50	673674	22.40	ug/l		100
4) Vinyl Chloride	1.20	62	593534	22.54	ug/l		98
5) Bromomethane	1.38	94	273797	21.83	ug/l		100
6) Chloroethane	1.46	64	360052	24.40	ug/l		90
7) Trichlorofluoromethane	1.56	101	461235m	22.46	ug/l		
8) Tert butyl alcohol	2.50	59	436580	115.03	ug/l		99
9) Diethyl Ether	1.68	74	339580	22.98	ug/l		95
10) Diisopropyl ether	2.71	45	2126638	23.14	ug/l		99
11) 1,1-Dichloroethene	1.81	96	394056	21.65	ug/l	#	37
12) Methyl Iodide	1.94	142	696909	21.04	ug/l	#	45
13) Acrolein	2.01	56	691409	252.19	ug/l		95
14) 1,1,2-Trichlorotrifluoroet	1.87	101	373423	21.21	ug/l		98
15) Acrylonitrile	2.80	53	1461504	113.59	ug/l		98
16) Allyl Chloride	2.11	41	1181990	23.95	ug/l		92
17) Acetone	2.22	43	1498209	123.24	ug/l		98
18) Carbon Disulfide	1.86	76	1250276	21.24	ug/l		100
19) Methyl Acetate	2.32	43	1000654	24.00	ug/l		98
20) Methyl tert-butyl Ether	2.41	73	1402340	22.30	ug/l		100
21) Methylene Chloride	2.19	84	468942	22.64	ug/l	#	94
22) trans-1,2-Dichloroethene	2.31	96	368517	20.20	ug/l		95
24) Vinyl Acetate	2.99	43	6572140	129.08	ug/l		97
25) 1,1-Dichloroethane	2.77	63	924475	23.28	ug/l		99
26) 2-Butanone	3.73	43	2763746	121.47	ug/l		96
27) 2,2-Dichloropropane	3.30	77	418106	21.65	ug/l		97
28) cis-1,2-Dichloroethene	3.22	96	530907	21.40	ug/l		99
29) Bromochloromethane	3.39	128	233215	20.76	ug/l		97
30) Chloroform	3.47	83	738915	22.35	ug/l		97
31) Ethyl Acetate	3.59	43	1070830	23.74	ug/l	#	98
32) Cyclohexane	3.39	56	737152	21.88	ug/l		99
33) 1,1,1-Trichloroethane	3.63	97	511415	22.28	ug/l		99
37) 1,1-Dichloropropene	3.74	75	590765	21.01	ug/l		97
38) Carbon Tetrachloride	3.58	117	504247	21.00	ug/l		99
39) Benzene	3.96	78	1716357	21.70	ug/l		99

JR 3/11/11

RRF Vinyl Chloride = $\frac{593534}{1852534} \times \frac{50}{20} = 0.80098$ OK

Response Factor Report MSVOAH

Method Path : W:\HPCHEM1\MSVOA_H\METHOD\ IRA
Method File : 82H012511W.M
Title : SW846 8260
Last Update : Wed Jan 26 05:57:50 2011
Response Via : Initial Calibration

Calibration Files
5 =VH039363.D 1 =VH039362.D 20 =VH039364.D
50 =VH039368.D 100 =VH039366.D 150 =VH039367.D

		Compound	5	1	20	50	100	150	Avg	%RSD
1)	I	Pentafluorobenzene	----------			ISTD	----------			
2)	T	Dichlorodifluorom	0.542	0.382	0.396	0.561	0.602	0.583	0.511	18.90
3)	P	Chloromethane	1.141	1.049	0.909	1.054	1.139	1.037	1.055	8.06
4)	CM	Vinyl Chloride	0.939	0.903	0.801	0.862	0.972	0.861	0.890	6.92#
5)	T	Bromomethane	0.480	0.437	0.369	0.426	0.408	0.416	0.423	8.58
7)	T	Trichlorofluorome	0.611	0.514	0.622	0.671	0.688	0.679	0.631	10.36
8)	T	Tert butyl alcoho	0.103	0.090	0.118	0.119	0.117	0.110	0.109	10.47
9)	T	Diethyl Ether	0.431	0.388	0.458	0.472	0.467	0.439	0.442	7.00
10)	T	Diisopropyl ether	3.101	3.095	2.870	2.770	2.820	2.631	2.881	6.45
11)	CM	1,1-Dichloroethen	0.537	0.627	0.532	0.559	0.584	0.564	0.567	6.14#
12)	T	Methyl Iodide	1.035	1.090	0.940	1.056	1.070	1.072	1.044	5.15
13)	T	Acrolein	0.241	0.397	0.187	0.155	0.156	0.148	0.214	44.99
14)	T	1,1,2-Trichlorotr	0.590	0.529	0.504	0.526	0.540	0.521	0.535	5.49
15)	T	Acrylonitrile	0.399	0.369	0.394	0.384	0.386	0.367	0.383	3.44
16)	T	Allyl Chloride	2.128	3.974	1.595	1.518	1.452	1.304	1.995	50.58
17)	T	Acetone	0.502	0.443	0.404	0.362	0.368	0.317	0.399	16.47
18)	T	Carbon Disulfide	2.127	2.311	1.687	2.090	2.084	2.017	2.053	9.97
19)	T	Methyl Acetate	1.292	1.604	1.350	1.158	1.227	1.168	1.300	12.79
20)	T	Methyl tert-butyl	1.971	1.894	1.892	1.827	1.874	1.751	1.868	3.94
21)	T	Methylene Chlorid	0.672	0.666	0.633	0.650	0.663	0.643	0.654	2.28
22)	T	trans-1,2-Dichlor	0.594	0.549	0.497	0.561	0.562	0.557	0.554	5.71
23)	T	Acetonitrile							0.000	-1.00
24)	T	Vinyl Acetate	1.984	2.098	1.774	1.599	1.220	0.924	1.600	28.33
25)	P	1,1-Dichloroethan	1.328	1.344	1.248	1.207	1.245	1.178	1.258	5.21
26)	TM	2-Butanone	0.912	0.789	0.746	0.660	0.696	0.617	0.737	14.31
27)	T	2,2-Dichloropropa	0.639	0.713	0.564	0.528	0.550	0.522	0.586	12.80
28)	T	cis-1,2-Dichloroe	0.724	0.821	0.716	0.754	0.770	0.724	0.752	5.31
29)	T	Bromochloromethan	0.352	0.286	0.315	0.303	0.327	0.314	0.316	7.05
30)	CM	Chloroform	0.998	0.914	0.997	0.983	1.013	0.968	0.979	3.58#
31)	T	Ethyl Acetate	1.667	1.637	1.445	1.357	1.384	1.321	1.469	10.07
32)	T	Cyclohexane	1.169	1.340	0.995	1.077	1.107	1.038	1.121	10.92
33)	T	1,1,1-Trichloroet	0.751	0.682	0.690	0.698	0.683	0.671	0.696	4.06
34)	S	1,2-Dichloroethan	0.740	0.872	0.823	0.659	0.675	0.659	0.738	12.34
35)	I	1,4-Difluorobenzene	----------			ISTD	----------			
36)	S	Dibromofluorometh	0.380	0.331	0.411	0.354	0.369	0.350	0.366	7.55
37)	T	1,1-Dichloroprope	0.622	0.575	0.522	0.566	0.578	0.549	0.568	5.87
38)	TM	Carbon Tetrachlor	0.502	0.382	0.445	0.440	0.461	0.449	0.446	8.68
39)	TM	Benzene	1.834	1.785	1.515	1.603	1.617	1.488	1.640	8.58
40)	T	Methacrylonitrile	0.473	0.510	0.458	0.453	0.456	0.430	0.463	5.79
41)	TM	1,2-Dichloroethan	0.578	0.496	0.542	0.524	0.551	0.520	0.535	5.35
42)	T	Isobutyl Alcohol			0.043				0.043	0.00
43)	T	Isopropyl Acetate	1.281	1.295	1.287	1.205	1.299	1.187	1.259	3.93
44)	TM	Trichloroethene	0.420	0.271	0.360	0.385	0.391	0.376	0.367	13.88
45)	T	Methylcyclohexane	0.518	0.797	0.407	0.448	0.423	0.407	0.500	30.24
46)	C	1,2-Dichloropropa	0.494	0.460	0.427	0.439	0.462	0.441	0.454	5.24#
47)	T	Dibromomethane	0.262	0.169	0.245	0.255	0.256	0.248	0.239	14.62
48)	T	Bromodichlorometh	0.466	0.460	0.473	0.458	0.506	0.482	0.474	3.81
49)	S	Toluene-d8	1.120	1.283	1.225	1.097	1.118	1.062	1.151	7.36
50)	T	4-Methyl-2-Pentan	0.734	0.659	0.707	0.636	0.610	0.487	0.639	13.67
51)	CM	Toluene	0.794	0.665	0.756	0.809	0.873	0.822	0.786	8.99#
52)	T	t-1,3-Dichloropro	0.553	0.514	0.575	0.553	0.588	0.562	0.558	4.52

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$\overline{RRF}_{VC} = (.939 + .903 + .801 + .862 + .972 + .861)/6 = .8897$ OK

D~ 3/12/11

CHEMTECH
Instrument: H
Initial Calibration File ID: VH039362.D, VH039363.D, VH039364.D, VH039366.D, VH039367.D, VH039368.D

Parameter	CAS No.	Initial Calibration Pass 15% Criteria[1]	Regressions Acceptable[2]	Comment In Case Narrative[3]
1,1,1,2-Tetrachloroethane	630-20-6	Pass		
1,1,1-Trichloroethane	71-55-6	Pass		
1,1,2,2-Tetrachloroethane	79-34-5	Pass		
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	Pass		
1,1,2-Trichloroethane	79-00-5	Pass		
1,1-Dichloroethane	75-34-3	Pass		
1,1-Dichloroethene	75-35-4	Pass		
1,1-Dichloropropene	563-58-6	Pass		
1,2,3-Trichlorobenzene	87-61-6	Fail	LR, r^2=0.997	
1,2,3-Trichloropropane	96-18-4	Pass		
1,2,4,5-tetramethylbenzene	67-56-1	N/A	not reported	
1,2,4-Trichlorobenzene	120-82-1	Pass		
1,2,4-Trimethylbenzene	95-63-6	Pass		
1,2-Dibromo-3-chloropropane	96-12-8	Fail	LR, r^2=0.999	
1,2-Dibromoethane	106-93-4	Fail	LR, r^2=0.999	
1,2-Dichlorobenzene	95-50-1	Pass		
1,2-Dichloroethane	107-06-2	Pass		
1,2-Dichloropropane	78-87-5	Pass		
1,3,5-Trimethylbenzene	108-67-8	Pass		
1,3-Dichlorobenzene	541-73-1	Pass		
1,3-Dichloropropane	142-28-9	Pass		
1,4-Dioxane		Fail	QR, r^2=0.997	
1,4-Dichlorobenzene	106-46-7	Pass		
2,2-Dichloropropane	594-20-7	Pass		
2-Butanone	78-93-3	Pass		
2-Chloroethyl vinyl ether	110-75-8	Fail		fail for method
2-Chlorotoluene	95-49-8	Pass		
2-Hexanone	591-78-6	Pass		
4-Chlorotoluene	106-43-4	Pass		
4-Methyl-2-Pentanone	108-10-1	Pass		
Acetone	67-64-1	Fail	LR, r^2=0.991	
Acetonitrile	75-05-8	N/A	not reported	
Acrolein	107-02-8	Fail	LR, r^2=0.999	
Acrylonitrile	107-13-1	Pass		
Benzene	71-43-2	Pass		
Bromobenzene	108-86-1	Pass		
Bromochloromethane	74-97-5	Pass		
Bromodichloromethane	75-27-4	Pass		
Bromoform	75-25-2	Pass		
Bromomethane	74-83-9	Pass		
Carbon Disulfide	75-15-0	Pass		
Carbon Tetrachloride	56-23-5	Pass		
Chlorobenzene	108-90-7	Pass		
Chloroethane	75-00-3	Pass		
Chloroform	67-66-3	Pass		
Chloromethane	74-87-3	Pass		
cis-1,2-dichloroethene	156-59-2	Pass		
cis-1,3-dichloropropene	10061-01-5	Pass		
Cyclohexane	110-82-7	Pass		
Dibromochloromethane	124-48-1	Pass		
Dibromomethane	74-95-3	Pass		

CHEMTECH

Initial Calibration File ID: VH039362.D, VH039363.D, VH039364.D, VH039366.D, VH039367.D, VH039368.D

Parameter	CAS No.	Initial Calibration Pass 15% Criteria[1]	Regressions Acceptable[2]	Comment In Case Narrative[3]
Dichlorodifluoromethane	75-71-8	Fail	LR, r^2=0.998	
Diethyl Ether	60-29-7	Pass		
Diisopropyl ether	108-20-3	Pass		
Ethyl Acetate	141-78-6	Pass		
Ethyl Methacrylate	97-63-2	Pass		
Ethylbenzene	100-41-4	Pass		
Hexachlorobutadiene	87-68-3	Fail	LR, r^2=0.995	
Hexachloroethane	67-72-1	Pass		
Hexachloroethane	67-72-1	Pass		
Isobutyl Alcohol	78-83-1	N/A	not reported	
Isopropyl Acetate	108-21-4	Pass		
Isopropylbenzene	98-82-8	Pass		
m&p-Xylene	1330-20-7	Pass		
Methacrylonitrile	126-98-7	Pass		
Methyl Acetate	79-20-9	Pass		
Methyl Iodide	74-88-4	Pass		
Methyl Methacrylate	80-62-6	Pass		
Methyl Tert-butyl Ether	1634-04-4	Pass		
Methylcyclohexane	108-87-2	Fail	LR, r^2=0.999	
Methylene Chloride	75-09-2	Pass		
n-Amyl Acetate	628-63-7	Pass		
Naphthalene	91-20-3	Fail	LR, r^2=0.998	
n-Butylbenzene	104-51-8	Pass		
N-propylbenzene	103-65-1	Pass		
o-Xylene	95-47-6	Pass		
p-diethylbenzene	105-05-5	N/A	not reported	
p-ethyltoluene	622-96-8	N/A	not reported	
p-Isopropyltoluene	99-87-6	Pass		
Sec-butylbenzene	135-98-8	Pass		
Styrene	100-42-5	Pass		
t-1,3-Dichloropropene	10061-02-6	Pass		
Tert butyl alcohol	75-65-0	Pass		
tert-Butylbenzene	98-06-6	Pass		
Tetrachloroethene	127-18-4	Pass		
Toluene	108-88-3	Pass		
trans-1,2-Dichloroethene	156-60-5	Pass		
trans-1,4-Dichloro-2-Butene	110-57-6	Fail	LR, r^2=0.999	
Trichloroethene	79-01-6	Pass		
Trichlorofluoromethane	75-69-4	Pass		
Vinyl Acetate	108-05-4	Fail	QR, r^2=1.000	
Vinyl Chloride	75-01-4	Pass		
Allyl Chloride		Fail	LR, r^2=0.995	

1 Indicate a response for each compound using a Pass/Fail or Yes/No system

2 Only mark response in the affirmative for those compounds that qualify

3 At a minimum, this column must indicate a response for compound that did not pass the 15% and regression

CHEMTECH

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C1167 SAS No.: C1167 SDG NO.: C1167

Lab File ID: VH039361.D BFB Injection Date: 01/25/2011

Instrument ID: MSVOAH BFB Injection Time: 12:27

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.2
75	30.0 - 60.0% of mass 95	43.4
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	5.4
173	Less than 2.0% of mass 174	0.3 (0.4) 1
174	50.0 - 100.0% of mass 95	79.3
175	5.0 - 9.0% of mass 174	5.9 (7.4) 1
176	95.0 - 101.0% of mass 174	75.9 (95.8) 1
177	5.0 - 9.0% of mass 176	4.5 (6) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD001	1 PPB ICC	VH039362.D	01/25/2011	13:02
VSTD005	5 PPB ICC	VH039363.D	01/25/2011	13:33
VSTD020	20 PPB ICC	VH039364.D	01/25/2011	14:04
VSTD100	100 PPB ICC	VH039366.D	01/25/2011	15:06
VSTD150	150 PPB ICC	VH039367.D	01/25/2011	15:37
VSTD050	50 PPB ICC	VH039368.D	01/25/2011	16:49

C1167

All sequences checked for possible carryover; all OK

CHEMTECH

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C1167 SAS No.: C1167 SDG NO.: C1167

Lab File ID: VH039376.D BFB Injection Date: 01/26/2011

Instrument ID: MSVOAH BFB Injection Time: 11:28

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.7
75	30.0 - 60.0% of mass 95	49
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.4 (0.5) 1
174	50.0 - 100.0% of mass 95	78.1
175	5.0 - 9.0% of mass 174	6.6 (8.4) 1
176	95.0 - 101.0% of mass 174	76.7 (98.3) 1
177	5.0 - 9.0% of mass 176	4.9 (6.4) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD050	50 PPB CCC	VH039377.D	01/26/2011	12:48
VBH0126W1	VBH0126W1	VH039379.D	01/26/2011	13:56
BSH0126W1	BSH0126W1	VH039380.D	01/26/2011	14:30
828131A-DP2820X	C1167-01	VH039382.D	01/26/2011	15:32
828131A-DP2920X	C1167-05 OK	VH039383.D	01/26/2011	16:03
828131A-DP3007X	C1167-06	VH039384.D	01/26/2011	16:34
828131A-DP3020X	C1167-07	VH039385.D	01/26/2011	17:04
828131A-DP3120X	C1167-08	VH039386.D	01/26/2011	17:35
828131A-DP3215X	C1167-09	VH039387.D	01/26/2011	18:06
828131A-PS0402	C1167-10	VH039388.D	01/26/2011	18:37
828131A-PS0602	C1167-11	VH039389.D	01/26/2011	19:08
828131A-PS0702	C1167-12	VH039390.D	01/26/2011	19:39
828131A-TB1RM	C1167-13	VH039391.D	01/26/2011	20:09
828131A-DP2907X	C1167-02	VH039392.D	01/26/2011	20:40
828131A-DP2907XMS	C1167-03MS	VH039393.D	01/26/2011	21:11
828131A-DP2907XMSD	C1167-04MSD	VH039394.D	01/26/2011	21:42
828131A-DP2820XDL	C1167-01DL	VH039396.D	01/26/2011	22:43

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2820X	SDG No.:	C1167
Lab Sample ID:	C1167-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039382.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	22		0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	210	E See DL	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	2.6		0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/2/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2820X	SDG No.:	C1167
Lab Sample ID:	C1167-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039382.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1.1		0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.2		66 - 150		96%	SPK: 50
1868-53-7	Dibromofluoromethane	51.4		76 - 130		103%	SPK: 50
2037-26-5	Toluene-d8	48.1		78 - 121		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.4		70 - 131		99%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	1828830	4.09				
540-36-3	1,4-Difluorobenzene	2755010	4.61				
3114-55-4	Chlorobenzene-d5	2347270	7.96				
3855-82-1	1,4-Dichlorobenzene-d4	1135820	10.45				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/21/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2820XDL	SDG No.:	C1167
Lab Sample ID:	C1167-01DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

Use only for cis-1,2-DCE

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039396.D	5		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	5	U	1	2.5	5	ug/L
74-87-3	Chloromethane	5	U	1	2.5	5	ug/L
75-01-4	Vinyl Chloride	22	D	1.7	2.5	5	ug/L
74-83-9	Bromomethane	5	U	1	2.5	5	ug/L
75-00-3	Chloroethane	5	U	1	2.5	5	ug/L
75-69-4	Trichlorofluoromethane	5	U	1.8	2.5	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	2.2	2.5	5	ug/L
75-35-4	1,1-Dichloroethene	5	U	2.4	2.5	5	ug/L
67-64-1	Acetone	25	U	2.5	12.5	25	ug/L
75-15-0	Carbon Disulfide	5	U	1	2.5	5	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	1.8	2.5	5	ug/L
79-20-9	Methyl Acetate	5	U	1	2.5	5	ug/L
75-09-2	Methylene Chloride	5	U	2	2.5	5	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	2	2.5	5	ug/L
75-34-3	1,1-Dichloroethane	5	U	1.8	2.5	5	ug/L
110-82-7	Cyclohexane	5	U	1	2.5	5	ug/L
78-93-3	2-Butanone	25	U	6.6	12.5	25	ug/L
56-23-5	Carbon Tetrachloride	5	U	1	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	210	D	1.8	2.5	5	ug/L
67-66-3	Chloroform	5	U	1.7	2.5	5	ug/L
71-55-6	1,1,1-Trichloroethane	5	U	2	2.5	5	ug/L
108-87-2	Methylcyclohexane	5	U	1	2.5	5	ug/L
71-43-2	Benzene	5	U	1.6	2.5	5	ug/L
107-06-2	1,2-Dichloroethane	5	U	2.4	2.5	5	ug/L
79-01-6	Trichloroethene	2.6	JD	1.4	2.5	5	ug/L
78-87-5	1,2-Dichloropropane	5	U	2.3	2.5	5	ug/L
75-27-4	Bromodichloromethane	5	U	1.8	2.5	5	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	10	12.5	25	ug/L
108-88-3	Toluene	5	U	1.8	2.5	5	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	1.4	2.5	5	ug/L
10061-01-5	cis-1,3-Dichloropropene	5	U	1.6	2.5	5	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	1.9	2.5	5	ug/L
591-78-6	2-Hexanone	25	U	9.7	12.5	25	ug/L
124-48-1	Dibromochloromethane	5	U	1	2.5	5	ug/L
106-93-4	1,2-Dibromoethane	5	U	2	2.5	5	ug/L

2/21/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2820XDL	SDG No.:	C1167
Lab Sample ID:	C1167-01DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039396.D	5		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	5	U	1.4	2.5	5	ug/L
108-90-7	Chlorobenzene	5	U	2.4	2.5	5	ug/L
100-41-4	Ethyl Benzene	5	U	1	2.5	5	ug/L
179601-23-1	m/p-Xylenes	10	U	4.8	5	10	ug/L
95-47-6	o-Xylene	5	U	2.2	2.5	5	ug/L
100-42-5	Styrene	5	U	1.8	2.5	5	ug/L
75-25-2	Bromoform	5	U	2.4	2.5	5	ug/L
98-82-8	Isopropylbenzene	5	U	2.2	2.5	5	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	1.6	2.5	5	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	2.2	2.5	5	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	1.6	2.5	5	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	2.2	2.5	5	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	2.3	2.5	5	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	1	2.5	5	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.1		66 - 150		96%	SPK: 50
1868-53-7	Dibromofluoromethane	52.7		76 - 130		105%	SPK: 50
2037-26-5	Toluene-d8	48.2		78 - 121		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.2		70 - 131		98%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	1885140	4.11				
540-36-3	1,4-Difluorobenzene	2776370	4.62				
3114-55-4	Chlorobenzene-d5	2356900	7.98				
3855-82-1	1,4-Dichlorobenzene-d4	1240730	10.46				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/2/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2907X	SDG No.:	C1167
Lab Sample ID:	C1167-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039392.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	0.63	J	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U J	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U J	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U J	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U J	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U J	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U J	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

dr 2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2907X	SDG No.:	C1167
Lab Sample ID:	C1167-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039392.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U J	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	54.7		66 - 150		109%	SPK: 50
1868-53-7	Dibromofluoromethane	53		76 - 130		106%	SPK: 50
2037-26-5	Toluene-d8	49.9		78 - 121		100%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.3		70 - 131		103%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	1561660	4.11				
540-36-3	1,4-Difluorobenzene	2553060	4.62				
3114-55-4	Chlorobenzene-d5	2144850	7.98				
3855-82-1	1,4-Dichlorobenzene-d4	1054650	10.46				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2920X	SDG No.:	C1167
Lab Sample ID:	C1167-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039383.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/19/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP2920X	SDG No.:	C1167
Lab Sample ID:	C1167-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039383.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	47		66 - 150		94%	SPK: 50
1868-53-7	Dibromofluoromethane	51.2		76 - 130		102%	SPK: 50
2037-26-5	Toluene-d8	48.4		78 - 121		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.1		70 - 131		102%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	1794760	4.1				
540-36-3	1,4-Difluorobenzene	2604460	4.61				
3114-55-4	Chlorobenzene-d5	2152430	7.96				
3855-82-1	1,4-Dichlorobenzene-d4	1055410	10.44				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/20/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP3007X	SDG No.:	C1167
Lab Sample ID:	C1167-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039384.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1.1		0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	2.6		0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/20/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP3007X	SDG No.:	C1167
Lab Sample ID:	C1167-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039384.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	46.7		66 - 150		93%	SPK: 50
1868-53-7	Dibromofluoromethane	52.7		76 - 130		105%	SPK: 50
2037-26-5	Toluene-d8	50.1		78 - 121		100%	SPK: 50
460-00-4	4-Bromofluorobenzene	53		70 - 131		106%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	1429910	4.09				
540-36-3	1,4-Difluorobenzene	2141310	4.62				
3114-55-4	Chlorobenzene-d5	1866400	7.96				
3855-82-1	1,4-Dichlorobenzene-d4	993050	10.45				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/20/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP3020X	SDG No.:	C1167
Lab Sample ID:	C1167-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039385.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	1.1		0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	3.5		0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/20/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP3020X	SDG No.:	C1167
Lab Sample ID:	C1167-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039385.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	42.7		66 - 150		85%	SPK: 50
1868-53-7	Dibromofluoromethane	47.4		76 - 130		95%	SPK: 50
2037-26-5	Toluene-d8	48.6		78 - 121		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.5		70 - 131		93%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	1690630	4.11				
540-36-3	1,4-Difluorobenzene	2482860	4.62				
3114-55-4	Chlorobenzene-d5	2112930	7.97				
3855-82-1	1,4-Dichlorobenzene-d4	1041760	10.45				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/24/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/20/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP3120X	SDG No.:	C1167
Lab Sample ID:	C1167-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039386.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	7.8		0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.96	J	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/20/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP3120X	SDG No.:	C1167
Lab Sample ID:	C1167-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039386.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	51.7		66 - 150		103%	SPK: 50
1868-53-7	Dibromofluoromethane	52.5		76 - 130		105%	SPK: 50
2037-26-5	Toluene-d8	50.6		78 - 121		101%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.5		70 - 131		107%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	1342830	4.1				
540-36-3	1,4-Difluorobenzene	2070360	4.61				
3114-55-4	Chlorobenzene-d5	1879940	7.96				
3855-82-1	1,4-Dichlorobenzene-d4	996429	10.45				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/20/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP3215X	SDG No.:	C1167
Lab Sample ID:	C1167-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039387.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/20/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-DP3215X	SDG No.:	C1167
Lab Sample ID:	C1167-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039387.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	50.6		66 - 150		101%	SPK: 50
1868-53-7	Dibromofluoromethane	57		76 - 130		114%	SPK: 50
2037-26-5	Toluene-d8	50.6		78 - 121		101%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.8		70 - 131		100%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	1696860	4.1				
540-36-3	1,4-Difluorobenzene	2526060	4.62				
3114-55-4	Chlorobenzene-d5	2173810	7.97				
3855-82-1	1,4-Dichlorobenzene-d4	1073650	10.45				
TENTITIVE IDENTIFIED COMPOUNDS							
	unknown9.46	50	J			9.46	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

1/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/17/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-PS0402	SDG No.:	C1167
Lab Sample ID:	C1167-10	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039388.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/2/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/17/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-PS0402	SDG No.:	C1167
Lab Sample ID:	C1167-10	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039388.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	46		66 - 150		92%	SPK: 50
1868-53-7	Dibromofluoromethane	51.8		76 - 130		104%	SPK: 50
2037-26-5	Toluene-d8	48.6		78 - 121		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.1		70 - 131		102%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	1508850	4.1				
540-36-3	1,4-Difluorobenzene	2313000	4.62				
3114-55-4	Chlorobenzene-d5	1885410	7.97				
3855-82-1	1,4-Dichlorobenzene-d4	1028760	10.45				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/17/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-PS0602	SDG No.:	C1167
Lab Sample ID:	C1167-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039389.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	0.58	J	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/17/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-PS0602	SDG No.:	C1167
Lab Sample ID:	C1167-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039389.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	50		66 - 150		100%	SPK: 50
1868-53-7	Dibromofluoromethane	52.5		76 - 130		105%	SPK: 50
2037-26-5	Toluene-d8	49.5		78 - 121		99%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.6		70 - 131		103%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	1751800	4.1				
540-36-3	1,4-Difluorobenzene	2768300	4.62				
3114-55-4	Chlorobenzene-d5	2338290	7.97				
3855-82-1	1,4-Dichlorobenzene-d4	1169920	10.45				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/21/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-PS0702	SDG No.:	C1167
Lab Sample ID:	C1167-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039390.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/21/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-PS0702	SDG No.:	C1167
Lab Sample ID:	C1167-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039390.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49.7		66 - 150		99%	SPK: 50
1868-53-7	Dibromofluoromethane	50.5		76 - 130		101%	SPK: 50
2037-26-5	Toluene-d8	49.9		78 - 121		100%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.7		70 - 131		101%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	1828740	4.1				
540-36-3	1,4-Difluorobenzene	2774290	4.62				
3114-55-4	Chlorobenzene-d5	2246430	7.97				
3855-82-1	1,4-Dichlorobenzene-d4	1194230	10.46				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/17/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-TB1RM	SDG No.:	C1167
Lab Sample ID:	C1167-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

TB

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039391.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	1	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	1	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	1	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	0.5	1	ug/L
67-64-1	Acetone	5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	0.5	1	ug/L
67-66-3	Chloroform	1	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	0.5	1	ug/L
71-43-2	Benzene	1	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	1	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	1	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	0.5	1	ug/L

2/21/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	01/17/11
Project:	Carriage Cleantown	Date Received:	01/22/11
Client Sample ID:	828131A-TB1RM	SDG No.:	C1167
Lab Sample ID:	C1167-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH039391.D	1		01/26/11	VH012611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
127-18-4	Tetrachloroethene	1	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	1	2	ug/L
95-47-6	o-Xylene	1	U	0.43	0.5	1	ug/L
100-42-5	Styrene	1	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	1	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	47		66 - 150		94%	SPK: 50
1868-53-7	Dibromofluoromethane	51.9		76 - 130		104%	SPK: 50
2037-26-5	Toluene-d8	50.1		78 - 121		100%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.4		70 - 131		101%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	1463210	4.11				
540-36-3	1,4-Difluorobenzene	2188130	4.62				
3114-55-4	Chlorobenzene-d5	1791330	7.97				
3855-82-1	1,4-Dichlorobenzene-d4	952135	10.46				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

2/21/11

Checked for completeness of parameters requested.

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grievew 2/21/11

ANALYTICAL RESULTS SUMMARY

PROJECT NAME : CARRIAGE CLEANTOWN

MACTEC INC.
1105 Lakewood Parkway
Suite 300
Alpharetta , GA - 30009
Phone No: 7703600600

ORDER ID : **C1167**

ATTENTION : **Tige Cunningham**

Tige Cunningham

Digitally signed by Tige Cunningham
DN: CN = Tige Cunningham, C = US, O = MACTEC
Location: Scanned by Tige
Date: 2011.03.31 07:58:39 -04'00'

DATA USABILITY SUMMARY REPORT
APRIL 2011 SUMP WATER SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

1.0 INTRODUCTION

Sump water samples were collected at the Off-Site Carriage Cleaners Site (Site) in Penfield, New York, in April 2011 and submitted for volatile organic compound (VOC) analysis by USEPA Method 8260B. Samples were analyzed by Chemtech, located in Mountainside, New Jersey. Results were reported in Sample Delivery Group (SDG) C2041.

A listing of samples included in this Data Usability Summary Report is presented in Table 1. A summary of the analytical results is presented in Table 2. A summary of sample results qualified during this review is presented in Table 3 (Summary of Validation Actions).

Deliverables for the off-site laboratory analyses included a Category B deliverable as defined in the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocols (NYSDEC, 2005).

A project chemist review was completed based on NYSDEC Division of Environmental Remediation guidance for Data Usability Summary Reports (NYSDEC, 2010). USEPA Region 2 quality control (QC) limits were used during the data evaluation unless noted otherwise. The project chemist review included evaluations of sample collection, data package completeness, holding times, QC data (blanks, instrument calibrations, duplicates, surrogate recovery, and spike recovery), data transcription, electronic data reporting, calculations, and data qualification. The following laboratory or data validation qualifiers are used in the final data presentation.

U = target analyte is not detected at the reported detection limit
J = concentration is estimated
UJ = target analyte is not detected at the reported detection limit and is estimated
E = analyte concentration exceeds the calibrated range of the instrument
D = analyte concentration is the result of a diluted sample analysis

Results are interpreted to be usable as reported by the laboratory unless discussed in the following sections.

2.0 VOCS – METHOD 8260B

Initially, a single sump sample was collected for analysis. During validation, it was determined that sample vials were filled from separated sources draining into the collection sump. One vial was filled from each of the drains. Field sample identification was adjusted to account for different sample collection locations.

Initial Calibration

SDG C2041

In the initial calibration, the relative percent standard deviation for 1,2-dibromo-3-chloropropane (29) exceeded the QC limit of 20. The result for 1,2-dibromo-3-chloropropane was not detected in the associated samples and the reporting limits were qualified estimated (UJ).

Continuing Calibration

In the continuing calibration associated with a subset of samples, the percent difference for bromomethane (-24), chloroethane (-24), acetone (-32), and methyl acetate (-21) exceeded the QC limit of 20. The associated sample result for bromomethane, chloroethane, acetone, and methyl acetate was not detected and the reporting limits were qualified estimated (UJ).

In the continuing calibration associated with a subset of samples, the percent difference for dichlorodifluoromethane (-23) and 1,2-dibromo-3-chloropropane (24) exceeded the QC limit of 20. The associated sample result for dichlorodifluoromethane and 1,2-dibromo-3-chloropropane was not detected and the reporting limits were qualified estimated (UJ).

Laboratory Control Samples (LCS)

For a subset of samples, the LCS percent recovery of dichlorodifluoromethane (60) was below the minimum QC limit of 70. Dichlorodifluoromethane was not detected in the associated sample and the sample result was qualified estimated at the reporting limit (UJ).

Reference:

New York State Department of Environmental Conservation (NYSDEC), 2005. "Analytical Services Protocols"; July 2005.

New York State Department of Environmental Conservation (NYSDEC), 2010. "Technical Guidance for Site Investigation and Remediation-Appendix 2B"; DER-10; Division of Environmental Remediation; May 2010.

USEPA Region 2, 2006. "Validating Volatile Organic Analysis of Ambient Air in Canister by Method TO-15"; SOP # HW-31, Revision 4, Hazardous Waste Support Branch; October 2006.

Data Validator: Michael Washburn

Date: 6/30/11

Reviewed by Chris Ricardi, NRCC-EAC
Quality Assurance Officer

Date: 6/30/11

TABLE 1
SUMMARY OF SAMPLES
DATA USABILITY SUMMARY REPORT
APRIL 2011 SUMP SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

						Class	VOC
						Analysis Method	SW8260B
						Fraction	T
SDG	**Media**	**Location**	**Lab ID**	**Sample ID**	**Sample Date**	**QC Code**	
C2041	NA-L	SW-15A	Chemtech	828131A-SW1501A	4/27/2011	FS	49
C2041	NA-L	SW-15B	Chemtech	828131A-SW1501B	4/27/2011	FS	49
C2041	BW	QC	Chemtech	TRIPBLANK	4/26/2011	FS	49

Notes:
QC CODE
FS = field sample
Media
NA-L = Not Available
BW = Blank Water

Prepared by / Date: KJC 05/26/11
Checked by / Date: MJW 06/29/11

TABLE 2
DATA USABILITY SUMMARY REPORT
APRIL 2011 SUMP SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

	Location	SW-15A		SW-15B	
	Sample Date	4/27/2011		4/27/2011	
	Sample ID	828131A-SW1501A		828131A-SW1501B	
	Qc Code	FS		FS	
Parameter	Units	Result	Qualifier	Result	Qualifier
1,1,1-Trichloroethane	µg/L	1	U	5	U
1,1,2,2-Tetrachloroethane	µg/L	1	U	5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	µg/L	1	U	5	U
1,1,2-Trichloroethane	µg/L	1	U	5	U
1,1-Dichloroethane	µg/L	1	U	5	U
1,1-Dichloroethene	µg/L	1	U	5	U
1,2,4-Trichlorobenzene	µg/L	1	U	5	U
1,2-Dibromo-3-chloropropane	µg/L	1	UJ	5	UJ
1,2-Dibromoethane	µg/L	1	U	5	U
1,2-Dichlorobenzene	µg/L	1	U	5	U
1,2-Dichloroethane	µg/L	1	U	5	U
1,2-Dichloropropane	µg/L	1	U	5	U
1,3-Dichlorobenzene	µg/L	1	U	5	U
1,4-Dichlorobenzene	µg/L	1	U	5	U
2-Butanone	µg/L	5	U	25	U
2-Hexanone	µg/L	5	U	25	U
4-Methyl-2-pentanone	µg/L	5	U	25	U
Acetic acid, methyl ester	µg/L	1	UJ	5	U
Acetone	µg/L	5	UJ	25	U
Benzene	µg/L	1	U	5	U
Bromodichloromethane	µg/L	1	U	5	U
Bromoform	µg/L	1	U	5	U
Bromomethane	µg/L	1	UJ	5	U
Carbon disulfide	µg/L	1	U	5	U
Carbon tetrachloride	µg/L	1	U	5	U
Chlorobenzene	µg/L	1	U	5	U
Chlorodibromomethane	µg/L	1	U	5	U
Chloroethane	µg/L	1	UJ	5	U
Chloroform	µg/L	1	U	5	U
Chloromethane	µg/L	1	U	5	U
Cis-1,2-Dichloroethene	µg/L	170	EJ	17	D
cis-1,3-Dichloropropene	µg/L	1	U	5	U
Cyclohexane	µg/L	1	U	5	U
Dichlorodifluoromethane	µg/L	1	U	5	UJ
Ethyl benzene	µg/L	1	U	5	U
Isopropylbenzene	µg/L	1	U	5	U
Methyl cyclohexane	µg/L	1	U	5	U
Methyl Tertbutyl Ether	µg/L	1	U	5	U
Methylene chloride	µg/L	1	U	5	U
Styrene	µg/L	1	U	5	U
Tetrachloroethene	µg/L	5.6		5	U
Toluene	µg/L	1	U	5	U
trans-1,2-Dichloroethene	µg/L	4.6		5	U
trans-1,3-Dichloropropene	µg/L	1	U	5	U
Trichloroethene	µg/L	37		5	U
Trichlorofluoromethane	µg/L	1	U	5	U
Vinyl chloride	µg/L	41		17	D
Xylene, o	µg/L	1	U	5	U
Xylenes (m&p)	µg/L	2	U	10	U

Notes:
Qualifier: U = not detected, J = estimated result
D = result from a dilution analysis, E = analyte concentration exceeds the calibrated range of the instrument
QC Code: FS = Field Sample
ug/L = microgram per liter

TABLE 3
SUMMARY OF DATA VALIDATION ACTIONS
DATA USABILITY SUMMARY REPORT
APRIL 2011 SUMP WATER SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

SDG	Lab Sample Id	Analysis Method	Field Sample ID	Analyte Name	Lab Resul	Lab Qual	Validated Result	Validation Qualifier	Val Reason Code	Result Units	Lab Id
C2041	C2041-01	SW8260B	828131A-SW1501A	1,2-Dibromo-3-chloropropane	1	U	1	UJ	ICVRSD	µg/L	Chemtech
C2041	C2041-01	SW8260B	828131A-SW1501A	Acetic acid, methyl ester	1	U	1	UJ	CCV%D	µg/L	Chemtech
C2041	C2041-01	SW8260B	828131A-SW1501A	Acetone	5	U	5	UJ	CCV%D	µg/L	Chemtech
C2041	C2041-01	SW8260B	828131A-SW1501A	Bromomethane	1	U	1	UJ	CCV%D	µg/L	Chemtech
C2041	C2041-01	SW8260B	828131A-SW1501A	Chloroethane	1	U	1	UJ	CCV%D	µg/L	Chemtech
C2041	C2041-01	SW8260B	828131A-SW1501A	Cis-1,2-Dichloroethene	170	E	170	EJ	E	µg/L	Chemtech
C2041	C2041-01DL	SW8260B	828131A-SW1501B	1,2-Dibromo-3-chloropropane	5	U	5	UJ	ICVRSD, CCV%D, LCS-L	µg/L	Chemtech
C2041	C2041-01DL	SW8260B	828131A-SW1501B	Dichlorodifluoromethane	5	U	5	UJ	CCV%D, LCS-L	µg/L	Chemtech

Notes:

Validation Qualifiers:

U = not detected, value is the detection limit

J = value is estimated

E = exceeds the calibrated range of the instrument

Validation Reason Codes:

LCS-L = LCS recovery low

E = result exceeds calibration range

CCV%D = Continuing calibration percent difference exceeds the goal

ICVRSD = Initial calibration relative percent standard deviatoim exceeds the limit

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	04/27/11
Project:	Carriage Cleantown	Date Received:	04/29/11
Client Sample ID:	828131A-SW1501A	SDG No.:	C2041
Lab Sample ID:	C2041-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034685.D	1		05/06/11	VG050611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	41		0.34	1	ug/L
74-83-9	Bromomethane	1	UJ	0.2	1	ug/L
75-00-3	Chloroethane	1	UJ	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	UJ	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	UJ	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	4.6		0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	170	EJ	0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	37		0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

MJW 6/24/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	04/27/11
Project:	Carriage Cleantown	Date Received:	04/29/11
Client Sample ID:	828131A-SW1501A	SDG No.:	C2041
Lab Sample ID:	C2041-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034685.D	1		05/06/11	VG050611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	5.6		0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	UJ	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55		66 - 150	110%	SPK: 50
1868-53-7	Dibromofluoromethane	51.8		76 - 130	104%	SPK: 50
2037-26-5	Toluene-d8	45.3		78 - 121	91%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.1		70 - 131	104%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	467503	3.89			
540-36-3	1,4-Difluorobenzene	857548	4.68			
3114-55-4	Chlorobenzene-d5	707823	9.65			
3855-82-1	1,4-Dichlorobenzene-d4	253960	13.36			

MJW 6/24/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	04/27/11
Project:	Carriage Cleantown	Date Received:	04/29/11
Client Sample ID:	828131A-SW150 DL B	SDG No.:	C2041
Lab Sample ID:	C2041-01DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034737.D	5		05/10/11	vg051011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	UJ	1	5	ug/L
74-87-3	Chloromethane	5	U	1	5	ug/L
75-01-4	Vinyl Chloride	17	D	1.7	5	ug/L
74-83-9	Bromomethane	5	U	1	5	ug/L
75-00-3	Chloroethane	5	U	1	5	ug/L
75-69-4	Trichlorofluoromethane	5	U	1.8	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	2.2	5	ug/L
75-35-4	1,1-Dichloroethene	5	U	2.4	5	ug/L
67-64-1	Acetone	25	U	2.5	25	ug/L
75-15-0	Carbon Disulfide	5	U	1	5	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	1.8	5	ug/L
79-20-9	Methyl Acetate	5	U	1	5	ug/L
75-09-2	Methylene Chloride	5	U	2	5	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	2	5	ug/L
75-34-3	1,1-Dichloroethane	5	U	1.8	5	ug/L
110-82-7	Cyclohexane	5	U	1	5	ug/L
78-93-3	2-Butanone	25	U	6.6	25	ug/L
56-23-5	Carbon Tetrachloride	5	U	1	5	ug/L
156-59-2	cis-1,2-Dichloroethene	17	D SIET	1.8	5	ug/L
67-66-3	Chloroform	5	U	1.7	5	ug/L
71-55-6	1,1,1-Trichloroethane	5	U	2	5	ug/L
108-87-2	Methylcyclohexane	5	U	1	5	ug/L
71-43-2	Benzene	5	U	1.6	5	ug/L
107-06-2	1,2-Dichloroethane	5	U	2.4	5	ug/L
79-01-6	Trichloroethene	5	U	1.4	5	ug/L
78-87-5	1,2-Dichloropropane	5	U	2.3	5	ug/L
75-27-4	Bromodichloromethane	5	U	1.8	5	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	10	25	ug/L
108-88-3	Toluene	5	U	1.8	5	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	1.4	5	ug/L
10061-01-5	cis-1,3-Dichloropropene	5	U	1.6	5	ug/L

MJW
6/24/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	04/27/11
Project:	Carriage Cleantown	Date Received:	04/29/11
Client Sample ID:	828131A-SW1501DL B	SDG No.:	C2041
Lab Sample ID:	C2041-01DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034737.D	5		05/10/11	vg051011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	5	U	1.9	5	ug/L
591-78-6	2-Hexanone	25	U	9.7	25	ug/L
124-48-1	Dibromochloromethane	5	U	1	5	ug/L
106-93-4	1,2-Dibromoethane	5	U	2	5	ug/L
127-18-4	Tetrachloroethene	5	U	1.4	5	ug/L
108-90-7	Chlorobenzene	5	U	2.4	5	ug/L
100-41-4	Ethyl Benzene	5	U	1	5	ug/L
179601-23-1	m/p-Xylenes	10	U	4.8	10	ug/L
95-47-6	o-Xylene	5	U	2.2	5	ug/L
100-42-5	Styrene	5	U	1.8	5	ug/L
75-25-2	Bromoform	5	U	2.4	5	ug/L
98-82-8	Isopropylbenzene	5	U	2.2	5	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	1.6	5	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	2.2	5	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	1.6	5	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	2.2	5	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	UJ	2.3	5	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	1	5	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	51.1		66 - 150	102%	SPK: 50
1868-53-7	Dibromofluoromethane	46.6		76 - 130	93%	SPK: 50
2037-26-5	Toluene-d8	44.2		78 - 121	88%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.3		70 - 131	93%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	540849	3.87			
540-36-3	1,4-Difluorobenzene	1013910	4.68			
3114-55-4	Chlorobenzene-d5	816719	9.64			
3855-82-1	1,4-Dichlorobenzene-d4	299422	13.35			

MSW 6/24/11

VOCs

NYSDEC DUSR PROJECT CHEMIST REVIEW RECORD
Project:
Method : SW-846 8260B
Laboratory and SDG(s): Chemtech **SDG#** C2041
Date: June 24, 2011
Reviewer: Mike Washburn
Review Level ☒ NYSDEC DUSR ☐ USEPA Region II Guideline

1. ☐ **Case Narrative Review and COC/Data Package Completeness** COMMENTS
   Were problems noted? Yes, see comments in sections below.
   Where all the samples on the COC analyzed for the requested analyses? (YES) NO (circle one)

2. ☐ **Holding time and Sample Collection**
   All samples were analyzed within the 14 day holding time. (YES) NO (circle one)

3. ☐ **QC Blanks**
   Are method blanks free of contamination? (YES) NO (circle one)
   Are Trip blanks free of contamination? (YES) NO (circle one)
   Are Rinse blanks free of contamination? YES NO (NA) (circle one)

4. ☐ **Instrument Tuning**
   Were all results were within method criteria. (YES) NO (circle one)

5. ☐ **Instrument Calibration** Were all results within criteria? YES (NO) (circle one)
   Initial Calibration %RSD = 20% **(30% for 1,1-DCE, chloroform, 1,2-DCP, toluene, ethylbenzene, VC)**
   Initial Avg RRF and Continuing RRF should be ≥ 0.05 and 0.10 for Chloromethane, 1,1-Dichloroethane, Bromoform and 0.30 for Chlorobenzene and 1,1,2,2-Tetrachloroethane
   Continuing Calibration %D = 20%
   IC - %RSD for 1,2-dibromo-3-chloropropane at 29, not detected qualified UJ.
   CC (5/6/11) - %D for bromomethane (-24), chloroethane (-24), acetone (-32) and methyl acetate (-21) above limit of 20. Not detected qualified UJ.
   CC (5/10/11) - %D for dichlordifluoromethane (-23) and 1,2-dibromo-3-chloropropane (24) above limit of 20. Not detected qualified UJ.

6. ☐ **Internal Standards** (Area Limits = -50% to +100%, RT's within 30 seconds of mid point cal Std)
   Were all results within criteria? (YES) NO (circle one)

7. ☐ **Surrogate Recovery** - Region II limits (water 80-120%, soil 70-130%)

   Were all results were within Region II limits? (YES) NO (circle one)

8. ☐ **Matrix Spike** - Region II limits (water and soil 70-130%, water RPD 20, soil RPD 35)

   Were MS/MSDs submitted/analyzed? YES (NO)

   Were all results were within the Region II limits? YES NO (NA) (circle one)

9. ☐ **Duplicates/replicates** - Region II Limits (water RPD 50, soil RPD 100)

   Were Field Duplicates submitted/analyzed? YES (NO)

   Were all results were within Region II Limits? YES NO (NA) (circle one)

10. ☐ **Laboratory Control Sample Results** - Region II (Water and soil 70-130%)

    Were all results were within Region II control limits? YES (NO) (circle one)
    5/6/11-Acetone (150) above upper control limit of 130. No action required, acetone not detected.
    5/10/11-Acetone (150) above upper control limit of 130. No action required, acetone not detected.
    Dichlorodifluoromethane (60) below lower control limit of 70. Dichlorodifluoromethane not detected, qualified estimate at reporting limit (UJ).

11. ☐ **Raw Data Review and Calculation Checks**

Completed.

12. □ **Electronic Data Review and Edits**
Does the EDD match the Form I's? (YES) NO (circle one)

13. □ **TIC Review** and DUSR **Table 1** (sample Listing), **Table 2** (results summary), **Table 3** (Reason Codes), **Table 4** (TIC's). Did lab report TICs? YES (NO) (circle one)

Response Factor Report MSVOAG

Method Path : W:\HPCHEM1\MSVOA_G\METHOD\
Method File : 82G042211W.M
Title : SW846 8260
Last Update : Mon Apr 25 04:45:10 2011
Response Via : Initial Calibration

Calibration Files
1 =VG034387.D 5 =VG034388.D 10 =VG034389.D
20 =VG034390.D 50 =VG034391.D 100 =VG034392.D

		Compound	1	5	10	20	50	100	Avg	%RSD
1)	I	Pentafluorobenzene	ISTD							
2)	T	Dichlorodifluorom	0.470	0.459	0.453	0.461	0.488	0.514	0.474	4.84
3)	P	Chloromethane	1.032	0.925	0.902	0.884	0.837	0.822	0.900	8.38
4)	C	Vinyl Chloride	0.900	0.894	0.956	0.923	0.826	0.807	0.884	6.50#
5)	T	Bromomethane	0.599	0.551	0.655	0.609	0.552	0.488	0.576	10.06
6)	T	Chloroethane	0.455	0.503	0.549	0.492	0.447	0.355	0.467	14.15
7)	T	Trichlorofluorome	0.689	0.703	0.696	0.700	0.683	0.670	0.690	1.79
8)	T	Diethyl Ether	0.737	0.546	0.594	0.590	0.530	0.518	0.586	13.71
9)	T	1,1,2-Trichlorotr	0.789	0.682	0.657	0.644	0.603	0.584	0.660	11.00
10)	T	Methyl Iodide	1.559	1.531	1.587	1.538	1.374	1.369	1.493	6.44
11)	T	Tert butyl alcoho	0.076	0.070	0.074	0.067	0.062	0.060	0.068	9.45
12)	CM	1,1-Dichloroethen	0.917	0.779	0.809	0.732	0.730	0.691	0.776	10.37#
13)	T	Acrolein	0.151	0.156	0.115	0.113	0.088	0.086	0.118	25.41
14)	T	Allyl chloride	0.865	1.163	1.044	0.932	0.912	0.790	0.951	14.02
15)	T	Acrylonitrile	0.321	0.300	0.285	0.276	0.263	0.257	0.284	8.47
16)	T	Acetone	0.207	0.195	0.178	0.161	0.143	0.137	0.170	16.56
17)	T	Carbon Disulfide	2.609	2.545	2.474	2.352	2.136	1.979	2.349	10.50
18)	T	Methyl Acetate	0.776	0.866	0.792	0.733	0.715	0.689	0.762	8.36
19)	T	Methyl tert-butyl	2.435	2.101	2.182	2.079	1.872	1.909	2.097	9.72
20)	T	Methylene Chlorid	1.306	1.064	0.970	0.901	0.826	0.776	0.974	19.74
21)	T	trans-1,2-Dichlor	0.820	0.841	0.888	0.811	0.783	0.746	0.815	5.96
22)	T	Acetonitrile							0.000	-1.00
23)	T	Diisopropyl ether	2.630	2.406	2.293	2.209	2.034	1.873	2.241	11.99
24)	T	Vinyl Acetate	1.171	1.181	1.127	1.081	0.971	0.857	1.065	11.95
25)	P	1,1-Dichloroethan	1.538	1.470	1.488	1.444	1.332	1.241	1.419	7.82
26)	T	2-Butanone	0.522	0.473	0.468	0.447	0.389	0.388	0.448	11.69
27)	T	2,2-Dichloropropa	0.473	0.636	0.686	0.655	0.510	0.548	0.585	14.80
28)	T	cis-1,2-Dichloroe	1.255	1.143	1.142	1.098	1.052	1.015	1.117	7.53
29)	T	Bromochloromethan	0.687	0.673	0.681	0.635	0.572	0.557	0.634	9.00
30)	C	Chloroform	1.339	1.211	1.167	1.177	1.095	1.064	1.176	8.25#
31)	T	Cyclohexane	1.247	1.028	1.046	1.015	0.910	0.887	1.022	12.53
32)	T	1,1,1-Trichloroet	0.662	0.738	0.690	0.666	0.606	0.585	0.658	8.50
33)	S	1,2-Dichloroethan	0.673	0.568	0.563	0.574	0.488	0.482	0.558	12.47
34)	I	1,4-Difluorobenzene	ISTD							
35)	S	Dibromofluorometh	0.474	0.395	0.409	0.399	0.345	0.342	0.394	12.27
36)	T	1,1-Dichloroprope	0.662	0.593	0.596	0.575	0.522	0.519	0.578	9.27
37)	T	Ethyl Acetate	0.602	0.562	0.552	0.529	0.464	0.458	0.528	10.78
38)	T	Carbon Tetrachlor	0.554	0.439	0.445	0.425	0.390	0.386	0.440	13.90
39)	T	Methylcyclohexane	0.585	0.600	0.586	0.533	0.527	0.500	0.555	7.30
40)	TM	Benzene	1.703	1.729	1.712	1.595	1.519	1.483	1.624	6.57
41)	T	Methacrylonitrile	0.280	0.298	0.288	0.262	0.240	0.234	0.267	9.83
42)	TM	1,2-Dichloroethan	0.422	0.368	0.390	0.360	0.352	0.346	0.373	7.63
43)	T	Isopropyl Acetate	0.886	0.748	0.774	0.742	0.706	0.682	0.756	9.44
44)	T	Isobutyl alcohol							0.000	-1.00
45)	TM	Trichloroethene	0.366	0.422	0.429	0.410	0.400	0.383	0.402	5.96
46)	C	1,2-Dichloropropa	0.483	0.449	0.464	0.447	0.432	0.417	0.449	5.17#
47)	T	Dibromomethane	0.328	0.289	0.296	0.270	0.278	0.266	0.288	7.87
48)	T	Bromodichlorometh	0.555	0.519	0.506	0.520	0.476	0.456	0.506	6.95
49)	T	Methyl methacryla	0.333	0.352	0.372	0.330	0.309	0.308	0.334	7.44
50)	T	1,4-Dioxane	0.004	0.004	0.004	0.004	0.004	0.004	0.004	5.70
51)	S	Toluene-d8	1.358	1.137	1.211	1.196	1.040	0.976	1.153	11.73
52)	T	4-Methyl-2-Pentan	0.426	0.383	0.399	0.382	0.349	0.339	0.380	8.44

MJW 6/27/11

Method Path : W:\HPCHEM1\MSVOA_G\METHOD\
Method File : 82G042211W.M
Title : SW846 8260
Last Update : Mon Apr 25 04:45:10 2011
Response Via : Initial Calibration

Calibration Files
1 =VG034387.D 5 =VG034388.D 10 =VG034389.D
20 =VG034390.D 50 =VG034391.D 100 =VG034392.D

		Compound	1	5	10	20	50	100	Avg	%RSD
53)	CM	Toluene	0.931	0.900	0.872	0.883	0.814	0.799	0.867	5.85#
54)	T	t-1,3-Dichloropro	0.583	0.544	0.555	0.532	0.534	0.533	0.547	3.65
55)	T	cis-1,3-Dichlorop	0.717	0.650	0.689	0.672	0.663	0.627	0.670	4.66
56)	T	1,1,2-Trichloroet	0.341	0.364	0.356	0.333	0.306	0.310	0.335	7.00
57)	T	Ethyl methacrylat	0.539	0.541	0.575	0.550	0.520	0.504	0.538	4.53
58)	T	1,3-Dichloropropa	0.656	0.691	0.676	0.631	0.604	0.593	0.642	6.09
59)	T	2-Chloroethyl Vin	0.252	0.225	0.188	0.181	0.159	0.154	0.193	19.97
60)	T	2-Hexanone	0.249	0.229	0.277	0.266	0.219	0.228	0.245	9.40
61)	T	Dibromochlorometh	0.333	0.363	0.390	0.363	0.354	0.351	0.359	5.24
62)	T	1,2-Dibromoethane	0.355	0.361	0.373	0.350	0.342	0.332	0.352	4.15
63)	S	4-Bromofluorobenz	0.525	0.377	0.396	0.387	0.333	0.324	0.390	18.52
64)	I	Chlorobenzene-d5	ISTD							
65)	T	Tetrachloroethene	0.328	0.360	0.404	0.391	0.359	0.366	0.368	7.29
66)	PM	Chlorobenzene	1.093	1.106	1.076	1.056	0.993	0.969	1.049	5.29
67)	T	1,1,1,2-Tetrachlo	0.404	0.376	0.381	0.375	0.346	0.351	0.372	5.66
68)	C	Ethyl Benzene	1.882	1.799	1.910	1.818	1.637	1.649	1.782	6.47#
69)	T	m/p-Xylenes	0.651	0.726	0.743	0.689	0.652	0.648	0.685	6.09
70)	T	o-Xylene	0.658	0.654	0.735	0.671	0.624	0.617	0.660	6.40
71)	T	Styrene	1.175	1.119	1.178	1.095	1.018	0.992	1.096	7.11
72)	P	Bromoform	0.243	0.250	0.272	0.264	0.250	0.265	0.257	4.41
73)	I	1,4-Dichlorobenzene-d	ISTD							
74)	T	Isopropylbenzene	4.764	4.246	4.287	4.204	3.851	3.646	4.166	9.29
75)	T	N-amyl acetate	2.201	2.209	2.187	2.091	2.010	1.903	2.100	5.90
76)	P	1,1,2,2-Tetrachlo	1.516	1.351	1.417	1.339	1.257	1.209	1.348	8.18
77)	T	1,2,3-Trichloropr	1.018	1.052	1.058	1.031	0.957	0.925	1.007	5.35
78)	T	Bromobenzene	1.079	1.080	1.095	1.043	1.018	0.982	1.050	4.14
79)	T	n-propylbenzene	5.061	4.664	4.919	4.700	4.515	4.192	4.675	6.55
80)	T	2-Chlorotoluene	2.723	2.801	2.962	2.869	2.635	2.523	2.752	5.80
81)	T	1,3,5-Trimethylbe	3.202	2.962	2.928	2.831	2.716	2.571	2.868	7.59
82)	T	trans-1,4-Dichlor	0.651	0.496	0.522	0.523	0.517	0.523	0.539	10.42
83)	T	4-Chlorotoluene	2.931	2.832	2.935	2.665	2.697	2.602	2.777	5.12
84)	T	tert-Butylbenzene	3.153	2.926	2.977	2.890	2.679	2.602	2.871	7.03
85)	T	1,2,4-Trimethylbe	3.072	2.738	2.917	2.857	2.705	2.602	2.815	5.98
86)	T	sec-Butylbenzene	3.906	3.518	3.871	3.655	3.427	3.316	3.615	6.61
87)	T	p-Isopropyltoluen	3.111	2.848	2.935	2.841	2.709	2.600	2.841	6.25
88)	T	1,3-Dichlorobenze	1.802	1.688	1.859	1.738	1.731	1.628	1.741	4.70
89)	T	1,4-Dichlorobenze	1.608	1.681	1.735	1.664	1.636	1.618	1.657	2.84
90)	T	n-Butylbenzene	2.976	2.735	2.885	2.708	2.513	2.536	2.726	6.76
91)	T	Hexachloroethane	0.670	0.671	0.734	0.674	0.624	0.631	0.668	5.88
92)	T	1,2-Dichlorobenze	1.605	1.563	1.622	1.623	1.494	1.471	1.563	4.26
93)	T	1,2,4,5-Tetrameth							0.000	-1.00
94)	T	1,2-Dibromo-3-Chl	0.270	0.158	0.157	0.158	0.141	0.145	0.172	28.58
95)	T	1,2,4-Trichlorobe	0.770	0.759	0.809	0.835	0.759	0.781	0.786	3.91
96)	T	Hexachlorobutadie	0.181	0.250	0.311	0.293	0.271	0.279	0.264	17.25
97)	T	Naphthalene	2.001	1.994	2.258	2.220	2.125	2.102	2.117	5.15
98)	T	1,2,3-Trichlorobe	0.539	0.612	0.669	0.669	0.621	0.663	0.629	8.06
99)	T	p-ethyltoluene							0.000	-1.00
100)	T	p-diethylbenzene							0.000	-1.00

(#) = Out of Range

IC

4) $RF_1 = \frac{11574(50)}{642767(1)} = 0.900326$ $RF_5 = \frac{56754(50)}{635157(5)} = 0.893543$

$RF_{10} = \frac{120563(50)}{630247(10)} = 0.956474$ $RF_{20} = \frac{219562(50)}{594538(20)} = 0.923246$

$RF_{50} = \frac{534254(50)}{646711(50)} = 0.826109$ $RF_{100} = \frac{977656(50)}{606092(100)} = 0.806524$

47) $RF_1 = \frac{7438(50)}{1134248(1)} = 0.327838$ $RF_5 = \frac{33085(50)}{1146191(5)} = 0.288652$

$RF_{10} = \frac{66733(50)}{1128695(10)} = 0.29562$ $RF_{20} = \frac{117703(50)}{1091370(20)} = 0.269622$

$RF_{50} = \frac{314931(50)}{1148719(50)} = 0.277641$ $RF_{100} = \frac{580852(50)}{1090515(100)} = 0.26632$

65) $RF_1 = \frac{5962(50)}{904499(1)} = 0.327763$ $RF_5 = \frac{32754(50)}{910251(5)} = 0.359835$

$RF_{10} = \frac{71537(50)}{885062(10)} = 0.404136$ $RF_{20} = \frac{133545(50)}{854386(20)} = 0.390763$

$RF_{50} = \frac{332718(50)}{926763(50)} = 0.359010$ $RF_{100} = \frac{643502(50)}{880188(100)} = 0.365775$

79) $RF_1 = \frac{33287(50)}{328867(1)} = 5.06086$ $RF_5 = \frac{158055(50)}{340576(5)} = 4.664304$

$RF_{10} = \frac{336131(50)}{341668(10)} = 4.918971$ $RF_{20} = \frac{614500(50)}{326833(20)} = 4.700412$

$RF_{50} = \frac{1527347(50)}{338257(50)} = 4.515344$ $RF_{100} = \frac{2758321(50)}{329019(100)} = 4.191735$

MJW
6/23/11

Initial Calibration Calculation

	I	II	III	IV	V	VI	Average	SD	%RSD
Vinyl Chloride	0.900326	0.893543	0.956474	0.923246	0.826109	0.806524	0.88437	0.057452	6.50
Dibromomethane	0.327838	0.288652	0.29562	0.269622	0.277641	0.26632	0.287616	0.022626	7.87
Tetrachloroethene	0.327763	0.359835	0.404136	0.390763	0.35901	0.365775	0.36788	0.026815	7.29
n-propylbenzene	5.06086	4.664304	4.918971	4.700412	4.515344	4.191735	4.675271	0.306008	6.55

MJW 6/23/11

Evaluate Continuing Calibration Report

Data Path : W:\HPCHEM1\Msvoa_G\Data\VG051011\
Data File : VG034726.D
Acq On : 10 May 2011 11:33
Operator : PS
Sample : 50 PPB CCC
Misc : 5mL MSVOA_G
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 12:10:41 2011
Quant Method : \\TERASTORAGE\VOASRV\HPCHEM1\MSVOA_G\METHOD\82G042211W.M
Quant Title : SW846 8260
QLast Update : Fri May 06 11:21:35 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	87	-0.01
2	T	Dichlorodifluoromethane	0.474	0.581	-22.6#	104	0.00
3	P	Chloromethane	0.900	1.023	-13.7	106	0.00
4	C	Vinyl Chloride	0.884	0.962	-8.8#	101	0.00
5	T	Bromomethane	0.576	0.664	-15.3	105	0.00
6	T	Chloroethane	0.467	0.540	-15.6	105	0.00
7	T	Trichlorofluoromethane	0.690	0.755	-9.4	96	0.00
8	T	Diethyl Ether	0.586	0.600	-2.4	99	0.00
9	T	1,1,2-Trichlorotrifluoroeth	0.660	0.707	-7.1	102	0.00
10	T	Methyl Iodide	1.493	1.502	-0.6	95	0.00
11	T	Tert butyl alcohol	0.068	0.066	2.9	94	0.00
12	CM	1,1-Dichloroethene	0.776	0.793	-2.2#	95	0.00
13	T	Acrolein	0.118	0.110	6.8	109	0.00
14	T	Allyl chloride	0.951	0.906	4.7	87	0.00
15	T	Acrylonitrile	0.284	0.285	-0.4	94	0.00
16	T	Acetone	0.170	0.181	-6.5	110	0.00
17	T	Carbon Disulfide	2.349	2.393	-1.9	98	0.00
18	T	Methyl Acetate	0.762	0.829	-8.8	101	0.00
19	T	Methyl tert-butyl Ether	2.097	2.120	-1.1	99	0.00
20	T	Methylene Chloride	0.974	0.913	6.3	96	0.00
21	T	trans-1,2-Dichloroethene	0.815	0.892	-9.4	99	0.00
22	T	Acetonitrile	0.000	0.000	0.0	0#	-2.09#
23	T	Diisopropyl ether	2.241	2.168	3.3	93	0.00
24	T	Vinyl Acetate	1.065	1.113	-4.5	100	0.00
25	P	1,1-Dichloroethane	1.419	1.515	-6.8	99	0.00
26	T	2-Butanone	0.448	0.426	4.9	96	0.00
27	T	2,2-Dichloropropane	0.585	0.524	10.4	89	0.00
28	T	cis-1,2-Dichloroethene	1.117	1.197	-7.2	99	0.00
29	T	Bromochloromethane	0.634	0.622	1.9	95	0.00
30	C	Chloroform	1.176	1.146	2.6#	91	0.00
31	T	Cyclohexane	1.022	1.038	-1.6	99	0.00
32	T	1,1,1-Trichloroethane	0.658	0.655	0.5	94	0.00
33	S	1,2-Dichloroethane-d4	0.558	0.581	-4.1	104	0.00
34	I	1,4-Difluorobenzene	1.000	1.000	0.0	90	0.00
35	S	Dibromofluoromethane	0.394	0.381	3.3	99	0.00
36	T	1,1-Dichloropropene	0.578	0.522	9.7	90	0.00
37	T	Ethyl Acetate	0.528	0.485	8.1	94	0.00
38	T	Carbon Tetrachloride	0.440	0.401	8.9	93	0.00
39	T	Methylcyclohexane	0.555	0.499	10.1	85	0.00
40	TM	Benzene	1.624	1.545	4.9	92	0.00
41	T	Methacrylonitrile	0.267	0.241	9.7	91	0.00
42	TM	1,2-Dichloroethane	0.373	0.390	-4.6	100	0.00
43	T	Isopropyl Acetate	0.756	0.702	7.1	90	0.00
44	T	Isobutyl alcohol	0.000	0.000	0.0	0#	-4.25#
45	TM	Trichloroethene	0.402	0.395	1.7	89	0.00

Evaluate Continuing Calibration Report

Data Path : W:\HPCHEM1\Msvoa_G\Data\VG051011\
Data File : VG034726.D
Acq On : 10 May 2011 11:33
Operator : PS
Sample : 50 PPB CCC
Misc : 5mL MSVOA_G
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 12:10:41 2011
Quant Method : \\TERASTORAGE\VOASRV\HPCHEM1\MSVOA_G\METHOD\82G042211W.M
Quant Title : SW846 8260
QLast Update : Fri May 06 11:21:35 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
90	T	n-Butylbenzene	2.726	2.523	7.4	92	0.00
91	T	Hexachloroethane	0.668	0.599	10.3	88	0.00
92	T	1,2-Dichlorobenzene	1.563	1.503	3.8	92	0.00
93	T	1,2,4,5-Tetramethylbenzene	0.000	0.000	0.0	0#	-15.10#
94	T	1,2-Dibromo-3-Chloropropane	0.172	0.131	23.8#	85	0.00
95	T	1,2,4-Trichlorobenzene	0.786	0.684	13.0	82	0.00
96	T	Hexachlorobutadiene	0.264	0.239	9.5	81	0.00
97	T	Naphthalene	2.117	1.694	20.0	73	-0.01
98	T	1,2,3-Trichlorobenzene	0.629	0.518	17.6	76	0.00
99	T	p-ethyltoluene	0.000	0.000	0.0	0#	-11.89#
100	T	p-diethylbenzene	0.000	0.000	0.0	0#	-13.90#

(#) = Out of Range SPCC's out = 0 CCC's out = 6

Evaluate Continuing Calibration Report

Data Path : W:\HPCHEM1\Msvoa_G\Data\VG050611\
Data File : VG034671.D
Acq On : 6 May 2011 10:36
Operator : PS
Sample : 50 PPB CCC
Misc : 5mL MSVOA_G
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 11:09:32 2011
Quant Method : \\TERASTORAGE\VOASRV\HPCHEM1\MSVOA_G\METHOD\82G042211W.M
Quant Title : SW846 8260
QLast Update : Thu May 05 18:09:28 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	85	0.00
2	T	Dichlorodifluoromethane	0.474	0.560	-18.1	98	0.00
3	P	Chloromethane	0.900	1.056	-17.3	108	-0.01
4	C	Vinyl Chloride	0.884	1.014	-14.7#	105	0.00
5	T	Bromomethane	0.576	0.714	-24.0#	111	0.00
6	T	Chloroethane	0.467	0.577	-23.6#	110	0.00
7	T	Trichlorofluoromethane	0.690	0.791	-14.6	99	-0.01
8	T	Diethyl Ether	0.586	0.647	-10.4	104	-0.01
9	T	1,1,2-Trichlorotrifluoroeth	0.660	0.727	-10.2	103	0.00
10	T	Methyl Iodide	1.493	1.564	-4.8	97	0.00
11	T	Tert butyl alcohol	0.068	0.076	-11.8	105	-0.01
12	CM	1,1-Dichloroethene	0.776	0.820	-5.7#	96	0.00
13	T	Acrolein	0.118	0.126	-6.8	122	-0.01
14	T	Allyl chloride	0.951	1.025	-7.8	96	0.00
15	T	Acrylonitrile	0.284	0.317	-11.6	103	0.00
16	T	Acetone	0.170	0.224	-31.8#	134	-0.01
17	T	Carbon Disulfide	2.349	2.457	-4.6	98	0.00
18	T	Methyl Acetate	0.762	0.918	-20.5#	110	0.00
19	T	Methyl tert-butyl Ether	2.097	2.330	-11.1	106	0.00
20	T	Methylene Chloride	0.974	0.883	9.3	91	-0.01
21	T	trans-1,2-Dichloroethene	0.815	0.939	-15.2	102	0.00
22	T	Acetonitrile	0.000	0.000	0.0	0#	-2.09#
23	T	Diisopropyl ether	2.241	2.314	-3.3	97	-0.01
24	T	Vinyl Acetate	1.065	1.252	-17.6	110	0.00
25	P	1,1-Dichloroethane	1.419	1.637	-15.4	105	0.00
26	T	2-Butanone	0.448	0.482	-7.6	106	-0.01
27	T	2,2-Dichloropropane	0.585	0.581	0.7	97	-0.01
28	T	cis-1,2-Dichloroethene	1.117	1.272	-13.9	103	-0.01
29	T	Bromochloromethane	0.634	0.703	-10.9	105	-0.01
30	C	Chloroform	1.176	1.254	-6.6#	98	0.00
31	T	Cyclohexane	1.022	1.087	-6.4	102	-0.01
32	T	1,1,1-Trichloroethane	0.658	0.722	-9.7	102	0.00
33	S	1,2-Dichloroethane-d4	0.558	0.591	-5.9	104	0.00
34	I	1,4-Difluorobenzene	1.000	1.000	0.0	89	-0.02
35	S	Dibromofluoromethane	0.394	0.378	4.1	97	-0.01
36	T	1,1-Dichloropropene	0.578	0.574	0.7	98	0.00
37	T	Ethyl Acetate	0.528	0.548	-3.8	105	0.00
38	T	Carbon Tetrachloride	0.440	0.449	-2.0	102	-0.01
39	T	Methylcyclohexane	0.555	0.512	7.7	87	-0.02
40	TM	Benzene	1.624	1.683	-3.6	99	-0.01
41	T	Methacrylonitrile	0.267	0.271	-1.5	100	0.00
42	TM	1,2-Dichloroethane	0.373	0.425	-13.9	108	0.00
43	T	Isopropyl Acetate	0.756	0.776	-2.6	98	0.00
44	T	Isobutyl alcohol	0.000	0.000	0.0	0#	-4.25#
45	TM	Trichloroethene	0.402	0.430	-7.0	96	0.00

MJW 6/23/11

Evaluate Continuing Calibration Report

Data Path : W:\HPCHEM1\Msvoa_G\Data\VG050611\
Data File : VG034671.D
Acq On : 6 May 2011 10:36
Operator : PS
Sample : 50 PPB CCC
Misc : 5mL MSVOA_G
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 06 11:09:32 2011
Quant Method : \\TERASTORAGE\VOASRV\HPCHEM1\MSVOA_G\METHOD\82G042211W.M
Quant Title : SW846 8260
QLast Update : Thu May 05 18:09:28 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
46	C	1,2-Dichloropropane	0.449	0.488	-8.7#	100	-0.01
47	T	Dibromomethane	0.288	0.301	-4.5	96	0.00
48	T	Bromodichloromethane	0.506	0.512	-1.2	96	-0.01
49	T	Methyl methacrylate	0.334	0.349	-4.5	101	0.00
50	T	1,4-Dioxane	0.004	0.003	25.0#	78	0.00
51	S	Toluene-d8	1.153	1.062	7.9	91	0.00
52	T	4-Methyl-2-Pentanone	0.380	0.407	-7.1	104	-0.01
53	CM	Toluene	0.867	0.896	-3.3#	98	0.00
54	T	t-1,3-Dichloropropene	0.547	0.555	-1.5	93	0.00
55	T	cis-1,3-Dichloropropene	0.670	0.687	-2.5	92	-0.01
56	T	1,1,2-Trichloroethane	0.335	0.379	-13.1	110	0.00
57	T	Ethyl methacrylate	0.538	0.563	-4.6	96	0.00
58	T	1,3-Dichloropropane	0.642	0.669	-4.2	98	0.00
59	T	2-Chloroethyl Vinyl ether	0.193	0.114	40.9#	64	0.00
60	T	2-Hexanone	0.245	0.268	-9.4	109	-0.01
61	T	Dibromochloromethane	0.359	0.397	-10.6	100	0.00
62	T	1,2-Dibromoethane	0.352	0.391	-11.1	102	-0.01
63	S	4-Bromofluorobenzene	0.390	0.369	5.4	99	-0.01
64	I	Chlorobenzene-d5	1.000	1.000	0.0	90	0.00
65	T	Tetrachloroethene	0.368	0.416	-13.0	104	0.00
66	PM	Chlorobenzene	1.049	1.176	-12.1	106	0.00
67	T	1,1,1,2-Tetrachloroethane	0.372	0.387	-4.0	100	0.00
68	C	Ethyl Benzene	1.782	1.813	-1.7#	100	0.00
69	T	m/p-Xylenes	0.685	0.722	-5.4	100	0.00
70	T	o-Xylene	0.660	0.712	-7.9	103	-0.01
71	T	Styrene	1.096	1.125	-2.6	99	0.00
72	P	Bromoform	0.257	0.252	1.9	91	0.00
73	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	92	-0.01
74	T	Isopropylbenzene	4.166	4.223	-1.4	101	-0.01
75	T	N-amyl acetate	2.100	2.212	-5.3	101	0.00
76	P	1,1,2,2-Tetrachloroethane	1.348	1.424	-5.6	104	0.00
77	T	1,2,3-Trichloropropane	1.007	1.067	-6.0	103	0.00
78	T	Bromobenzene	1.050	1.105	-5.2	100	0.00
79	T	n-propylbenzene	4.675	4.715	-0.9	96	0.00
80	T	2-Chlorotoluene	2.752	2.821	-2.5	99	0.00
81	T	1,3,5-Trimethylbenzene	2.868	2.784	2.9	94	0.00
82	T	trans-1,4-Dichloro-2-butene	0.539	0.503	6.7	90	-0.01
83	T	4-Chlorotoluene	2.777	2.913	-4.9	99	0.00
84	T	tert-Butylbenzene	2.871	3.077	-7.2	106	-0.01
85	T	1,2,4-Trimethylbenzene	2.815	2.908	-3.3	99	-0.01
86	T	sec-Butylbenzene	3.615	3.753	-3.8	101	-0.01
87	T	p-Isopropyltoluene	2.841	2.853	-0.4	97	0.00
88	T	1,3-Dichlorobenzene	1.741	1.789	-2.8	95	-0.01
89	T	1,4-Dichlorobenzene	1.657	1.775	-7.1	100	0.00

MJW 6/23/11

Coninuing Calibration Calculations

	Ave RF	CCRF	%D
Vinyl Chloride	0.884	1.01391	-14.7
Dibromomethane	0.288	0.301024	-4.5
Chlorobenzene	1.049	1.17577	-12.1
n-Propylbenzene	4.675	4.714808	-0.9

MJW 6/23/11

CC

4) $RF_{50} = \frac{560520(50)}{552825(50)} = 1.01391$

47) $RF_{50} = \frac{307618(50)}{1021404(50)} = 0.301024$

66) $RF_{50} = \frac{979597(50)}{833152(50)} = 1.17577$

79) $RF_{50} = \frac{1467701(50)}{311296(50)} = 4.714804$

MJW 6/23/11

Quantitation Report (QT Reviewed)

Data Path : \\Terastorage\VOASRV\HPCHEM1\Msvoa_G\Data\VG051011\
Data File : VG034737.D
Acq On : 10 May 2011 18:11
Operator : PS
Sample : C2041-01DL 5X
Misc : 5mL MSVOA_G
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 10 19:18:11 2011
Quant Method : \\TERASTORAGE\VOASRV\HPCHEM1\MSVOA_G\METHOD\82G042211W.M
Quant Title : SW846 8260
QLast Update : Tue May 10 15:02:55 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	3.873	168	540849	50.00	ug/l	0.01
34) 1,4-Difluorobenzene	4.676	114	1013909	50.00	ug/l	0.00
64) Chlorobenzene-d5	9.645	117	816719	50.00	ug/l	0.00
73) 1,4-Dichlorobenzene-d4	13.348	152	299422	50.00	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	3.862	65	308191	51.06	ug/l	0.01
Spiked Amount 50.000			Recovery = 102.12%			
35) Dibromofluoromethane	3.224	113	372259	46.60	ug/l	0.00
Spiked Amount 50.000			Recovery = 93.20%			
51) Toluene-d8	7.136	98	1034219	44.23	ug/l	0.00
Spiked Amount 50.000			Recovery = 88.46%			
63) 4-Bromofluorobenzene	11.606	95	312644	46.31	ug/l	0.00
Spiked Amount 50.000			Recovery = 92.62%			
Target Compounds						Qvalue
4) Vinyl Chloride	0.896	62	32646	3.41	ug/l ✓	94
28) cis-1,2-Dichloroethene	2.731	96	41214	3.41	ug/l ✓	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

DF = 5

28) $\text{Conc} = \frac{41214\,(50)}{540849\,(1.117)} = 3.41103 \times DF = 17.055$

4) $\text{Conc} = \frac{32646\,(50)}{540849\,(0.884)} = 3.41406 \times DF = 17.0703$

MJW 6/23/11

Quantitation Report (QT Reviewed)

Data Path : \\Terastorage\voasrv\HPCHEM1\Msvoa_G\Data\VG050611\
Data File : VG034685.D
Acq On : 6 May 2011 19:04
Operator : PS
Sample : C2041-01
Misc : 5mL MSVOA_G
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 07 02:24:45 2011
Quant Method : \\TERASTORAGE\VOASRV\HPCHEM1\MSVOA_G\METHOD\82G042211W.M
Quant Title : SW846 8260
QLast Update : Fri May 06 11:21:35 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	3.885	168	467503	50.00	ug/l	0.01
34) 1,4-Difluorobenzene	4.681	114	857548	50.00	ug/l	0.02
64) Chlorobenzene-d5	9.654	117	707823	50.00	ug/l	0.02
73) 1,4-Dichlorobenzene-d4	13.360	152	253960	50.00	ug/l	0.01
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	3.875	65	286841	54.98	ug/l	0.02
Spiked Amount 50.000			Recovery =	109.96%		
35) Dibromofluoromethane	3.223	113	349756	51.76	ug/l	0.01
Spiked Amount 50.000			Recovery =	103.52%		
51) Toluene-d8	7.155	98	896532	45.34	ug/l	0.00
Spiked Amount 50.000			Recovery =	90.68%		
63) 4-Bromofluorobenzene	11.609	95	296041	52.08	ug/l	0.00
Spiked Amount 50.000			Recovery =	104.16%		
Target Compounds						Qvalue
4) Vinyl Chloride	0.907	62	337936	40.87	ug/l	98
21) trans-1,2-Dichloroethene	1.848	96	35030	4.60	ug/l	97
28) cis-1,2-Dichloroethene	2.742	96	1761981	168.65	ug/l	98
45) Trichloroethene	4.565	130	253837	36.84	ug/l	88
65) Tetrachloroethene	7.840	164	29089	5.59	ug/l	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

28) conc = $\frac{1761981\,(50)}{467503\,(1.117)} = 168.707$

4) conc = $\frac{337936\,(50)}{467503\,(0.884)} = 40.8854$

MJW 6/23/11

CHEMTECH

WATER VOLATILE LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: MACTEC Inc.

Lab Code: CHEM Cas No: C2041 SAS No : C2041 SDG No: C2041

Matrix Spike - EPA Sample No : BSG0506W1 Analytical Method: EPA SW846 8260 Datafile : VG034673.D

COMPOUND	SPIKE ADDED (ug/L)	CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC#	QC LIMITS REC
Dichlorodifluoromethane	20		18	90	(35-124)
Chloromethane	20		21	105	(40-125)
Vinyl Chloride	20		22 ✓	110 ✓	(50-144)
Bromomethane	20		25	125	(44-145)
Chloroethane	20		26	130	(60-135)
Trichlorofluoromethane	20		22	110	(60-137)
1,1,2-Trichlorotrifluoroethane	20		21	105	(52-142)
1,1-Dichloroethene	20		21	105	(70-130)
Acetone	100		150	150*	(50-140)
Carbon Disulfide	20		20	100	(36-155)
Methyl tert-butyl Ether	20		22	110	(65-125)
Methyl Acetate	20		25	125	(51-158)
Methylene Chloride	20		21	105	(61-138)
trans-1,2-Dichloroethene	20		21	105	(60-137)
1,1-Dichloroethane	20		23	115	(70-135)
Cyclohexane	20		20	100	(56-141)
2-Butanone	100		100	100	(56-150)
Carbon Tetrachloride	20		18	90	(65-138)
cis-1,2-Dichloroethene	20		22	110	(70-125)
Chloroform	20		20	100	(67-135)
1,1,1-Trichloroethane	20		21	105	(65-130)
Methylcyclohexane	20		16	80	(56-137)
Benzene	20		19	95	(80-120)
1,2-Dichloroethane	20		21	105	(70-130)
Trichloroethene	20		19	95	(70-125)
1,2-Dichloropropane	20		20	100	(75-125)
Bromodichloromethane	20		18	90	(75-120)
4-Methyl-2-Pentanone	100		99	99	(63-135)
Toluene	20		19	95	(75-120)
t-1,3-Dichloropropene	20		18	90	(66-135)
cis-1,3-Dichloropropene	20		18	90	(70-130)
1,1,2-Trichloroethane	20		20	100	(75-125)
2-Hexanone	100		110	110	(56-130)
Dibromochloromethane	20		19	95	(64-135)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD : 0 Out of 0 outside limits

Spike Recovery : 5 Out of 90 outside limits

Comments: _____

MSW
6/23/11

CHEMTECH

WATER VOLATILE LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: MACTEC Inc.

Lab Code: CHEM Cas No: C2041 SAS No : C2041 SDG No: C2041

Matrix Spike - EPA Sample No : BSG0506W1 Analytical Method: EPA SW846 8260 Datafile : VG034673.D

COMPOUND	SPIKE ADDED (ug/L)	CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC#	QC LIMITS REC
1,2-Dibromoethane	20		21	105	(80-120)
Tetrachloroethene	20		21 ✓	105 ✓	(45-178)
Chlorobenzene	20		20	100	(80-120)
Ethyl Benzene	20		19	95	(75-125)
m/p-Xylenes	40		38	95	(75-130)
o-Xylene	20		20	100	(80-120)
Styrene	20		19	95	(65-135)
Bromoform	20		17	85	(70-130)
Isopropylbenzene	20		19	95	(75-125)
1,1,2,2-Tetrachloroethane	20		19	95	(65-130)
1,3-Dichlorobenzene	20		19	95	(75-125)
1,4-Dichlorobenzene	20		19	95	(75-125)
1,2-Dichlorobenzene	20		19	95	(70-120)
1,2-Dibromo-3-Chloropropane	20		17	85	(54-130)
1,2,4-Trichlorobenzene	20		17	85	(65-133)

~~Acetone~~

~~conc = 232414 (50) / 535363 (0.170) =~~

Vinyl chloride

$$\text{conc} = \frac{206395\,(50)}{535363\,(0.884)} = 21.805/20 = 109.02\ \%$$

PCE

$$\text{conc} = \frac{127115\,(50)}{820194\,(0.368)} = 21.05/20 = 105.29\ \%$$

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD : 0 Out of 0 outside limits

Spike Recovery : 5 Out of 90 outside limits

Comments: _____

MJW 6/23/11

CHEMTECH

WATER VOLATILE LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: MACTEC Inc.

Lab Code: CHEM Cas No: C2041 SAS No : C2041 SDG No: C2041

Matrix Spike - EPA Sample No : BSG0510W1 Analytical Method: EPA SW846 8260 Datafile : VG034729.D

COMPOUND	SPIKE ADDED (ug/L)	CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC#	QC LIMITS REC
Dichlorodifluoromethane	20		12	60	(35-124)
Chloromethane	20		17	85	(40-125)
Vinyl Chloride	20		19	95	(50-144)
Bromomethane	20		21	105	(44-145)
Chloroethane	20		20	100	(60-135)
Trichlorofluoromethane	20		19	95	(60-137)
1,1,2-Trichlorotrifluoroethane	20		20	100	(52-142)
1,1-Dichloroethene	20		19	95	(70-130)
Acetone	100		150	150*	(50-140)
Carbon Disulfide	20		18	90	(36-155)
Methyl tert-butyl Ether	20		20	100	(65-125)
Methyl Acetate	20		22	110	(51-158)
Methylene Chloride	20		24	120	(61-138)
trans-1,2-Dichloroethene	20		21	105	(60-137)
1,1-Dichloroethane	20		22	110	(70-135)
Cyclohexane	20		19	95	(56-141)
2-Butanone	100		100	100	(56-150)
Carbon Tetrachloride	20		17	85	(65-138)
cis-1,2-Dichloroethene	20		20	100	(70-125)
Chloroform	20		19	95	(67-135)
1,1,1-Trichloroethane	20		19	95	(65-130)
Methylcyclohexane	20		17	85	(56-137)
Benzene	20		18	90	(80-120)
1,2-Dichloroethane	20		19	95	(70-130)
Trichloroethene	20		18	90	(70-125)
1,2-Dichloropropane	20		20	100	(75-125)
Bromodichloromethane	20		17	85	(75-120)
4-Methyl-2-Pentanone	100		98	98	(63-135)
Toluene	20		18	90	(75-120)
t-1,3-Dichloropropene	20		17	85	(66-135)
cis-1,3-Dichloropropene	20		17	85	(70-130)
1,1,2-Trichloroethane	20		19	95	(75-125)
2-Hexanone	100		100	100	(56-130)
Dibromochloromethane	20		19	95	(64-135)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD : 0 Out of 0 outside limits

Spike Recovery : 6 Out of 90 outside limits

Comments: _____

MJW 6/24/11

CHEMTECH

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C2041 SAS No.: C2041 SDG NO.: C2041

Lab File ID: VG034670.D BFB Injection Date: 05/06/2011

Instrument ID: MSVOAG BFB Injection Time: 10:03

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.5 ✓
75	30.0 - 60.0% of mass 95	40.6 ✓
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.2 ✓
173	Less than 2.0% of mass 174	0.6 (0.8) 1
174	50.0 - 100.0% of mass 95	80.5 ✓
175	5.0 - 9.0% of mass 174	5.8 (7.2) 1
176	95.0 - 101.0% of mass 174	79.6 (98.9 ✓) 1
177	5.0 - 9.0% of mass 176	5.4 (6.8 ✓) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD050	50 PPB CCC	VG034671.D	05/06/2011	10:36
VBG0506W1	VBG0506W1	VG034672.D	05/06/2011	12:35
BSG0506W1	BSG0506W1	VG034673.D	05/06/2011	13:10
TRIPBLANK	C2041-02	VG034684.D	05/06/2011	18:35
828131A-SW1501	C2041-01	VG034685.D	05/06/2011	19:04

$m/e_{50} = 7653/49488 \cdot 100 = 15.5\%$

$m/e_{75} = 20102/49488 \cdot 100 = 40.6\%$

$m/e_{96} = 3078/49488 \cdot 100 = 6.2\%$

$m/e_{174} = 39824/49488 \cdot 100 = 80.5\%$

$m/e_{176} = 39394/39824 \cdot 100 = 98.9\%$

$m/e_{177} = 2686/39394 \cdot 100 = 6.8\%$

MJW 6/23/11

DATA USABILITY SUMMARY REPORT
JULY AND AUGUST 2011 SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

1.0 INTRODUCTION

Groundwater and soil samples were collected at the Off-Site Carriage Cleaners Site (Site) in Penfield, New York, in July and August 2011 and submitted to Chemtech, located in Mountainside, New Jersey for analysis. Analytical results were reported in the following Sample Delivery Groups (SDGs): C3028 and C3214. Groundwater samples were analyzed for one or more of the following parameters:

- Volatile Organic Compounds (VOCs) by USEPA Method 8260B
- Dissolved Gases (methane, ethane, ethane) by RSK-175
- Anions (chloride, nitrate, nitrite, sulfate) by EPA Method 300
- Total Alkalinity (as $CaCO_3$) by Standard Methods SM2320
- Carbon dioxide by Standard Methods SM2320
- Sulfide by Standard Methods SM4500
- Total Organic Carbon(TOC) by Standard Methods SM5310B
- Iron and manganese by USEPA Method 6010B

In addition, two soil samples were analyzed for TOC using the Lloyd Kahn method.

A listing of samples included in this Data Usability Summary Report is presented in Table 1. A summary of the analytical results is presented in Table 2. A summary of sample results qualified during this review is presented in Table 3 (Summary of Validation Actions). Tentatively Identified Compounds (TICs) are presented in Table 4.

Deliverables for the off-site laboratory analyses included a Category B deliverable as defined in the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocols (NYSDEC, 2005).

A project chemist review was completed based on NYSDEC Division of Environmental Remediation guidance for Data Usability Summary Reports (NYSDEC, 2010). USEPA Region 2 quality control (QC) limits were used during the data evaluation unless noted otherwise. The project chemist review included evaluations of sample collection, data package completeness, holding times, QC data (blanks, instrument calibrations, duplicates, surrogate recovery, and spike recovery), data transcription, electronic data reporting, calculations, and data qualification. The following laboratory or data validation qualifiers are used in the final data presentation.

U = target analyte is not detected at the reported detection limit
J = concentration is estimated
UJ = target analyte is not detected at the reported detection limit and is estimated
E = analyte concentration exceeds the calibrated range of the instrument
D = analyte concentration is the result of a diluted sample analysis
N = reported as a tentatively identified compounds with uncertainty in the identification

Results are interpreted to be usable as reported by the laboratory unless discussed in the following sections.

2.0 VOLATILE ORGANIC COMPOUNDS (VOCs) – METHOD 8260B

Blanks

The laboratory qualified VOC results with a B if the compound was detected in the associated method blank. During validation, the B qualifier was removed from the final data set if the result was qualified not detected (U).

SDG C3214

The aqueous method blank (VBG0815W1) analyzed on August 15, 2011 had a detection of 1,1,1-trichloroethane at 7.6 µg/L. An action level (38 µg/L) was established at five times the reported blank concentration and was compared to associated sample results. 1,1,1-Trichloroethane was reported at 8.6 µg/L in sample 828131A-MW05012 and was qualified as not detected (U).

Surrogates

Surrogate percent recoveries in aqueous samples were evaluated based on limits of 80 – 120 percent for surrogates dibromofluoromethane (DBFM), 1,2-dichloroethane-d4 (DCE), toluene-d9 (TOL), and bromofluorobenzene (BFB).

SDG C3214

The following samples had surrogate recoveries that were outside the QC limits:

Field Sample ID	Surrogate	Percent Recovered
828131A-DP10013	DCE	142
828131A-MW07012 (50X dilution)	DCE	48
828131A-MW07012 (50X dilution)	DBFM	50
828131A-MW07012 (50X dilution)	TOL	49
828131A-MW07012 (50X dilution)	BFB	42

The results for detected compounds in sample 828131A-DP10013 were qualified estimated (J). The result for cis-1,2-dichloroethene (reported from the 50X dilution analysis) in sample 828131A-MW07012 was qualified estimated (J).

Continuing Calibration

SDG C3214

Cyclohexane (23) had a percent difference (%D) above the control limit of 20 in the continuing calibration analyzed on August 12, 2011 at 17:48. Cyclohexane was not detected in the associated sample (828131A-MW02012) and the reporting limit was qualified estimated (UJ).

The following compounds had a %D above the control limit of 20 in the continuing calibration analyzed on August 15, 2011 at 10:39: vinyl chloride (-35), chloroethane (-28), trichlorofluoromethane (-32), and carbon disulfide (-25). These compounds were qualified estimated (J/UJ) in 828131A-DP28018 and 828131A-DP15013.

The following compounds had a %D above the control limit of 20 in the continuing calibration analyzed on August 16, 2011 at 10:31: vinyl chloride (-22) and trichlorofluoromethane (-21). These compounds were not detected in the associated sample (828131A-MW6035) and the reporting limit was qualified estimated (UJ).

Laboratory Control Samples (LCS)

The percent recoveries of the laboratory control spikes were evaluated based on the USEPA Region 2 limits of 70 – 130 percent and a RPD of 20 for aqueous samples.

SDG C3214

The percent recoveries of the following compounds were above the upper control limit in the LCS (BSG0815W1) analyzed on August 15, 2011: 1,1,1-trichloroethane (145) and tetrachloroethene (135). 1,1,1-trichloroethane was not detected and no qualification was necessary. Tetrachloroethene in the following associated samples and results were qualified estimated (J): 828131A-DP10013, 828131A-MW05012, 828131A-MW07012, and 828131A-MW12055.

The percent recoveries of the following compounds were above the upper control limit in the LCS (BSR0815W1) analyzed on August 15, 2011: vinyl chloride (145) and tetrachloroethene (145). These compounds were detected in one or more of the following associated samples and results were qualified estimated (J): 828131A-DP15013 (1X, 50X dilution) 828131A-DP28018, 828131A-MW02012 (100X dilution), and 828131A-MW02012DUP (100X dilution).

Matrix Spike (MS/MSD)

The percent recoveries of the matrix spikes were evaluated based on the USEPA Region 2 limits of 70 – 130 percent and a RPD of 20 for aqueous samples.

SDG C3214

Sample 828131A-DP28018 was spiked for MS/MSD analysis. The percent recoveries of acetone (68), carbon disulfide (50 and 52), and styrene (32 and 42) were below the lower control limit. These compounds were not detected in the unspiked sample and the reporting limits were qualified estimated (UJ) in the final data set.

Internal Standards

SDG C3214

Three of the four internal standards in sample 828131A-MW07012 (50X dilution) had area counts that were below the lower control limit. Cis-1,2-dichloroethene was the only compound reported from the 50X dilution analysis. The internal standard (pentafluorobenzene) used to

quantify the concentration of cis-1,2-dichloroethene had an area count below the lower control limit and cis-1,2-dichloroethene was qualified estimated (J) in the final data set.

Tentatively Identified Compounds

Tentatively identified compounds (TICs) were reported by the laboratory if detected during the VOC analysis. TICs being reported as final results in samples are presented in Table 4. If a sample is not listed, no TICs were reported in the sample, or the TICs were removed as blank contaminants or artifacts of the GC/MS instrument system.

3.0 METALS (IRON AND MANGANESE) – METHOD 6010B

Blanks

SDG C3028

Iron (32 µg/L) was detected in the method blank associated with samples in SDG C3028. Professional judgment was used to establish a 5X action level at 160 µg/L and qualify samples. A detection of iron at 121 µg/L was qualified as not detected (U) in sample 828131A-DP15013.

4.0 TOTAL ORGANIC CARBON – METHOD LLOYD KAHN

Data Reporting

SDG C3028

The results for TOC exceeded the upper end of the calibration line (3200 mg/kg) in samples 828131A-MW11 (4500 mg/kg) and 828131A-MW12 (4900 mg/kg) and results were reported with an "E" qualifier by the laboratory. The laboratory was unable to analyze a mass of sample smaller than 50 milligrams. TOC results were qualified estimated (EJ) in the final data set.

5.0 ANIONS – METHOD 300

Data Reporting

SDG C3028

Chloride analysis by method 300 was requested on the chain of custody for field sample 828131A-MW05012. The laboratory reported results for nitrate, nitrite, sulfate, and chloride for 828131A-MW05012. The nitrate, nitrite, and sulfate results were not removed from the final data set.

Data Validator: Tige Cunningham

Date: 9/15/11

Reviewed by Chris Ricardi, NRCC-EAC
Quality Assurance Officer

Date: 9/26/11

Reference:

New York State Department of Environmental Conservation (NYSDEC), 2005. "Analytical Services Protocols"; July 2005.

New York State Department of Environmental Conservation (NYSDEC), 2010. "Technical Guidance for Site Investigation and Remediation-Appendix 2B"; DER-10; Division of Environmental Remediation; May 2010.

TABLE 2 - RESULTS SUMMARY
DATA USABILITY SUMMARY REPORT
JULY AND AUGUST 2011 SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Sample Delivery Group	C3028		C3028		C3028		C3214		C3214		C3214	
		Location	DP-33		DP-34		QC		DP-10		DP-12		DP-15	
		Sample Date	7/13/2011		7/13/2011		6/27/2011		8/2/2011		8/2/2011		8/2/2011	
		Sample ID	828131A-DP3325X		828131A-DP3225X		828131A-TRIPBLANK		828131A-DP10013		828131A-DP12013		828131A-DP15013	
		Qc Code	FS		FS		TB		FS		FS		FS	
		Units	ug/l		ug/l		ug/l		ug/l		ug/l		ug/l	
Analysis	**Parameter**		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260B	1,1,1-Trichloroethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2,2-Tetrachloroethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloroethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethene		1	U	1	U	1	U	1.9	J	1	U	1.8	
SW8260B	1,2,4-Trichlorobenzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromo-3-chloropropane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromoethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichlorobenzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloroethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloropropane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,3-Dichlorobenzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,4-Dichlorobenzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	2-Butanone		5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	2-Hexanone		5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	4-Methyl-2-pentanone		5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	Acetic acid, methyl ester		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Acetone		5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	Benzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromodichloromethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromoform		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromomethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Carbon disulfide		1	U	1	U	1	U	1	U	1	U	1	UJ
SW8260B	Carbon tetrachloride		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chlorobenzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chlorodibromomethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloroethane		1	U	1	U	1	U	1	U	1	U	1	UJ
SW8260B	Chloroform		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloromethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Cis-1,2-Dichloroethene		1	U	47		1	U	410	D	0.82	J	1100	D
SW8260B	cis-1,3-Dichloropropene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Cyclohexane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Dichlorodifluoromethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Ethyl benzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Isopropylbenzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Methyl cyclohexane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Methyl Tertbutyl Ether		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Methylene chloride		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Styrene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Tetrachloroethene		1	U	3.2		1	U	2.2	J	1	U	330	DJ
SW8260B	Toluene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	trans-1,2-Dichloroethene		1	U	0.94	J	1	U	15	J	1	U	8.6	
SW8260B	trans-1,3-Dichloropropene		1	U	1	U	1	U	1	U	1	U	1	U

TABLE 2 - RESULTS SUMMARY
DATA USABILITY SUMMARY REPORT
JULY AND AUGUST 2011 SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Sample Delivery Group	C3028		C3028		C3028		C3214		C3214		C3214	
		Location	DP-33		DP-34		QC		DP-10		DP-12		DP-15	
		Sample Date	7/13/2011		7/13/2011		6/27/2011		8/2/2011		8/2/2011		8/2/2011	
		Sample ID	828131A-DP3325X		828131A-DP3225X		828131A-TRIPBLANK		828131A-DP10013		828131A-DP12013		828131A-DP15013	
		Qc Code	FS		FS		TB		FS		FS		FS	
		Units	ug/l		ug/l		ug/l		ug/l		ug/l		ug/l	
Analysis	**Parameter**		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260B	Trichloroethene		1	U	3.5		1	U	70	D	1	U	610	D
SW8260B	Trichlorofluoromethane		1	U	1	U	1	U	1	U	1	U	1	UJ
SW8260B	Vinyl chloride		1	U	2.1		1	U	86	D	2.7		7.9	J
SW8260B	Xylene, o		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Xylenes (m&p)		2	U	2	U	2	U	2	U	2	U	2	U
RSK175	Ethane								5	U			5	U
RSK175	Ethene								5	U			5	U
RSK175	Methane								13.56				4.1	J

Notes:
Qualifier: U = not detected, J = estimated result
D = result from a dilution analysis
QC Code: FS = Field Sample, TB = Trip Blank,
FD = Field Duplicate
ug/L = microgram per liter

TABLE 2 - RESULTS SUMMARY
DATA USABILITY SUMMARY REPORT
JULY AND AUGUST 2011 SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

	Sample Delivery Group	C3214		C3214		C3214		C3214		C3214		C3214	
	Location	DP-22		DP-23		DP-27		DP-28		IDW		MW-11	
	Sample Date	8/2/2011		8/2/2011		8/2/2011		8/2/2011		8/2/2011		8/2/2011	
	Sample ID	828131A-DP22015		828131A-DP23015		828131A-DP27015		828131A-DP28018		828131A-MW-11-MW-12		828131A-MW11055	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/l		ug/l		ug/l		ug/l		ug/kg		ug/l	
Analysis	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260B	1,1,1-Trichloroethane	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	1,1,2,2-Tetrachloroethane	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	1,1,2-Trichloroethane	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	1,1-Dichloroethane	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	1,1-Dichloroethene	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	1,2,4-Trichlorobenzene	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	1,2-Dibromo-3-chloropropane	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	1,2-Dibromoethane	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	1,2-Dichlorobenzene	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	1,2-Dichloroethane	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	1,2-Dichloropropane	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	1,3-Dichlorobenzene	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	1,4-Dichlorobenzene	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	2-Butanone	5	U	5	U	5	U	5	U	29	U	5	U
SW8260B	2-Hexanone	5	U	5	U	5	U	5	U	29	U	5	U
SW8260B	4-Methyl-2-pentanone	5	U	5	U	5	U	5	U	29	U	5	U
SW8260B	Acetic acid, methyl ester	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Acetone	5	U	5	U	5	U	5	UJ	29	U	5	U
SW8260B	Benzene	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Bromodichloromethane	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Bromoform	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Bromomethane	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Carbon disulfide	1	U	1	U	1	U	1	UJ	5.8	U	1	U
SW8260B	Carbon tetrachloride	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Chlorobenzene	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Chlorodibromomethane	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Chloroethane	1	U	1	U	1	U	1	UJ	5.8	U	1	U
SW8260B	Chloroform	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Chloromethane	0.69	J	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Cis-1,2-Dichloroethene	1	U	240	D	1	U	5.1		32		1.9	
SW8260B	cis-1,3-Dichloropropene	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Cyclohexane	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Dichlorodifluoromethane	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Ethyl benzene	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Isopropylbenzene	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Methyl cyclohexane	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Methyl Tertbutyl Ether	1	U	0.54	J	1	U	1	U	5.8	U	1	U
SW8260B	Methylene chloride	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Styrene	1	U	1	U	1	U	1	UJ	5.8	U	1	U
SW8260B	Tetrachloroethene	1	U	1	U	1	U	1	U	4.4	J	1	U
SW8260B	Toluene	1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	trans-1,2-Dichloroethene	1	U	8.1		1	U	1	U	5.8	U	1	U
SW8260B	trans-1,3-Dichloropropene	1	U	1	U	1	U	1	U	5.8	U	1	U

TABLE 2 - RESULTS SUMMARY
DATA USABILITY SUMMARY REPORT
JULY AND AUGUST 2011 SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Sample Delivery Group	C3214		C3214		C3214		C3214		C3214		C3214	
		Location	DP-22		DP-23		DP-27		DP-28		IDW		MW-11	
		Sample Date	8/2/2011		8/2/2011		8/2/2011		8/2/2011		8/2/2011		8/2/2011	
		Sample ID	828131A-DP22015		828131A-DP23015		828131A-DP27015		828131A-DP28018		828131A-MW-11-MW-12		828131A-MW11055	
		Qc Code	FS		FS		FS		FS		FS		FS	
		Units	ug/l		ug/l		ug/l		ug/l		ug/kg		ug/l	
Analysis	**Parameter**		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260B	Trichloroethene		1	U	1	U	1	U	1	U	4.2	J	1	U
SW8260B	Trichlorofluoromethane		1	U	1	U	1	U	1	UJ	5.8	U	1	U
SW8260B	Vinyl chloride		130		120		1	U	4.5	J	4.3	J	1	U
SW8260B	Xylene, o		1	U	1	U	1	U	1	U	5.8	U	1	U
SW8260B	Xylenes (m&p)		2	U	2	U	2	U	2	U	12	U	2	U
RSK175	Ethane				5	U							5	U
RSK175	Ethene				5	U							5	U
RSK175	Methane				16.85								3.59	J

Notes:
Qualifier: U = not detected, J = estimated result
D = result from a dilution analysis
QC Code: FS = Field Sample, TB = Trip Blank,
FD = Field Duplicate
ug/L = microgram per liter

TABLE 2 - RESULTS SUMMARY
DATA USABILITY SUMMARY REPORT
JULY AND AUGUST 2011 SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Sample Delivery Group	C3214		C3214		C3214		C3214		C3214		C3214	
		Location	MW-12		MW-2		MW-2		MW-5		MW-6M		MW-7	
		Sample Date	8/2/2011		8/2/2011		8/2/2011		8/2/2011		8/2/2011		8/2/2011	
		Sample ID	828131A-MW12055		828131A-MW02012		828131A-MW02012DUP		828131A-MW05012		828131A-MW6035		828131A-MW07012	
		Qc Code	FS		FS		FD		FS		FS		FS	
		Units	ug/l		ug/l		ug/l		ug/l		ug/l		ug/l	
Analysis	**Parameter**		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260B	1,1,1-Trichloroethane		1	U	1	U	1	U	8.6	U	1	U	1	U
SW8260B	1,1,2,2-Tetrachloroethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloroethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethene		1	U	2.5		3.2		1	U	1	U	7.6	
SW8260B	1,2,4-Trichlorobenzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromo-3-chloropropane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dibromoethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichlorobenzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloroethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloropropane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,3-Dichlorobenzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	1,4-Dichlorobenzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	2-Butanone		5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	2-Hexanone		5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	4-Methyl-2-pentanone		5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	Acetic acid, methyl ester		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Acetone		5	U	5	U	5	U	5	U	5	U	5	U
SW8260B	Benzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromodichloromethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromoform		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromomethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Carbon disulfide		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Carbon tetrachloride		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chlorobenzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chlorodibromomethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloroethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloroform		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloromethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Cis-1,2-Dichloroethene		130		1400	D	1500	D	0.81	J	1	U	2500	DJ
SW8260B	cis-1,3-Dichloropropene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Cyclohexane		1	U	1	UJ	1	U	1	U	1	U	1	U
SW8260B	Dichlorodifluoromethane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Ethyl benzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Isopropylbenzene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Methyl cyclohexane		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Methyl Tertbutyl Ether		1.1		1	U	1	U	1	U	1	U	1	U
SW8260B	Methylene chloride		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Styrene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Tetrachloroethene		0.98	J	1300	DJ	1300	DJ	14	J	1	U	11	J
SW8260B	Toluene		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	trans-1,2-Dichloroethene		4.2		47		31		1	U	1	U	32	
SW8260B	trans-1,3-Dichloropropene		1	U	1	U	1	U	1	U	1	U	1	U

TABLE 2 - RESULTS SUMMARY
DATA USABILITY SUMMARY REPORT
JULY AND AUGUST 2011 SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Sample Delivery Group	C3214		C3214		C3214		C3214		C3214		C3214	
		Location	MW-12		MW-2		MW-2		MW-5		MW-6M		MW-7	
		Sample Date	8/2/2011		8/2/2011		8/2/2011		8/2/2011		8/2/2011		8/2/2011	
		Sample ID	828131A-MW12055		828131A-MW02012		828131A-MW02012DUP		828131A-MW05012		828131A-MW6035		828131A-MW07012	
		Qc Code	FS		FS		FD		FS		FS		FS	
		Units	ug/l		ug/l		ug/l		ug/l		ug/l		ug/l	
Analysis	**Parameter**		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260B	Trichloroethene		2.9		660	D	680	D	1.9		0.67	J	78	
SW8260B	Trichlorofluoromethane		1	U	1	U	1	U	1	U	1	UJ	1	U
SW8260B	Vinyl chloride		110		63		71		1	U	1	UJ	89	
SW8260B	Xylene, o		1	U	1	U	1	U	1	U	1	U	1	U
SW8260B	Xylenes (m&p)		2	U	2	U	2	U	2	U	2	U	2	U
RSK175	Ethane				5	U							5	U
RSK175	Ethene				5	U							5	U
RSK175	Methane				5.63								12.64	

Notes:
Qualifier: U = not detected, J = estimated result
D = result from a dilution analysis
QC Code: FS = Field Sample, TB = Trip Blank,
FD = Field Duplicate
ug/L = microgram per liter

TABLE 2 - RESULTS SUMMARY
DATA USABILITY SUMMARY REPORT
JULY AND AUGUST 2011 SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

	Sample Delivery Group	C3214	
	Location	QC	
	Sample Date	8/2/2011	
	Sample ID	TRIPBLANK	
	Qc Code	TB	
	Units	ug/l	
Analysis	**Parameter**	Result	Qualifier
SW8260B	1,1,1-Trichloroethane	1	U
SW8260B	1,1,2,2-Tetrachloroethane	1	U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	1	U
SW8260B	1,1,2-Trichloroethane	1	U
SW8260B	1,1-Dichloroethane	1	U
SW8260B	1,1-Dichloroethene	1	U
SW8260B	1,2,4-Trichlorobenzene	1	U
SW8260B	1,2-Dibromo-3-chloropropane	1	U
SW8260B	1,2-Dibromoethane	1	U
SW8260B	1,2-Dichlorobenzene	1	U
SW8260B	1,2-Dichloroethane	1	U
SW8260B	1,2-Dichloropropane	1	U
SW8260B	1,3-Dichlorobenzene	1	U
SW8260B	1,4-Dichlorobenzene	1	U
SW8260B	2-Butanone	5	U
SW8260B	2-Hexanone	5	U
SW8260B	4-Methyl-2-pentanone	5	U
SW8260B	Acetic acid, methyl ester	1	U
SW8260B	Acetone	5	U
SW8260B	Benzene	1	U
SW8260B	Bromodichloromethane	1	U
SW8260B	Bromoform	1	U
SW8260B	Bromomethane	1	U
SW8260B	Carbon disulfide	1	U
SW8260B	Carbon tetrachloride	1	U
SW8260B	Chlorobenzene	1	U
SW8260B	Chlorodibromomethane	1	U
SW8260B	Chloroethane	1	U
SW8260B	Chloroform	1	U
SW8260B	Chloromethane	1	U
SW8260B	Cis-1,2-Dichloroethene	1	U
SW8260B	cis-1,3-Dichloropropene	1	U
SW8260B	Cyclohexane	1	U
SW8260B	Dichlorodifluoromethane	1	U
SW8260B	Ethyl benzene	1	U
SW8260B	Isopropylbenzene	1	U
SW8260B	Methyl cyclohexane	1	U
SW8260B	Methyl Tertbutyl Ether	1	U
SW8260B	Methylene chloride	1	U
SW8260B	Styrene	1	U
SW8260B	Tetrachloroethene	1	U
SW8260B	Toluene	1	U
SW8260B	trans-1,2-Dichloroethene	1	U
SW8260B	trans-1,3-Dichloropropene	1	U

TABLE 2 - RESULTS SUMMARY
DATA USABILITY SUMMARY REPORT
JULY AND AUGUST 2011 SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

	Sample Delivery Group	C3214	
	Location	QC	
	Sample Date	8/2/2011	
	Sample ID	TRIPBLANK	
	Qc Code	TB	
	Units	ug/l	
Analysis	**Parameter**	Result	Qualifier
SW8260B	Trichloroethene	1	U
SW8260B	Trichlorofluoromethane	1	U
SW8260B	Vinyl chloride	1	U
SW8260B	Xylene, o	1	U
SW8260B	Xylenes (m&p)	2	U
RSK175	Ethane		
RSK175	Ethene		
RSK175	Methane		

Notes:
Qualifier: U = not detected, J = estimated result
D = result from a dilution analysis
QC Code: FS = Field Sample, TB = Trip Blank,
FD = Field Duplicate
ug/L = microgram per liter

TABLE 2 - RESULTS SUMMARY
DATA USABILITY SUMMARY REPORT
JULY AND AUGUST 2011 SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Sample Delivery Group	C3028		C3028		C3214		C3214		C3214		C3214	
		Location	MW-11		MW-12		DP-10		DP-15		DP-23		MW-11	
		Sample Date	7/11/2011		7/13/2011		8/2/2011		8/2/2011		8/2/2011		8/2/2011	
		Sample ID	828131A-MW11		828131A-MW12		828131A-DP10013		828131A-DP15013		828131A-DP23015		828131A-MW11055	
		Qc Code	FS		FS		FS		FS		FS		FS	
Analysis	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW6010B	Iron	ug/l					834		121	U	1450		254	
SW6010B	Manganese	ug/l					831		412		219		98.7	
E300.0	Chloride	mg/l					250	D	250	D	260	D	500	D
E300.0	Nitrate as N	mg/l					0.1	U	0.1	U	0.1	U	0.1	U
E300.0	Nitrite as N	mg/l					0.15	U	0.15	U	0.15	U	0.15	U
E300.0	Sulfate	mg/l					280	D	150	D	71	D	88	D
Lloyd Kahn	Total Organic Carbon	mg/kg	4,500	EJ	4,900	EJ								
SM5310B	Total Organic Carbon	mg/l					2		3.7		3.9		2.9	
SM 2320 B	Total Alkalinity, as CaCO3	mg/l					520		400		420		400	
SM2320 B	Carbon Dioxide	mg/l					540		400		420		390	
SM4500 S	Sulfide	mg/l					1	U	1	U	1	U	1	U

Notes:
Qualifier: U = not detected, J = estimated result
D = result from a dilution analysis
E = result exceeded the calibration of the instrument
QC Code: FS = Field Sample, TB = Trip Blank,
FD = Field Duplicate
ug/L = microgram per liter
mg/L = milligram per liter
mg/kg = milligram per kilogram

TABLE 2 - RESULTS SUMMARY
DATA USABILITY SUMMARY REPORT
JULY AND AUGUST 2011 SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Sample Delivery Group	C3214		C3214		C3214	
		Location	MW-2		MW-5		MW-7	
		Sample Date	8/2/2011		8/2/2011		8/2/2011	
		Sample ID	828131A-MW02012		828131A-MW05012		828131A-MW07012	
		Qc Code	FS		FS		FS	
Analysis	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW6010B	Iron	ug/l	1920				728	
SW6010B	Manganese	ug/l	564				711	
E300.0	Chloride	mg/l	350	D	320	D	350	D
E300.0	Nitrate as N	mg/l	0.1	U	0.1	U	0.1	U
E300.0	Nitrite as N	mg/l	0.15	U	0.15	U	0.15	U
E300.0	Sulfate	mg/l	120	D	120	D	130	D
Lloyd Kahn	Total Organic Carbon	mg/kg						
SM5310B	Total Organic Carbon	mg/l	4.9				4	
SM 2320 B	Total Alkalinity, as CaCO3	mg/l	420		420		430	
SM2320 B	Carbon Dioxide	mg/l	440		430		440	
SM4500 S	Sulfide	mg/l	1	U			1	U

Notes:
Qualifier: U = not detected, J = estimated result
D = result from a dilution analysis
E = result exceeded the calibration of the instrument
QC Code: FS = Field Sample, TB = Trip Blank,
FD = Field Duplicate
ug/L = microgram per liter
mg/L = milligram per liter
mg/kg = milligram per kilogram

TABLE 1 - SAMPLE SUMMARY
DATA USABILITY SUMMARY REPORT
JULY AND AUGUST 2011 SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

									NA Parameters	NA Parameters	NA Parameters	NA Parameters	NA Parameters	NA Parameters
					Class	VOC	Metals	TOC	Anions	CO2	Alkalinity	Sulfide	Dissolved Gases	TOC
					Analysis Method	SW8260B	SW6010B	Lloyd Kahn	E300.0	SM 2320 B	SM2320 B	SM4500 S	RSK175	SM5310B
					Fraction	T	T		T	T	T	T	T	T
SDG	**Location**	**Sample Date**	**Sample ID**	**Qc Code**	**Media**									
C3028	DP-32	7/13/2011	828131A-DP3225X	FS	GW	X								
C3028	DP-33	7/13/2011	828131A-DP3325X	FS	GW	X								
C3028	MW-11	7/11/2011	828131A-MW11	FS	SOIL			X						
C3028	MW-12	7/13/2011	828131A-MW12	FS	SOIL			X						
C3028	QC	7/14/2011	828131A-TRIPBLANK	TB	GW	X								
C3214	DP-10	8/2/2011	828131A-DP10013	FS	GW	X	X		X	X	X	X	X	X
C3214	DP-12	8/2/2011	828131A-DP12013	FS	GW	X								
C3214	DP-15	8/2/2011	828131A-DP15013	FS	GW	X	X		X	X	X	X	X	X
C3214	DP-22	8/2/2011	828131A-DP22015	FS	GW	X								
C3214	DP-23	8/2/2011	828131A-DP23015	FS	GW	X	X		X	X	X	X	X	X
C3214	DP-27	8/2/2011	828131A-DP27015	FS	GW	X								
C3214	DP-28	8/2/2011	828131A-DP28018	FS	GW	X								
C3214	MW-11	8/2/2011	828131A-MW11055	FS	GW	X	X		X	X	X	X	X	X
C3214	MW-12	8/2/2011	828131A-MW12055	FS	GW	X								
C3214	MW-2	8/2/2011	828131A-MW02012	FS	GW	X	X		X	X	X	X	X	X
C3214	MW-2	8/2/2011	828131A-MW02012DUP	FD	GW	X								
C3214	MW-5	8/2/2011	828131A-MW05012	FS	GW	X			X	X	X			
C3214	MW-6M	8/2/2011	828131A-MW6035	FS	GW	X								
C3214	MW-7	8/2/2011	828131A-MW07012	FS	GW	X	X		X	X	X	X	X	X
C3214	QC	8/2/2011	TRIPBLANK	TB	BW	X								
C3214	IDW	8/2/2011	828131A-MW-11-MW-12	FS	SOIL	X								

Notes:
FS = field sample
FD = field duplicate
TB = trip blank
GW = groundwater
BW = blank water
IDW = investigation derived waste sample
QC = quality control

TABLE 3 - VALIDATION ACTIONS
DATA USABILITY SUMMARY REPORT
JULY AND AUGUST 2011 SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

SDG	Lab Sample Id	Analysis Method	Field Sample ID	Paramater Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Result Units	Lab Id
C3028	C3028-03	Lloyd Kahn	828131A-MW11	Total Organic Carbon	3200	U	4,500	EJ	E	mg/kg	CCGE
C3028	C3028-04	Lloyd Kahn	828131A-MW12	Total Organic Carbon	3200	U	4,900	EJ	E	mg/kg	CCGE
C3214	C3214-12	SW6010B	828131A-DP15013	Iron	121		121	U	BL1	ug/l	CCGE
C3214	C3214-04	SW8260B	828131A-MW05012	1,1,1-Trichloroethane	8.6	B	8.6	U	BL-1	ug/l	CCGE
C3214	C3214-07	SW8260B	828131A-DP10013	1,1-Dichloroethene	1.9		1.9	J	SS-H	ug/l	CCGE
C3214	C3214-14	SW8260B	828131A-DP28018	Acetone	5	U	5	UJ	MS-L	ug/l	CCGE
C3214	C3214-12	SW8260B	828131A-DP15013	Carbon disulfide	1	U	1	UJ	CCV%D	ug/l	CCGE
C3214	C3214-14	SW8260B	828131A-DP28018	Carbon disulfide	1	U	1	UJ	MS-L, CCV%D	ug/l	CCGE
C3214	C3214-12	SW8260B	828131A-DP15013	Chloroethane	1	U	1	UJ	CCV%D	ug/l	CCGE
C3214	C3214-14	SW8260B	828131A-DP28018	Chloroethane	1	U	1	UJ	CCV%D	ug/l	CCGE
C3214	C3214-05DL	SW8260B	828131A-MW07012	Cis-1,2-Dichloroethene	2500	D	2,500	DJ	SS-L, IS-L	ug/l	CCGE
C3214	C3214-02	SW8260B	828131A-MW02012	Cyclohexane	1	U	1	UJ	CCV%D	ug/l	CCGE
C3214	C3214-14	SW8260B	828131A-DP28018	Styrene	1	U	1	UJ	MS-L	ug/l	CCGE
C3214	C3214-02DL	SW8260B	828131A-MW02012	Tetrachloroethene	1300	D	1,300	DJ	LCS-H	ug/l	CCGE
C3214	C3214-03DL	SW8260B	828131A-MW02012DUP	Tetrachloroethene	1300	D	1,300	DJ	LCS-H	ug/l	CCGE
C3214	C3214-04	SW8260B	828131A-MW05012	Tetrachloroethene	14		14	J	LCS-H	ug/l	CCGE
C3214	C3214-05	SW8260B	828131A-MW07012	Tetrachloroethene	11		11	J	LCS-H	ug/l	CCGE
C3214	C3214-07	SW8260B	828131A-DP10013	Tetrachloroethene	2.2		2.2	J	SS-H, LCS-H	ug/l	CCGE
C3214	C3214-09	SW8260B	828131A-MW12055	Tetrachloroethene	0.98	J	0.98	J	LCS-H	ug/l	CCGE
C3214	C3214-12DL	SW8260B	828131A-DP15013	Tetrachloroethene	330	D	330	DJ	LCS-H	ug/l	CCGE
C3214	C3214-07	SW8260B	828131A-DP10013	trans-1,2-Dichloroethene	15		15	J	SS-H	ug/l	CCGE
C3214	C3214-01	SW8260B	828131A-MW6035	Trichlorofluoromethane	1	U	1	UJ	CCV%D	ug/l	CCGE
C3214	C3214-12	SW8260B	828131A-DP15013	Trichlorofluoromethane	1	U	1	UJ	CCV%D	ug/l	CCGE
C3214	C3214-14	SW8260B	828131A-DP28018	Trichlorofluoromethane	1	U	1	UJ	CCV%D	ug/l	CCGE
C3214	C3214-01	SW8260B	828131A-MW6035	Vinyl chloride	1	U	1	UJ	CCV%D	ug/l	CCGE
C3214	C3214-12	SW8260B	828131A-DP15013	Vinyl chloride	7.9		7.9	J	LCS-H, CCV%D	ug/l	CCGE
C3214	C3214-14	SW8260B	828131A-DP28018	Vinyl chloride	4.5		4.5	J	LCS-H, CCV%D	ug/l	CCGE

Notes:
Val Reason Code
E = Result exceeds calibration reange
BL-1 = method blank qualifier
CCV%D = continuing calibration %D exceeds goal
LCS-H = LCS recovery is high
MS-L = Matrix spike recover is low
Qualifier: U = not detected, J = estimated result
D = result from a dilution analysis
E = result exceeded the calibration of the instrument
ug/L = microgram per liter
mg/kg = milligram per kilogram

TABLE 4 - TICs REPORTED
DATA USABILITY SUMMARY REPORT
JULY AND AUGUST 2011 SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

sample_name	sys_sample_code	sample_date	lab_sample_id	sample_type_code	Lab_Del_Group	cas_rn	chemical_name	result_value	Final Qual	result_unit	analysis_date
828131A-MW-11-MW-12	828131A-MW-11-MW-12	8/2/2011	C3214-17	FS	C3214	110-54-3	Hexane	8.9	JN	ug/kg	8/4/2011

VOCs

~~NO Quals~~ TC

NYSDEC DUSR PROJECT CHEMIST REVIEW RECORD
Project: Off-site Carriage Cleaners and TOC by Lloyd Kahn
Method : SW-846 8260B
Laboratory and SDG(s): C3028 ~~SDG#~~ Lab = Chemtech
Date: 9-12-11
Reviewer: Tige Cunningham
Review Level [X] NYSDEC DUSR [ ] USEPA Region II Guideline

1. ☑ **Case Narrative Review and COC/Data Paekage Completeness** COMMENTS
   Were problems noted?
   Where all the samples on the COC analyzed for the requested analyses? (YES) NO (circle one)

2. ☑ **Holding time and Sample Collection**
   All samples were analyzed within the 14 day holding time. (YES) NO (circle one)

3. ☑ **QC Blanks**
   Are method blanks free of contamination? (YES) NO (circle one)
   Are Trip blanks free of contamination? (YES) NO (circle one)
   Are Rinse blanks free of contamination? YES NO (NA) (circle one)

4. ☑ **Instrument Tuning**
   Were all results were within method criteria. (YES) NO (circle one)

5. ☑ **Instrument Calibration** Were all results within criteria? YES (NO) (circle one)
   Initial Calibration %RSD = 20% **(30% for 1,1-DCE, chloroform, 1,2-DCP, toluene, ethylbenzene, VC)**
   Initial Avg RRF and Continuing RRF should be ≥ 0.05 and 0.10 for Chloromethane, 1,1-Dichloroethane, Bromoform and 0.30 for Chlorobenzene and 1,1,2,2-Tetrachloroethane
   Continuing Calibration %D = 20%
   Initial Cal compounds w/ %RSD > 20 were calibrated using regression, NO Quals given.

6. ☑ **Internal Standards** (Area Limits = -50% to +100%, RT's within 30 seconds of mid point cal Std)
   Were all results within criteria? (YES) NO (circle one)

7. ☑ **Surrogate Recovery** - Region II limits (water 80-120%, soil 70-130%)

   Were all results were within Region II limits? (YES) NO (circle one)

8. ☑ **Matrix Spike** - Region II limits (water and soil 70-130%, water RPD 20, soil RPD 35)

   Were MS/MSDs submitted/analyzed? YES (NO) Not Submitted

   Were all results were within the Region II limits? YES NO (NA) (circle one)

9. ☑ **Dnplicates/replicates** - Region II Limits (water RPD 50, soil RPD 100)

   Were Field Duplicates submitted/analyzed? YES (NO)

   Were all results were within Region II Limits? YES NO (NA) (circle one)

10. ☑ **Laboratory Control Sample Results** - Region II (Water and soil 70-130%)

    Were all results were within Region II control limits? YES (NO) (circle one)
    2-Hexanone @ 140% no detections No action

11. ☑ **Raw Data Review and Calculation Checks**
    Raw data Reviewed for Cis 12DCE on Sample 828131A-DP3225X

12. ☑ **Electronic Data Review and Edits**
    Does the EDD match the Form I's? YES NO (circle one)

13. ☑ **TIC Review** and DUSR **Table 1** (sample Listing), **Table 2** (results summary), **Table 3** (Reason Codes), **Table 4** (TIC's). Did lab report TICs? YES (NO) (circle one)
    TIC's not requested
    Results for TOC over Calibration and could not be "diluted". E Results Qualified J

✳

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	07/13/11
Project:	Carriage Cleantown	Date Received:	07/15/11
Client Sample ID:	828131A-DP3225X	SDG No.:	C3028
Lab Sample ID:	C3028-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036177.D	1		07/15/11	VG071511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	2.1		0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.94	J	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	47		0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	3.5		0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

TC
9/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	07/13/11
Project:	Carriage Cleantown	Date Received:	07/15/11
Client Sample ID:	828131A-DP3225X	SDG No.:	C3028
Lab Sample ID:	C3028-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036177.D	1		07/15/11	VG071511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	3.2		0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	44.3		66 - 150	89%	SPK: 50
1868-53-7	Dibromofluoromethane	47.9		76 - 130	96%	SPK: 50
2037-26-5	Toluene-d8	48		78 - 121	96%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.4		70 - 131	101%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	373812	3.91			
540-36-3	1,4-Difluorobenzene	660181	4.72			
3114-55-4	Chlorobenzene-d5	479719	9.68			
3855-82-1	1,4-Dichlorobenzene-d4	216137	13.4			

TC
9/12/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	07/13/11
Project:	Carriage Cleantown	Date Received:	07/15/11
Client Sample ID:	828131A-DP3325X	SDG No.:	C3028
Lab Sample ID:	C3028-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036179.D	1		07/16/11	VG071511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

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9/12/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	07/13/11
Project:	Carriage Cleantown	Date Received:	07/15/11
Client Sample ID:	828131A-DP3325X	SDG No.:	C3028
Lab Sample ID:	C3028-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036179.D	1		07/16/11	VG071511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	1	U	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroetbane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Cbloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	48.1		66 - 150	96%	SPK: 50
1868-53-7	Dibromofluoromethane	49.9		76 - 130	100%	SPK: 50
2037-26-5	Toluene-d8	51.1		78 - 121	102%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.1		70 - 131	96%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	389032	3.91			
540-36-3	1,4-Difluorobenzene	668131	4.72			
3114-55-4	Chlorobenzene-d5	510172	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	224049	13.39			

9/12/11
TC

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	06/27/11
Project:	Carriage Cleantown	Date Received:	07/15/11
Client Sample ID:	828131A-TRIPBLANK	SDG No.:	C3028
Lab Sample ID:	C3028-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036176.D	1		07/15/11	VG071511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

TC
9-12-11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	06/27/11
Project:	Carriage Cleantown	Date Received:	07/15/11
Client Sample ID:	828131A-TRIPBLANK	SDG No.:	C3028
Lab Sample ID:	C3028-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036176.D	1		07/15/11	VG071511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	1	U	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	51.6		66 - 150	103%	SPK: 50
1868-53-7	Dibromofluoromethane	45.6		76 - 130	91%	SPK: 50
2037-26-5	Toluene-d8	51.3		78 - 121	103%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.5		70 - 131	99%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	434709	3.91			
540-36-3	1,4-Difluorobenzene	772735	4.73			
3114-55-4	Chlorobenzene-d5	604864	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	257495	13.39			

8/12/11
TC

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	07/11/11
Project:	Carriage Cleantown	Date Received:	07/15/11
Client Sample ID:	828131A-MW11	SDG No.:	C3028
Lab Sample ID:	C3028-03	Matrix:	SOIL
		% Solid:	87.9

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	4500	EJ-OR-TC	1	100	100	mg/Kg	07/19/11	07/19/11	Lloyd Kahn

TC 9/12/11

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	07/13/11
Project:	Carriage Cleantown	Date Received:	07/15/11
Client Sample ID:	828131A-MW12	SDG No.:	C3028
Lab Sample ID:	C3028-04	Matrix:	SOIL
		% Solid:	86.7

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	4900	EJ-OR	1	100	100	mg/Kg	07/19/11	07/19/11	Lloyd Kahn

9/12/11
TC

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

CHEMTECH
CHAIN OF CUSTODY RECORD

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

CHEMTECH PROJECT NO. C3028
QUOTE NO.
COC Number 083112

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: MACTEC
ADDRESS: 511 Congress Str PO Box 7050
CITY: Portland STATE: Me ZIP: 04101
ATTENTION: Tige Cunningham
PHONE: 207-828-3415 FAX: 207-772-4762

CLIENT PROJECT INFORMATION

PROJECT NAME: Off-Site Carriage Cleaners
PROJECT NO.: 3612102468 LOCATION: Penfield, NY
PROJECT MANAGER: J. Pickett / C. Staples
e-mail: TLCunningham@mactec.com
PHONE: FAX:

CLIENT BILLING INFORMATION

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

DATA TURNAROUND INFORMATION

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

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☒ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other ____
☒ EDD FORMAT Equis E2

ANALYSIS: 1. 8260 VOCs 2. TOC 3. 4. 5. 6. 7. 8. 9.

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	COMP	GRAB	DATE	TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
							PRESERVATIVES	A	E								← Specify Preservatives A-HCl B-HNO_3 C-H_2SO_4 D-NaOH E-ICE F-Other
1.	828131A - DP3225X	GW		✓	7/13/11	1235	3	x									
2.	828131A - DP3325X	GW		✓	7/13/11	1415	3	x									
3.	828131A - MW11	Soil		✓	7/11/11	1930	1	~~x~~	x								
4.	828131A - MW12	Soil		✓	7/13/11	1655	1	~~x~~	x								
5.	828131A - Trip Blank	~~GW~~ W		✓	6/27/11	1745	2	x									
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY	DATE/TIME	RECEIVED BY
1. RELINQUISHED BY SAMPLER: [signature]	7/14/11 1640	1. FED EX AIRBILL 8372 3852 2680
2. RELINQUISHED BY:	DATE/TIME:	2. RECEIVED BY:
3. RELINQUISHED BY: FedEx	7-15-11 900	3. RECEIVED FOR LAB BY: [signature]

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
Cooler Temp. 4°C
MeOH extraction requires an additional 4 oz jar for percent solid.
Ice in Cooler?: —
Comments:

Page 1 of 1

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

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

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

TC 9-12-11

Response Factor Report MSVOAG

Method Path : \\TERASTORAGE\VOASRV\HPCHEM1\MSVOA_G\METHOD\
Method File : 82G071511W.M
Title : SW846 8260
Last Update : Fri Jul 15 15:59:34 2011
Response Via : Initial Calibration

Calibration Files
1 =VG036160.D 5 =VG036161.D 20 =VG036162.D
50 =VG036163.D 100 =VG036164.D 150 =VG036165.D

Initial Cal Check
TC 9/12/11

		Compound	1	5	20	50	100	150	Avg	%RSD
1)	I	Pentafluorobenzene	ISTD							
2)	T	Dichlorodifluorom	0.344	0.409	0.300	0.436	0.488	0.448	0.404	17.30
3)	P	Chloromethane	0.859	0.891	0.739	0.842	0.869	0.804	0.834	6.57
4)	C	Vinyl Chloride	0.716	0.758	0.594	0.691	0.751	0.681	0.699	8.59#
5)	T	Bromomethane	0.720	0.644	0.465	0.501	0.530	0.435	0.549	20.12
6)	T	Chloroethane	0.477	0.477	0.390	0.417	0.345	0.267	0.395	20.41
7)	T	Trichlorofluorome	0.742	0.771	0.721	0.801	0.884	0.828	0.791	7.54
8)	T	Diethyl Ether	0.457	0.425	0.405	0.430	0.451	0.440	0.435	4.36
9)	T	1,1,2-Trichlorotr	0.611	0.617	0.488	0.533	0.587	0.565	0.567	8.72
10)	T	Methyl Iodide	1.073	1.253	1.103	1.283	1.336	1.384	1.239	10.11
11)	T	Tert butyl alcoho	0.056	0.056	0.057	0.058	0.061	0.063	0.059	4.81
12)	CM	1,1-Dichloroethen	0.617	0.602	0.546	0.609	0.661	0.629	0.611	6.21#
13)	T	Acrolein	0.096	0.095	0.062	0.080	0.080	0.075	0.081	15.73
14)	T	Allyl chloride	1.064	1.103	0.884	0.916	0.936	0.848	0.959	10.65
15)	T	Acrylonitrile	0.223	0.208	0.210	0.209	0.212	0.199	0.210	3.61
16)	T	Acetone	0.404	0.283	0.213	0.223	0.223	0.200	0.258	29.93
17)	T	Carbon Disulfide	2.227	1.974	1.806	2.099	2.146	1.978	2.038	7.37
18)	T	Methyl Acetate	0.568	0.768	0.719	0.678	0.662	0.628	0.671	10.45
19)	T	Methyl tert-butyl	1.484	1.591	1.349	1.462	1.483	1.464	1.472	5.22
20)	T	Methylene Chlorid	0.960	0.745	0.703	0.710	0.711	0.710	0.756	13.33
21)	T	trans-1,2-Dichlor	0.662	0.667	0.538	0.611	0.631	0.626	0.622	7.48
22)	T	Acetonitrile							0.000	-1.00
23)	T	Diisopropyl ether	2.073	2.076	1.843	1.907	1.854	1.701	1.909	7.61
24)	T	Vinyl Acetate	1.300	1.209	1.084	1.099	0.972	0.871	1.089	14.22
25)	P	1,1-Dichloroethan	1.462	1.270	1.135	1.215	1.169	1.129	1.230	10.20
26)	T	2-Butanone	0.410	0.416	0.341	0.344	0.316	0.294	0.353	14.04
27)	T	2,2-Dichloropropa	0.811	0.736	0.602	0.586	0.586	0.551	0.645	16.03
28)	T	cis-1,2-Dichloroe	0.807	0.829	0.795	0.804	0.797	0.827	0.810	1.83
29)	T	Bromochloromethan	0.595	0.526	0.524	0.483	0.468	0.432	0.505	11.28
30)	C	Chloroform	1.215	1.228	1.061	1.107	1.079	1.059	1.125	6.85#
31)	T	Cyclohexane	1.039	0.913	0.807	0.867	0.831	0.774	0.872	10.91
32)	T	1,1,1-Trichloroet	0.795	0.734	0.651	0.712	0.683	0.692	0.711	6.98
33)	S	1,2-Dichloroethan	0.991	0.558	0.561	0.574	0.588	0.549	0.637	27.32
34)	I	1,4-Difluorobenzene	ISTD							
35)	S	Dibromofluorometh	0.465	0.367	0.396	0.395	0.380	0.390	0.399	8.57
36)	T	1,1-Dichloroprope	0.537	0.542	0.482	0.498	0.488	0.481	0.505	5.46
37)	T	Ethyl Acetate	0.588	0.486	0.425	0.429	0.384	0.377	0.448	17.59
38)	T	Carbon Tetrachlor	0.337	0.422	0.430	0.422	0.416	0.437	0.411	8.96
39)	T	Methylcyclohexane	0.570	0.560	0.458	0.476	0.467	0.451	0.497	10.70
40)	TM	Benzene	1.567	1.527	1.415	1.395	1.343	1.310	1.426	7.10
41)	T	Methacrylonitrile	0.299	0.224	0.208	0.206	0.194	0.189	0.220	18.46
42)	TM	1,2-Dichloroethan	0.459	0.439	0.406	0.402	0.409	0.413	0.421	5.40
43)	T	Isopropyl Acetate	0.675	0.629	0.613	0.591	0.545	0.526	0.597	9.24
44)	T	Isobutyl alcohol							0.000	-1.00
45)	TM	Trichloroethene	0.324	0.387	0.372	0.383	0.384	0.387	0.373	6.61
46)	C	1,2-Dichloropropa	0.490	0.359	0.345	0.352	0.340	0.328	0.369	16.34#
47)	T	Dibromomethane	0.237	0.237	0.236	0.235	0.239	0.231	0.236	1.18
48)	T	Bromodichlorometh	0.380	0.414	0.396	0.418	0.423	0.407	0.406	3.93
49)	T	Methyl methacryla	0.397	0.266	0.264	0.268	0.249	0.237	0.280	20.88
50)	T	1,4-Dioxane	0.002	0.003	0.004	0.004	0.003	0.003	0.003	16.08
51)	S	Toluene-d8	0.940	0.786	0.823	0.832	0.846	0.787	0.836	6.74
52)	T	4-Methyl-2-Pentan	0.374	0.366	0.350	0.341	0.316	0.297	0.341	8.66

cis-12DCE check

1ppb 10038 (50) / G21917 X = 0.8070

5ppb 47439 (50) / 572224 (5) = 0.8290

20ppb 189583 (50) / 593125 (20) = 0.7948

50ppb 472349 (50) / 587707 (50) = 0.803715

100 ~~602269~~ 460615 / ~~602269~~ (50) / 460615 (100) = 602269 = 0.79749

150 1625247 (50) / 655080 (150) = 0.8274

TC 9/12/11

Data Path : W:\HPCHEM1\MSVOA_G\DATA\VG071511\
Data File : VG036177.D
Acq On : 15 Jul 2011 23:36
Operator : PS
Sample : C3028-01
Misc : 5mL MSVOA_G
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 16 02:36:24 2011
Quant Method : \\TERASTORAGE\VOASRV\HPCHEM1\MSVOA_G\METHOD\82G071511W.M
Quant Title : SW846 8260
QLast Update : Sat Jul 16 01:53:50 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	3.91	168	373812	50.00	ug/l		0.00
34) 1,4-Difluorobenzene	4.72	114	660181	50.00	ug/l		0.00
64) Chlorobenzene-d5	9.68	117	479719	50.00	ug/l		0.00
73) 1,4-Dichlorobenzene-d4	13.40	152	216137	50.00	ug/l		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4	3.90	65	188570	44.31	ug/l		0.00
Spiked Amount 50.000			Recovery = 88.62%				
35) Dibromofluoromethane	3.25	113	252187	47.92	ug/l		0.00
Spiked Amount 50.000			Recovery = 95.84%				
51) Toluene-d8	7.18	98	529859	48.01	ug/l		0.00
Spiked Amount 50.000			Recovery = 96.02%				
63) 4-Bromofluorobenzene	11.65	95	227784	50.43	ug/l		0.00
Spiked Amount 50.000			Recovery = 100.86%				
Target Compounds							Qvalue
4) Vinyl Chloride	0.92	62	11164	2.14	ug/l		98
21) trans-1,2-Dichloroethene	1.86	96	4383	0.94	ug/l	#	74
28) cis-1,2-Dichloroethene	2.77	96	283434	46.81	ug/l		100
45) Trichloroethene	4.60	130	17309	3.52	ug/l		97
65) Tetrachloroethene	7.87	164	9612	3.22	ug/l	#	78

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sample Calculation check

1,2-DCE

$$.810 = \frac{283434(50)}{373812\,(X)} = 46.804 \quad \checkmark \text{ ok}$$

Surrogate 4-BFB

$$0.342 = \frac{227784(50)}{\cancel{479719}\ 660181\,(X)} = \frac{50.443}{50} = 100\%$$

9/12/14
TC

Data Path : W:\HPCHEM1\MSVOA_G\DATA\VG071511\
Data File : VG036168.D
Acq On : 15 Jul 2011 18:09
Operator : PS
Sample : 50 PPB CCC
Misc : 5mL MSVOA_G
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 15 18:37:46 2011
Quant Method : \\TERASTORAGE\VOASRV\HPCHEM1\MSVOA_G\METHOD\82G071511W.M
Quant Title : SW846 8260
QLast Update : Fri Jul 15 15:59:34 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	50.000	50.000	0.0	109	0.00
2	T	Dichlorodifluoromethane	50.000	49.666	0.7	111	-0.01
3	P	Chloromethane	50.000	50.982	-2.0	110	0.00
4	C	Vinyl Chloride	50.000	51.259	-2.5#	113	0.00
5	T	Bromomethane	50.000	46.929	6.1	113	0.00
6	T	Chloroethane	50.000	48.696	2.6	106	-0.01
7	T	Trichlorofluoromethane	50.000	48.859	2.3	105	0.00
8	T	Diethyl Ether	50.000	46.421	7.2	103	0.00
9	T	1,1,2-Trichlorotrifluoroeth	50.000	48.412	3.2	113	0.00
10	T	Methyl Iodide	50.000	47.350	5.3	100	0.00
11	T	Tert butyl alcohol	250.000	227.813	8.9	100	0.00
12	CM	1,1-Dichloroethene	50.000	44.817	10.4#	98	0.00
13	T	Acrolein	250.000	216.764	13.3	91	0.00
14	T	Allyl chloride	50.000	43.490	13.0	100	0.00
15	T	Acrylonitrile	250.000	228.401	8.6	100	0.00
16	T	Acetone	250.000	210.301	15.9	89	0.00
17	T	Carbon Disulfide	50.000	46.994	6.0	100	0.00
18	T	Methyl Acetate	50.000	47.876	4.2	103	0.00
19	T	Methyl tert-butyl Ether	50.000	45.373	9.3	100	0.00
20	T	Methylene Chloride	50.000	41.764	16.5	97	0.00
21	T	trans-1,2-Dichloroethene	50.000	45.850	8.3	102	0.00
22	T	Acetonitrile	50.000	0.000	100.0#	0	-2.08#
23	T	Diisopropyl ether	50.000	45.039	9.9	99	0.00
24	T	Vinyl Acetate	250.000	229.675	8.1	100	0.00
25	P	1,1-Dichloroethane	50.000	44.463	11.1	98	0.00
26	T	2-Butanone	250.000	223.448	10.6	100	0.00
27	T	2,2-Dichloropropane	50.000	49.722	0.6	107	0.00
28	T	cis-1,2-Dichloroethene	50.000	46.515	7.0	102	0.00
29	T	Bromochloromethane	50.000	44.401	11.2	101	0.00
30	C	Chloroform	50.000	46.477	7.0#	103	0.00
31	T	Cyclohexane	50.000	44.594	10.8	98	0.00
32	T	1,1,1-Trichloroethane	50.000	46.459	7.1	102	0.00
33	S	1,2-Dichloroethane-d4	50.000	49.639	0.7	107	0.00
34	I	1,4-Difluorobenzene	50.000	50.000	0.0	107	0.00
35	S	Dibromofluoromethane	50.000	47.707	4.6	103	0.00
36	T	1,1-Dichloropropene	50.000	49.686	0.6	108	0.00
37	T	Ethyl Acetate	50.000	52.070	-4.1	102	0.00
38	T	Carbon Tetrachloride	50.000	49.152	1.7	102	0.00
39	T	Methylcyclohexane	50.000	46.118	7.8	103	0.00
40	TM	Benzene	50.000	48.380	3.2	106	0.00
41	T	Methacrylonitrile	50.000	50.855	-1.7	103	0.00
42	TM	1,2-Dichloroethane	50.000	49.129	1.7	110	0.00
43	T	Isopropyl Acetate	50.000	47.934	4.1	103	0.00
44	T	Isobutyl alcohol	50.000	0.000	100.0#	0	-4.34#
45	TM	Trichloroethene	50.000	54.074	-8.1	112	0.00

CIS 12 DCE

$50 = \frac{484152\,(50)}{642590\,(X)} =$

RF: 0.7534

$0.810 = \frac{484152\,(50)}{642590\,(x)}$

$\%D = \frac{46.50}{50} = 6.98$

OK ✓

9/12/11
TC

115

Data Path : W:\HPCHEM1\MSVOA_G\DATA\VG071511\
Data File : VG036171.D
Acq On : 15 Jul 2011 20:11
Operator : PS
Sample : BSG0715W1
Misc : 5mL MSVOA_G
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 02:09:51 2011
Quant Method : \\TERASTORAGE\VOASRV\HPCHEM1\MSVOA_G\METHOD\82G071511W.M
Quant Title : SW846 8260
QLast Update : Sat Jul 16 01:53:50 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	3.91	168	620010	50.00	ug/l		0.00
34) 1,4-Difluorobenzene	4.73	114	1041735	50.00	ug/l		0.00
64) Chlorobenzene-d5	9.69	117	739625	50.00	ug/l		0.00
73) 1,4-Dichlorobenzene-d4	13.39	152	327158	50.00	ug/l		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4	3.90	65	363629	51.68	ug/l		0.00
Spiked Amount 50.000			Recovery = 103.36%				
35) Dibromofluoromethane	3.25	113	396609	47.76	ug/l		0.00
Spiked Amount 50.000			Recovery = 95.52%				
51) Toluene-d8	7.19	98	905497	52.00	ug/l		0.00
Spiked Amount 50.000			Recovery = 104.00%				
63) 4-Bromofluorobenzene	11.65	95	331030	46.45	ug/l		0.00
Spiked Amount 50.000			Recovery = 92.90%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.80	85	75726	15.08	ug/l		100
3) Chloromethane	0.87	50	192817	18.64	ug/l		100
4) Vinyl Chloride	0.92	62	150976	17.43	ug/l		97
5) Bromomethane	1.06	94	123648	18.05	ug/l		96
6) Chloroethane	1.12	64	100908	18.23	ug/l		98
7) Trichlorofluoromethane	1.17	101	174019	17.74	ug/l		95
8) Diethyl Ether	1.32	74	95750	17.77	ug/l		98
9) 1,1,2-Trichlorotrifluoroet	1.47	101	126603	18.01	ug/l		100
10) Methyl Iodide	1.50	142	261214	17.01	ug/l		97
11) Tert butyl alcohol	2.05	59	69192	95.06	ug/l	#	93
12) 1,1-Dichloroethene	1.42	96	123672	16.33	ug/l		91
13) Acrolein	1.62	56	66323	68.24	ug/l		95
14) Allyl chloride	1.69	41	193789	16.30	ug/l		98
15) Acrylonitrile	2.35	53	236125	90.59	ug/l		98
16) Acetone	1.80	43	244078	83.53	ug/l		98
17) Carbon Disulfide	1.44	76	407251	16.11	ug/l		98
18) Methyl Acetate	1.88	43	171579	20.63	ug/l		98
19) Methyl tert-butyl Ether	1.95	73	325124	17.81	ug/l		93
20) Methylene Chloride	1.76	84	156892	16.73	ug/l		92
21) trans-1,2-Dichloroethene	1.86	96	127566	16.53	ug/l		96
23) Diisopropyl ether	2.22	45	428296	18.09	ug/l		98
24) Vinyl Acetate	2.53	43	1251766	92.69	ug/l		99
25) 1,1-Dichloroethane	2.29	63	272283	17.85	ug/l		97
26) 2-Butanone	3.45	43	409879	93.53	ug/l		94
27) 2,2-Dichloropropane	2.86	77	116135	14.97	ug/l		99
28) cis-1,2-Dichloroethene	2.76	96	179775	17.90	ug/l		97
29) Bromochloromethane	2.95	49	123751	19.77	ug/l		97
30) Chloroform	3.05	83	255835	18.34	ug/l		99
31) Cyclohexane	2.93	56	189696	17.54	ug/l		97
32) 1,1,1-Trichloroethane	3.24	97	156727	17.78	ug/l		99
36) 1,1-Dichloropropene	3.39	75	202150	19.23	ug/l		99
37) Ethyl Acetate	3.24	43	169887	19.13	ug/l	#	100
38) Carbon Tetrachloride	3.16	117	161908m	18.93	ug/l		
39) Methylcyclohexane	4.53	83	180168	17.40	ug/l		93

LCS
calc check

0.810 = 179775 (50) / 620010 (X) =

17.894 ppb / 20 = 89%R

OK ✓

2G071511W.M Mon Jul 18 13:16:53 2011 S

TC 9/12/11

VOCs

NYSDEC DUSR PROJECT CHEMIST REVIEW RECORD
Project: Offsite Carriage Cleaners
Method : SW-846 8260B
Laboratory and SDG(s): Chemtech **SDG#** C3214
Date: 9-13-11
Reviewer: Tige Cunningham
Review Level [X] NYSDEC DUSR USEPA Region II Guideline

1. ☑ **Case Narrative Review and COC/Data Package Completeness** COMMENTS
   Were problems noted? Yes and noted.
   Where all the samples on the COC analyzed for the requested analyses? (YES) NO (circle one)

2. ☑ **Holding time and Sample Collection**
   All samples were analyzed within the 14 day holding time. (YES) NO (circle one)

3. ☑ **QC Blanks**
   Are method blanks free of contamination? YES (NO) (circle one) 111TCA @ 7.6ppb. (U) Qual sample MW05012 @ 8.6ppb.
   Are Trip blanks free of contamination? (YES) NO (circle one)
   Are Rinse blanks free of contamination? YES NO (NA) (circle one)

4. ☑ **Instrument Tuning**
   Were all results were within method criteria. (YES) NO (circle one)

5. ☑ **Instrument Calibration** Were all results within criteria? YES (NO) (circle one) See attached
   Initial Calibration %RSD = 20% **(30% for 1,1-DCE, chloroform, 1,2-DCP, toluene, ethylbenzene, VC)**
   Initial Avg RRF and Continuing RRF should be ≥ 0.05 and 0.10 for Chloromethane, 1,1-Dichloroethane, Bromoform and 0.30 for Chlorobenzene and 1,1,2,2-Tetrachloroethane 4 Initial Cals analyzed only
   Continuing Calibration %D = 20% Calc checks done on I-cal line 8/5/11

6. ☑ **Internal Standards** (Area Limits = -50% to +100%, RT's within 30 seconds of mid point cal Std)
   Were all results within criteria? YES (NO) (circle one) 828131A-MW07012 (50%) Pentafluorobenzene out low. (J) Qual

7. ☑ **Surrogate Recovery** - Region II limits (water 80-120%, soil 70-130%) cis12DCE
   Were all results were within Region II limits? YES (NO) (circle one) See attached Form

8. ☑ **Matrix Spike** - Region II limits (water and soil 70-130%, water RPD 20, soil RPD 35)
   Were MS/MSDs submitted/analyzed? (YES) NO Sample 828131A - DP28018
   Were all results were within the Region II limits? YES (NO) NA (circle one) See attached Form

9. ☑ **Duplicates/replicates** - Region II Limits (water RPD 50, soil RPD 100)
   Were Field Duplicates submitted/analyzed? (YES) NO
   Were all results were within Region II Limits? (YES) NO NA (circle one)

10. ☑ **Laboratory Control Sample Results** - Region II (Water and soil 70-130%)
    Were all results were within Region II control limits? YES NO (circle one)

11. ☑ **Raw Data Review and Calculation Checks** 49 compounds x 16 = 784 OK ✓

12. ☑ **Electronic Data Review and Edits**
    Does the EDD match the Form I's? (YES) NO (circle one)

13. ☑ **TIC Review** and DUSR **Table 1** (sample Listing), **Table 2** (results summary), **Table 3** (Reason Codes), **Table 4** (TIC's). Did lab report TICs? (YES) NO (circle one)

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW6035	SDG No.:	C3214
Lab Sample ID:	C3214-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000371.D	1		08/16/11	VR081611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	1	U J	0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U J	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.67	J	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

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9/19/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW6035	SDG No.:	C3214
Lab Sample ID:	C3214-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000371.D	1		08/16/11	VR081611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	1	U	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	56.3		61 - 141	113%	SPK: 50
1868-53-7	Dibromofluoromethane	60.3		69 - 133	121%	SPK: 50
2037-26-5	Toluene-d8	57.5		65 - 126	115%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.2		58 - 135	108%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	975344	8.19			
540-36-3	1,4-Difluorobenzene	1653810	9.07			
3114-55-4	Chlorobenzene-d5	1483670	11.81			
3855-82-1	1,4-Dichlorobenzene-d4	754530	13.73			

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW6035	SDG No.:	C3214
Lab Sample ID:	C3214-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000371.D	1		08/16/11	VR081611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW02012	SDG No.:	C3214
Lab Sample ID:	C3214-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000317.D	1		08/13/11	VR081211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units	
TARGETS							
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L	
74-87-3	Chloromethane	1	U	0.2	1	ug/L	
75-01-4	Vinyl Chloride	63		0.34	1	ug/L	
74-83-9	Bromomethane	1	U	0.2	1	ug/L	
75-00-3	Chloroethane	1	U	0.2	1	ug/L	
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L	
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L	
75-35-4	1,1-Dichloroethene	2.5		0.47	1	ug/L	
67-64-1	Acetone	5	U	0.5	5	ug/L	
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L	
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L	
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L	
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L	
156-60-5	trans-1,2-Dichloroethene	47		0.41	1	ug/L	
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L	
110-82-7	Cyclohexane	1	U J	0.2	1	ug/L	
78-93-3	2-Butanone	5	U	1.3	5	ug/L	
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L	
156-59-2	cis-1,2-Dichloroethene	1400 ~~1500~~	E D	0.35	1	ug/L	100X
67-66-3	Chloroform	1	U	0.34	1	ug/L	
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L	
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L	
71-43-2	Benzene	1	U	0.32	1	ug/L	
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L	
79-01-6	Trichloroethene	660 ~~670~~	E D	0.28	1	ug/L	100X
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L	
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L	
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L	
108-88-3	Toluene	1	U	0.37	1	ug/L	
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L	
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L	

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW02012	SDG No.:	C3214
Lab Sample ID:	C3214-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000317.D	1		08/13/11	VR081211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	1300 ~~1100~~	E DJ	0.27	1	ug/L 100X
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	47.3		61 - 141	95%	SPK: 50
1868-53-7	Dibromofluoromethane	51.3		69 - 133	103%	SPK: 50
2037-26-5	Toluene-d8	46.1		65 - 126	92%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.2		58 - 135	92%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	1088310	8.19			
540-36-3	1,4-Difluorobenzene	1828310	9.07			
3114-55-4	Chlorobenzene-d5	1630420	11.81			
3855-82-1	1,4-Dichlorobenzene-d4	815556	13.73			

TC
9/19/4

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW02012	SDG No.:	C3214
Lab Sample ID:	C3214-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000317.D	1		08/13/11	VR081211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

TC
9/19/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW02012DUP	SDG No.:	C3214
Lab Sample ID:	C3214-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000329.D	1		08/13/11	VR081211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	71		0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	3.2		0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	31		0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1500 ~~1600~~	~~E~~ D	0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	680 ~~690~~	~~E~~ D	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

9/12/14
TC

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW02012DUP	SDG No.:	C3214
Lab Sample ID:	C3214-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000329.D	1		08/13/11	VR081211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	1300 ~~1200~~	~~E~~ DJ	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	48.3		61 - 141	97%	SPK: 50
1868-53-7	Dibromofluoromethane	50.7		69 - 133	101%	SPK: 50
2037-26-5	Toluene-d8	48.5		65 - 126	97%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.4		58 - 135	91%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	1012550	8.19			
540-36-3	1,4-Difluorobenzene	1743140	9.07			
3114-55-4	Chlorobenzene-d5	1541840	11.81			
3855-82-1	1,4-Dichlorobenzene-d4	776823	13.73			

9/19/11
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CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW02012DUP	SDG No.:	C3214
Lab Sample ID:	C3214-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000329.D	1		08/13/11	VR081211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

9/19/11
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CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW05012	SDG No.:	C3214
Lab Sample ID:	C3214-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036665.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.81	J	0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	8.6	~~B~~ U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	1.9		0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

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9/8/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW05012	SDG No.:	C3214
Lab Sample ID:	C3214-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036665.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	14	J	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	59.3		61 - 141	119%	SPK: 50
1868-53-7	Dibromofluoromethane	56.5		69 - 133	113%	SPK: 50
2037-26-5	Toluene-d8	49.6		65 - 126	99%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.2		58 - 135	106%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	695438	3.93			
540-36-3	1,4-Difluorobenzene	1003050	4.75			
3114-55-4	Chlorobenzene-d5	984636	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	437436	13.4			

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9/19/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW05012	SDG No.:	C3214
Lab Sample ID:	C3214-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036665.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

TC
9/19/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW07012	SDG No.:	C3214
Lab Sample ID:	C3214-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036666.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	89		0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	7.6		0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	32		0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	2500 ~~1000~~	E DJ	0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	78		0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

9/19/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW07012	SDG No.:	C3214
Lab Sample ID:	C3214-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036666.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	11	4	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	60.2		61 - 141	120%	SPK: 50
1868-53-7	Dibromofluoromethane	57.5		69 - 133	115%	SPK: 50
2037-26-5	Toluene-d8	51.5		65 - 126	103%	SPK: 50
460-00-4	4-Bromofluorobenzene	54		58 - 135	108%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	688131	3.94			
540-36-3	1,4-Difluorobenzene	961013	4.75			
3114-55-4	Chlorobenzene-d5	986994	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	450307	13.4			

9/19/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW07012	SDG No.:	C3214
Lab Sample ID:	C3214-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036666.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

9/19/11
TC

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP12013	SDG No.:	C3214
Lab Sample ID:	C3214-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023452.D	1		08/16/11	VE081611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	2.7		0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.82	J	0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

9/19/11
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CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP12013	SDG No.:	C3214
Lab Sample ID:	C3214-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023452.D	1		08/16/11	VE081611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	1	U	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	60.9		61 - 141	122%	SPK: 50
1868-53-7	Dibromofluoromethane	55.9		69 - 133	112%	SPK: 50
2037-26-5	Toluene-d8	54.7		65 - 126	109%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.3		58 - 135	109%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	1212770	9.35			
540-36-3	1,4-Difluorobenzene	2478290	10.44			
3114-55-4	Chlorobenzene-d5	2283960	14.85			
3855-82-1	1,4-Dichlorobenzene-d4	874015	18.64			

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP12013	SDG No.:	C3214
Lab Sample ID:	C3214-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023452.D	1		08/16/11	VE081611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

9/19/11
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CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP10013	SDG No.:	C3214
Lab Sample ID:	C3214-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036670.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	86 ~~180~~	~~E~~ D	0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1.9	J	0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	15	J	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	410 ~~790~~	~~E~~ D	0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	70 ~~150~~	~~E~~ D	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP10013	SDG No.:	C3214
Lab Sample ID:	C3214-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036670.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	2.2	J	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	70.9	*	61 - 141	142%	SPK: 50
1868-53-7	Dibromofluoromethane	65.3		69 - 133	131%	SPK: 50
2037-26-5	Toluene-d8	55		65 - 126	110%	SPK: 50
460-00-4	4-Bromofluorobenzene	57		58 - 135	114%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	320447	3.93			
540-36-3	1,4-Difluorobenzene	458033	4.75			
3114-55-4	Chlorobenzene-d5	447155	9.71			
3855-82-1	1,4-Dichlorobenzene-d4	197460	13.41			

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP10013	SDG No.:	C3214
Lab Sample ID:	C3214-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036670.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW11055	SDG No.:	C3214
Lab Sample ID:	C3214-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023450.D	1		08/16/11	VE081611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1.9		0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

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9/19/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW11055	SDG No.:	C3214
Lab Sample ID:	C3214-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023450.D	1		08/16/11	VE081611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	1	U	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	59.3		61 - 141	119%	SPK: 50
1868-53-7	Dibromofluoromethane	55.6		69 - 133	111%	SPK: 50
2037-26-5	Toluene-d8	53.8		65 - 126	108%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.8		58 - 135	108%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	1290910	9.35			
540-36-3	1,4-Difluorobenzene	2613920	10.44			
3114-55-4	Chlorobenzene-d5	2378410	14.85			
3855-82-1	1,4-Dichlorobenzene-d4	916187	18.64			

TC
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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW11055	SDG No.:	C3214
Lab Sample ID:	C3214-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023450.D	1		08/16/11	VE081611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW12055	SDG No.:	C3214
Lab Sample ID:	C3214-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036672.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	110		0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1.1		0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	4.2		0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	130		0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	2.9		0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

9/19/11
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CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW12055	SDG No.:	C3214
Lab Sample ID:	C3214-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036672.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.98	J	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	60.9		61 - 141	122%	SPK: 50
1868-53-7	Dibromofluoromethane	55.6		69 - 133	111%	SPK: 50
2037-26-5	Toluene-d8	48.1		65 - 126	96%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.2		58 - 135	108%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	670318	3.94			
540-36-3	1,4-Difluorobenzene	982858	4.75			
3114-55-4	Chlorobenzene-d5	974393	9.71			
3855-82-1	1,4-Dichlorobenzene-d4	455612	13.41			

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CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW12055	SDG No.:	C3214
Lab Sample ID:	C3214-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036672.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

9/19/11
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CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP27015	SDG No.:	C3214
Lab Sample ID:	C3214-10	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023451.D	1		08/16/11	VE081611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

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9/19/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP27015	SDG No.:	C3214
Lab Sample ID:	C3214-10	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023451.D	1		08/16/11	VE081611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	1	U	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	60.4		61 - 141	121%	SPK: 50
1868-53-7	Dibromofluoromethane	56.6		69 - 133	113%	SPK: 50
2037-26-5	Toluene-d8	54.1		65 - 126	108%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.6		58 - 135	109%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	1243520	9.35			
540-36-3	1,4-Difluorobenzene	2518850	10.45			
3114-55-4	Chlorobenzene-d5	2317850	14.85			
3855-82-1	1,4-Dichlorobenzene-d4	897751	18.65			

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP27015	SDG No.:	C3214
Lab Sample ID:	C3214-10	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023451.D	1		08/16/11	VE081611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilutiou

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP22015	SDG No.:	C3214
Lab Sample ID:	C3214-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023453.D	1		08/16/11	VE081611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	0.69	J	0.2	1	ug/L
75-01-4	Vinyl Chloride	130		0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

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CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP22015	SDG No.:	C3214
Lab Sample ID:	C3214-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023453.D	1		08/16/11	VE081611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	1	U	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Diehloroethane-d4	60.3		61 - 141	121%	SPK: 50
1868-53-7	Dibromofluoromethane	56.6		69 - 133	113%	SPK: 50
2037-26-5	Toluene-d8	54.8		65 - 126	110%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.1		58 - 135	108%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	1195850	9.35			
540-36-3	1,4-Difluorobenzene	2412570	10.45			
3114-55-4	Chlorobenzene-d5	2206940	14.84			
3855-82-1	1,4-Dichlorobenzene-d4	851249	18.65			

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP22015	SDG No.:	C3214
Lab Sample ID:	C3214-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023453.D	1		08/16/11	VE081611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP15013	SDG No.:	C3214
Lab Sample ID:	C3214-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000356.D	1		08/15/11	VR081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	7.9	J	0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U J	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U J	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1.8		0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U J	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	8.6		0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	~~1000~~ 1100	E D	0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	~~520~~ 610	E D	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

TC
9/19/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP15013	SDG No.:	C3214
Lab Sample ID:	C3214-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000356.D	1		08/15/11	VR081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	~~270~~ 330	J DJ	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.6		61 - 141	101%	SPK: 50
1868-53-7	Dibromofluoromethane	55.9		69 - 133	112%	SPK: 50
2037-26-5	Toluene-d8	53.8		65 - 126	108%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.6		58 - 135	99%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	1031450	8.19			
540-36-3	1,4-Difluorobenzene	1719010	9.07			
3114-55-4	Chlorobenzene-d5	1538840	11.81			
3855-82-1	1,4-Dichlorobenzene-d4	776282	13.73			

TC
9/19/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP15013	SDG No.:	C3214
Lab Sample ID:	C3214-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000356.D	1		08/15/11	VR081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

TC
9/19/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP23015	SDG No.:	C3214
Lab Sample ID:	C3214-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036668.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	120		0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.54	J	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	8.1		0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	~~230~~ 240 E D		0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

TC
9/14/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP23015	SDG No.:	C3214
Lab Sample ID:	C3214-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036668.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	1	U	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	60.9		61 - 141	122%	SPK: 50
1868-53-7	Dibromofluoromethane	56.8		69 - 133	114%	SPK: 50
2037-26-5	Toluene-d8	48.2		65 - 126	97%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.1		58 - 135	104%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	689957	3.92			
540-36-3	1,4-Difluorobenzene	1006240	4.74			
3114-55-4	Chlorobenzene-d5	996080	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	453272	13.4			

JC
9/19/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP23015	SDG No.:	C3214
Lab Sample ID:	C3214-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036668.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

TC
9/19/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP28018	SDG No.:	C3214
Lab Sample ID:	C3214-14	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000362.D	1		08/15/11	VR081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	4.5	J	0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U J	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U J	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	U J	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U J	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	5.1		0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

TC
9/19/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP28018	SDG No.:	C3214
Lab Sample ID:	C3214-14	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000362.D	1		08/15/11	VR081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	1	U	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U J	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	47.6		61 - 141	95%	SPK: 50
1868-53-7	Dibromofluoromethane	49.1		69 - 133	98%	SPK: 50
2037-26-5	Toluene-d8	45		65 - 126	90%	SPK: 50
460-00-4	4-Bromofluorobenzene	42.6		58 - 135	85%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	660946	8.19			
540-36-3	1,4-Difluorobenzene	1140170	9.07			
3114-55-4	Chlorobenzene-d5	1022820	11.81			
3855-82-1	1,4-Dichlorobenzene-d4	509609	13.73			

TC
9/19/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP28018	SDG No.:	C3214
Lab Sample ID:	C3214-14	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000362.D	1		08/15/11	VR081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

TC
8/19/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW-11-MW-12	SDG No.:	C3214
Lab Sample ID:	C3214-17	Matrix:	SOIL
Analytical Method:	SW8260B	% Moisture:	14
Sample Wt/Vol:	4.98 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF028073.D	1		08/04/11	VF080411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5.8	U	0.76	5.8	ug/Kg
74-87-3	Chloromethane	5.8	U	1	5.8	ug/Kg
75-01-4	Vinyl Chloride	4.3	J	1.4	5.8	ug/Kg
74-83-9	Bromomethane	5.8	U	2.9	5.8	ug/Kg
75-00-3	Chloroethane	5.8	U	1.6	5.8	ug/Kg
75-69-4	Trichlorofluoromethane	5.8	U	1.5	5.8	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	5.8	U	1.6	5.8	ug/Kg
75-35-4	1,1-Dichloroethene	5.8	U	1.7	5.8	ug/Kg
67-64-1	Acetone	29	U	3.5	29	ug/Kg
75-15-0	Carbon Disulfide	5.8	U	1.2	5.8	ug/Kg
1634-04-4	Methyl tert-butyl Ether	5.8	U	1.1	5.8	ug/Kg
79-20-9	Methyl Acetate	5.8	U	1.8	5.8	ug/Kg
75-09-2	Methylene Chloride	5.8	U	1.7	5.8	ug/Kg
156-60-5	trans-1,2-Dichloroethene	5.8	U	0.81	5.8	ug/Kg
75-34-3	1,1-Dichloroethane	5.8	U	1.1	5.8	ug/Kg
110-82-7	Cyclohexane	5.8	U	1.2	5.8	ug/Kg
78-93-3	2-Butanone	29	U	3.6	29	ug/Kg
56-23-5	Carbon Tetrachloride	5.8	U	1.2	5.8	ug/Kg
156-59-2	cis-1,2-Dichloroethene	32		1	5.8	ug/Kg
67-66-3	Chloroform	5.8	U	0.86	5.8	ug/Kg
71-55-6	1,1,1-Trichloroethane	5.8	U	1	5.8	ug/Kg
108-87-2	Methylcyclohexane	5.8	U	1.2	5.8	ug/Kg
71-43-2	Benzene	5.8	U	0.44	5.8	ug/Kg
107-06-2	1,2-Dichloroethane	5.8	U	0.75	5.8	ug/Kg
79-01-6	Trichloroethene	4.2	J	1	5.8	ug/Kg
78-87-5	1,2-Dichloropropane	5.8	U	0.3	5.8	ug/Kg
75-27-4	Bromodichloromethane	5.8	U	0.72	5.8	ug/Kg
108-10-1	4-Methyl-2-Pentanone	29	U	3.4	29	ug/Kg
108-88-3	Toluene	5.8	U	0.75	5.8	ug/Kg
10061-02-6	t-1,3-Dichloropropene	5.8	U	0.92	5.8	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	5.8	U	0.84	5.8	ug/Kg

TC
9/19/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW-11-MW-12	SDG No.:	C3214
Lab Sample ID:	C3214-17	Matrix:	SOIL
Analytical Method:	SW8260B	% Moisture:	14
Sample Wt/Vol:	4.98 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF028073.D	1		08/04/11	VF080411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	5.8	U	1.1	5.8	ug/Kg
591-78-6	2-Hexanone	29	U	4.6	29	ug/Kg
124-48-1	Dibromochloromethane	5.8	U	0.63	5.8	ug/Kg
106-93-4	1,2-Dibromoethane	5.8	U	0.75	5.8	ug/Kg
127-18-4	Tetrachloroethene	4.4	J	1.2	5.8	ug/Kg
108-90-7	Chlorobenzene	5.8	U	0.58	5.8	ug/Kg
100-41-4	Ethyl Benzene	5.8	U	0.72	5.8	ug/Kg
179601-23-1	m/p-Xylenes	12	U	0.84	12	ug/Kg
95-47-6	o-Xylene	5.8	U	0.79	5.8	ug/Kg
100-42-5	Styrene	5.8	U	0.53	5.8	ug/Kg
75-25-2	Bromoform	5.8	U	0.86	5.8	ug/Kg
98-82-8	Isopropylbenzene	5.8	U	0.56	5.8	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	5.8	U	0.54	5.8	ug/Kg
541-73-1	1,3-Dichlorobenzene	5.8	U	0.43	5.8	ug/Kg
106-46-7	1,4-Dichlorobenzene	5.8	U	0.48	5.8	ug/Kg
95-50-1	1,2-Dichlorobenzene	5.8	U	0.72	5.8	ug/Kg
96-12-8	1,2-Dibromo-3-Cbloropropane	5.8	U	1	5.8	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	5.8	U	0.82	5.8	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	40.5		56 - 120	81%	SPK: 50
1868-53-7	Dibromofluoromethane	51.1		57 - 135	102%	SPK: 50
2037-26-5	Toluene-d8	49		67 - 123	98%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.3		33 - 141	95%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	684487	3.19			
540-36-3	1,4-Difluorobenzene	1037520	3.79			
3114-55-4	Chlorobenzene-d5	897032	7.12			
3855-82-1	1,4-Dichlorobenzene-d4	539647	9			
TENTATIVE IDENTIFIED COMPOUNDS						
000110-54-3	Hexane	8.9	J		1.77	ug/Kg

9/19/11
TC

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW-11-MW-12	SDG No.:	C3214
Lab Sample ID:	C3214-17	Matrix:	SOIL
Analytical Method:	SW8260B	% Moisture:	14
Sample Wt/Vol:	4.98 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF028073.D	1		08/04/11	VF080411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

TC
9/9/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	TRIPBLANK	SDG No.:	C3214
Lab Sample ID:	C3214-18	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000304.D	1		08/12/11	VR081211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

TC
8/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	TRIPBLANK	SDG No.:	C3214
Lab Sample ID:	C3214-18	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000304.D	1		08/12/11	VR081211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	1	U	0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	48.3		61 - 141	97%	SPK: 50
1868-53-7	Dibromofluoromethane	48.7		69 - 133	97%	SPK: 50
2037-26-5	Toluene-d8	50.2		65 - 126	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.8		58 - 135	94%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	1307410	8.19			
540-36-3	1,4-Difluorobenzene	2237750	9.07			
3114-55-4	Chlorobenzene-d5	1991950	11.81			
3855-82-1	1,4-Dichlorobenzene-d4	986577	13.73			

TC 9/14/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	TRIPBLANK	SDG No.:	C3214
Lab Sample ID:	C3214-18	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR000304.D	1		08/12/11	VR081211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

TC
8/12/11

CHEMTECH 284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

Cover Page

Order ID : C3214

Project ID : Carriage Cleantown

Client : MACTEC Inc.

Lab Sample Number	Client Sample Number
C3214-01	828131A-MW6035
C3214-02	828131A-MW02012
C3214-03	828131A-MW02012DUP
C3214-04	828131A-MW05012
C3214-05	828131A-MW07012
C3214-06	828131A-DP12013
C3214-07	828131A-DP10013
C3214-08	828131A-MW11055
C3214-09	828131A-MW12055
C3214-10	828131A-DP27015
C3214-11	828131A-DP22015
C3214-12	828131A-DP15013
C3214-13	828131A-DP23015
C3214-14	828131A-DP28018
C3214-15	C3214-14-MS
C3214-16	C3214-14-MSD
C3214-17	828131A-MW-11-MW-12
C3214-18	TRIPBLANK

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.08.22 15:25:17 -04'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

Cunningham, Tige

From: mildred V. Reyes [mildred@chemtech.net]
Sent: Thursday, September 15, 2011 4:51 PM
To: Cunningham, Tige
Cc: Divya Mehta; Kurt Hummler; Pickett, Jeffrey; Staples, Charles; Ricardi, Christian
Subject: RE: NYSDEC Offsite Carriage Cleaners: Cover page for C3214 and batching samples

Good Afternoon:

We have review the data and found that the sample matrix cause the discrepancies in the samples affecting the internal standard.

The original analysis of the samples yield lower recoveries for the Internal Standard due to the sample matrix effect. The samples results were higher due to this.
When the samples were diluted the matrix effect was also diluted and recoveries for the internal standard were closer to the CCC results for the internal standard, therefore the sample results are more accurate.

The Internal Standard limits have a wide QC criteria (±50%). On both analysis the Internal Standard met the requirement.

Please do not hesitate to contact Divya Mehta if you require further information.

Regards,

Mildred V. Reyes
QA/QC

Direct Line: **(908) 728-3153**

CHEMTECH
284 Sheffield Street,
Mountainside, New Jersey 07092
Phone: (908) 789 8900
Fax: (908) 789 8922

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DoDELAP

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received this transmission in error, please notify us immediately by return e-mail,
and permanently delete this transmission, including attachments if any, from any computer.

From: Cunningham, Tige [mailto:TLCunningham@mactec.com]
Sent: Wednesday, September 14, 2011 4:28 PM
To: mildred@chemtech.net
Cc: Divya Mehta; Kurt Hummler; Pickett, Jeffrey; Staples, Charles; Ricardi, Christian
Subject: RE: NYSDEC Offsite Carriage Cleaners: Cover page for C3214 and batching samples

Hi Mildred

Can you please check the following analytical runs by 8260B. The 10X dilution analysis on this sample does not seem to match the original run at 1X. The concentrations from the 10X seem to be around half of the concentrations in the 1X. The upper level of the calibration line was 150ppb and the 10X result of vinyl chloride was 86ppb, which should have been within calibration on the 1X.

Thank you for the help.
Tige

field_sample_id	qc_code	lab_sample_id	analysis_method	param_name	final_result	final_c
828131A-DP10013	FS	C3214-07	SW8260B	Cis-1,2-Dichloroethene	790	
828131A-DP10013	FS	C3214-07DL	SW8260B	Cis-1,2-Dichloroethene	410	
828131A-DP10013	FS	C3214-07	SW8260B	Trichloroethene	150	
828131A-DP10013	FS	C3214-07DL	SW8260B	Trichloroethene	70	
828131A-DP10013	FS	C3214-07	SW8260B	Vinyl chloride	180	
828131A-DP10013	FS	C3214-07DL	SW8260B	Vinyl chloride	86	

Tige Cunningham, NRCC EAC
Project Scientist
AMEC Environment & Infrastructure
511 Congress Street, Suite 200
Portland Maine 04101
Tel 207-828-3415 Cell 207-329-0164 (personal)
Fax 207-772-4762

From: mildred V. Reyes [mailto:mildred@chemtech.net]
Sent: Wednesday, September 14, 2011 10:29 AM
To: Cunningham, Tige
Cc: Divya Mehta; Kurt Hummler; Pickett, Jeffrey; Staples, Charles
Subject: RE: NYSDEC Offsite Carriage Cleaners: Cover page for C3214 and batching samples

field_sample_id	qc_code	lab_sample_id	analysis_method	param_name	final_result	final_qualifier
828131A-DP10013	FS	C3214-07	SW8260B	Cis-1,2-Dichloroethene	790	E
828131A-DP10013	FS	C3214-07DL	SW8260B	Cis-1,2-Dichloroethene	410	D
828131A-DP10013	FS	C3214-07	SW8260B	Trichloroethene	150	E
828131A-DP10013	FS	C3214-07DL	SW8260B	Trichloroethene	70	D
828131A-DP10013	FS	C3214-07	SW8260B	Vinyl chloride	180	E
828131A-DP10013	FS	C3214-07DL	SW8260B	Vinyl chloride	86	D
828131A-DP15013	FS	C3214-12	SW8260B	Cis-1,2-Dichloroethene	1000	E
828131A-DP15013	FS	C3214-12DL	SW8260B	Cis-1,2-Dichloroethene	1100	D
828131A-DP15013	**FS**	**C3214-12**	**SW8260B**	**Tetrachloroethene**	**270**	**EJ**
828131A-DP15013	**FS**	**C3214-12DL**	**SW8260B**	**Tetrachloroethene**	**330**	**DJ**
828131A-DP15013	FS	C3214-12	SW8260B	Trichloroethene	520	E
828131A-DP15013	FS	C3214-12DL	SW8260B	Trichloroethene	610	D
828131A-DP23015	FS	C3214-13	SW8260B	Cis-1,2-Dichloroethene	230	E
828131A-DP23015	FS	C3214-13DL	SW8260B	Cis-1,2-Dichloroethene	240	D
828131A-DP23015	FS	C3214-13	SW8260B	Vinyl chloride	120	
828131A-DP23015	FS	C3214-13DL	SW8260B	Vinyl chloride	120	D
828131A-MW02012	**FS**	**C3214-02**	**SW8260B**	**Cis-1,2-Dichloroethene**	**1500**	**E**
828131A-MW02012	FS	C3214-02DL	SW8260B	Cis-1,2-Dichloroethene	1400	D
828131A-MW02012	**FS**	**C3214-02**	**SW8260B**	**Tetrachloroethene**	**1100**	**E**
828131A-MW02012	**FS**	**C3214-02DL**	**SW8260B**	**Tetrachloroethene**	**1300**	**DJ**
828131A-MW02012	**FS**	**C3214-02**	**SW8260B**	**Trichloroethene**	**670**	**E**
828131A-MW02012	FS	C3214-02DL	SW8260B	Trichloroethene	660	D
828131A-MW02012	FS	C3214-02	SW8260B	Vinyl chloride	63	
828131A-MW02012	**FS**	**C3214-02DL**	**SW8260B**	**Vinyl chloride**	**77**	**DJ**
828131A-MW02012DUP	FD	C3214-03	SW8260B	Cis-1,2-Dichloroethene	1600	E
828131A-MW02012DUP	FD	C3214-03DL	SW8260B	Cis-1,2-Dichloroethene	1500	D
828131A-MW02012DUP	FD	C3214-03	SW8260B	Tetrachloroethene	1200	E
828131A-MW02012DUP	**FD**	**C3214-03DL**	**SW8260B**	**Tetrachloroethene**	**1300**	**DJ**
828131A-MW02012DUP	FD	C3214-03	SW8260B	Trichloroethene	690	E
828131A-MW02012DUP	FD	C3214-03DL	SW8260B	Trichloroethene	680	D
828131A-MW02012DUP	FD	C3214-03	SW8260B	Vinyl chloride	71	
828131A-MW02012DUP	**FD**	**C3214-03DL**	**SW8260B**	**Vinyl chloride**	**80**	**DJ**
828131A-MW07012	FS	C3214-05	SW8260B	Cis-1,2-Dichloroethene	1000	E
828131A-MW07012	**FS**	**C3214-05DL**	**SW8260B**	**Cis-1,2-Dichloroethene**	**2500**	**DJ**
828131A-MW07012	FS	C3214-05	SW8260B	Trichloroethene	78	
828131A-MW07012	**FS**	**C3214-05DL**	**SW8260B**	**Trichloroethene**	**140**	**DJ**
828131A-MW07012	FS	C3214-05	SW8260B	Vinyl chloride	89	
828131A-MW07012	**FS**	**C3214-05DL**	**SW8260B**	**Vinyl chloride**	**210**	**DJ**

1 + 1

IS = 50ppb = $\frac{\text{Area}}{100}$

.5 RF = $\frac{\text{Sample Area}\ (50)}{\text{Area IS}\ (X)}$

200

100

$\frac{100}{50}$

CHEMTECH

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C3214 SAS No.: C3214 SDG NO.: C3214

Lab File ID: VG036661.D Date Analyzed: 08/15/2011

Instrument ID: MSVOAG Time Analyzed: 11:15

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	587267	3.93	819747	4.73	797338	9.69
UPPER LIMIT	1174534	4.43	1639494	5.23	1594676	10.19
LOWER LIMIT	293633.5	3.43	409873.5	4.23	398669	9.19
EPA SAMPLE NO.						
BSG0815W1	624396	3.92	921010	4.74	911789	9.70
828131A-MW05012	695438	3.93	1003049	4.75	984636	9.70
828131A-MW07012	688131	3.94	961013	4.75	986994	9.70
828131A-DP10013	320447	3.93	458033	4.75	447155	9.71
828131A-DP10013DL	669879	3.94	967087	4.75	987561	9.70
828131A-MW12055	670318	3.94	982858	4.75	974393	9.71
828131A-DP23015	689957	3.92	1006239	4.74	996080	9.70
828131A-DP23015DL	685455	3.93	983353	4.75	973117	9.70
VBG0815W1	642077	3.93	943900	4.74	903500	9.69

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_G\DATA\VG081511\
Data File : VG036670.D
Acq On : 15 Aug 2011 17:56
Operator : PS
Sample : C3214-07
Misc : 5mL MSVOA_G
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 16 08:58:26 2011
Quant Method : W:\HPCHEM1\MSVOA_G\METHOD\82G080511W.M
Quant Title : SW846 8260
QLast Update : Tue Aug 16 07:18:52 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	3.93	168	320447	50.00	ug/l	0.02
34) 1,4-Difluorobenzene	4.75	114	458033	50.00	ug/l	0.04
64) Chlorobenzene-d5	9.71	117	447155	50.00	ug/l	0.02
73) 1,4-Dichlorobenzene-d4	13.41	152	197460	50.00	ug/l	0.02
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	3.92	65	215839	70.86	ug/l	0.02
Spiked Amount 50.000			Recovery =	141.72%		
35) Dibromofluoromethane	3.27	113	202517	65.33	ug/l	0.02
Spiked Amount 50.000			Recovery =	130.66%		
51) Toluene-d8	7.21	98	594801	54.97	ug/l	0.03
Spiked Amount 50.000			Recovery =	109.94%		
63) 4-Bromofluorobenzene	11.66	95	242848	57.00	ug/l	0.02
Spiked Amount 50.000			Recovery =	114.00%		
Target Compounds						Qvalue
4) Vinyl Chloride	0.94	62	594257	175.89	ug/l	94
12) 1,1-Dichloroethene	1.43	96	5830	1.89	ug/l	80
21) trans-1,2-Dichloroethene	1.87	96	45855	14.53	ug/l	95
28) cis-1,2-Dichloroethene	2.78	96	3331443	792.78	ug/l	99
45) Trichloroethene	4.63	130	550345	152.73	ug/l	98
65) Tetrachloroethene	7.89	164	11669	2.25	ug/l	86

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_G\DATA\VG081511\
Data File : VG036671.D
Acq On : 15 Aug 2011 18:25
Operator : PS
Sample : C3214-07DL 10X
Misc : 5mL MSVOA_G
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 16 09:00:41 2011
Quant Method : W:\HPCHEM1\MSVOA_G\METHOD\82G080511W.M
Quant Title : SW846 8260
QLast Update : Tue Aug 16 07:18:52 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	3.94	168	669879	50.00	ug/l	0.03
34) 1,4-Difluorobenzene	4.75	114	967087	50.00	ug/l	0.04
64) Chlorobenzene-d5	9.70	117	987561	50.00	ug/l	0.02
73) 1,4-Dichlorobenzene-d4	13.41	152	452213	50.00	ug/l	0.02
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	3.92	65	383345	60.54	ug/l	0.02
Spiked Amount 50.000			Recovery = 121.08%			
35) Dibromofluoromethane	3.26	113	371413	56.88	ug/l	0.02
Spiked Amount 50.000			Recovery = 113.76%			
51) Toluene-d8	7.21	98	1126971	49.37	ug/l	0.03
Spiked Amount 50.000			Recovery = 98.74%			
63) 4-Bromofluorobenzene	11.66	95	482343	53.66	ug/l	0.01
Spiked Amount 50.000			Recovery = 107.32%			
Target Compounds						Qvalue
4) Vinyl Chloride	0.94	62	60650	8.59	ug/l	96
28) cis-1,2-Dichloroethene	2.78	96	363977	41.43	ug/l	97
45) Trichloroethene	4.63	130	53600	7.04	ug/l	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CHEMTECH

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CHEMTECH Client: MACTEC Inc.

Lab Code: CHEM CASE No.: C3214 SAS No.: C3214 SDG NO.: C3214

Analytical Method: EPA SW846 8260

	Lab Sample ID.	Client Sample NO.	SMC1 (DCE) #	SMC2 (DBFM) #	SMC3 (TOL) #	SMC4 (BFB) #	TOT OUT
01	VBG0815W1	VBG0815W1	136	126	105	111	0
02	BSG0815W1	BSG0815W1	137	119	106	114	0
03	C3214-04	828131A-MW05012	119	113	99	106	0
04	C3214-05	828131A-MW07012	120	115	103	108	0
05	C3214-13	828131A-DP23015	122	114	97	104	0
06	C3214-13DL	828131A-DP23015DL	120	113	99	106	0
07	C3214-07	828131A-DP10013	142 *	131	110	114	1
08	C3214-07DL	828131A-DP10013DL	121	114	99	107	0
09	C3214-09	828131A-MW12055	122	111	96	108	0

J Qual all hits

QC LIMITS

SMC1 (DCE) = 1,2-Dichloroethane-d4 (61-141)

SMC2 (DBFM) =Dibromofluoromethane (69-133)

SMC3 (TOL) =Toluene-d8 (65-126)

SMC4 (BFB) =4-Bromofluorobenzene (58-135)

Column to be used to flag recovery values
* Values outside of contract required QC Limits

TC
9/13/11 ✓

CHEMTECH

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CHEMTECH Client: MACTEC Inc.

Lab Code: CHEM CASE No.: C3214 SAS No.: C3214 SDG NO.: C3214

Analytical Method: EPA SW846 8260

	Lab Sample ID.	Client Sample NO.	SMC1 (DCE) #	SMC2 (DBFM) #	SMC3 (TOL) #	SMC4 (BFB) #	TOT OUT
01	VBR0812W1	VBR0812W1	98	99	101	95	0
02	BSR0812W1	BSR0812W1	99	102	101	98	0
03	C3214-18	TRIPBLANK	97	97	100	94	0
04	C3214-02	828131A-MW02012	95	103	92	92	0
05	C3214-15MS	828131A-DP28018MS	96	104	97	96	0
06	C3214-16MSD	828131A-DP28018MSD	97	103	98	97	0
07	VBR0812W2	VBR0812W2	98	97	98	90	0
08	BSR0812W3	BSR0812W3	96	102	101	96	0
09	C3214-03	828131A-MW02012DUP	97	101	97	91	0
10	VBR0815W1	VBR0815W1	99	104	102	93	0
11	BSR0815W1	BSR0815W1	95	105	103	98	0
12	C3214-03DL	828131A-MW02012DUPDL	86	94	90	83	0
13	C3214-02DL	828131A-MW02012DL	93	100	98	90	0
14	C3214-12	828131A-DP15013	101	112	108	99	0
15	C3214-12DL	828131A-DP15013DL	89	95	94	85	0
16	C3214-14	828131A-DP28018	95	98	90	85	0
17	VBR0816W2	VBR0816W2	85	88	88	79	0
18	BSR0816W1	BSR0816W1	92	99	99	92	0
19	C3214-05DL	828131A-MW07012DL	48 *	50 *	49 *	42 *	4
20	C3214-01	828131A-MW6035	113	121	115	108	0

QC LIMITS

SMC1 (DCE) = 1,2-Dichloroethane-d4 (61-141)

SMC2 (DBFM) =Dibromofluoromethane (69-133)

SMC3 (TOL) =Toluene-d8 (65-126)

SMC4 (BFB) =4-Bromofluorobenzene (58-135)

Column to be used to flag recovery values
* Values outside of contract required QC Limits

J Qual all results used from this dilution run

TC 9/13/11

CHEMTECH

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH **Client:** MACTEC Inc.

Lab Code: CHEM **Cas No:** C3214 **SAS No :** C3214 **SDG No:** C3214

Matrix Spike - EPA Sample No : C3214-15 **Analytical Method:** EPA SW846 8260 **Datafile :** VR000319.D

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS (ug/L)	MS % REC#	QC REC	
Dichlorodifluoromethane	50	0	42	84	(47-161)	
Chloromethane	50	0	51	102	(53-157)	
Vinyl Chloride	50	3.2	51	96	(57-149)	
Bromomethane	50	0	44	88	(45-165)	
Chloroethane	50	0	51	102	(47-166)	
Trichlorofluoromethane	50	0	51	102	(51-165)	
1,1,2-Trichlorotrifluoroethane	50	0	43	86	(61-145)	
1,1-Dichloroethene	50	0	41	82	(55-148)	
Acetone	250	0	170	68	(11-159)	*
Carbon Disulfide	50	0	25	50	(13-149)	*
Methyl tert-butyl Ether	50	0	43	86	(60-145)	
Methyl Acetate	50	0	42	84	(27-167)	
Methylene Chloride	50	0	50	100	(56-146)	
trans-1,2-Dichloroethene	50	0.74	45	89	(60-141)	
1,1-Dichloroethane	50	0	47	94	(61-144)	
Cyclohexane	50	0	45	90	(57-142)	
2-Butanone	250	0	230	92	(42-145)	
Carbon Tetrachloride	50	0	49	98	(60-140)	
cis-1,2-Dichloroethene	50	9	53	88	(48-156)	
Chloroform	50	0	47	94	(63-140)	
1,1,1-Trichloroethane	50	0	46	92	(65-140)	
Methylcyclohexane	50	0	41	82	(62-128)	
Benzene	50	0	47	94	(62-134)	
1,2-Dichloroethane	50	0	46	92	(67-136)	
Trichloroethene	50	3	50	94	(64-131)	
1,2-Dichloropropane	50	0	48	96	(69-130)	
Bromodichloromethane	50	0	46	92	(66-132)	
4-Methyl-2-Pentanone	250	0	240	96	(57-148)	
Toluene	50	0	45	90	(68-129)	
t-1,3-Dichloropropene	50	0	45	90	(54-136)	
cis-1,3-Dichloropropene	50	0	47	94	(56-133)	
1,1,2-Trichloroethane	50	0	49	98	(68-134)	
2-Hexanone	250	0	210	84	(46-158)	

 # Column to be used to flag recovery and RPD values with an asterisk
*** Values outside of QC limits**

RPD : 0 Out of 0 outside limits

Spike Recovery : 1 Out of 49 outside limits

* UJ in unspiked sample

9/13/11
TC

CHEMTECH

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH **Client:** MACTEC Inc.

Lab Code: CHEM **Cas No:** C3214 **SAS No :** C3214 **SDG No:** C3214

Matrix Spike - EPA Sample No : C3214-15 **Analytical Method:** EPA SW846 8260 **Datafile :** VR000319.D

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS (ug/L)	MS % REC#	QC REC
Dibromochloromethane	50	0	47	94	(59-136)
1,2-Dibromoethane	50	0	49	98	(65-138)
Tetrachloroethene	50	5.8	44	76	(29-137)
Chlorobenzene	50	0	48	96	(68-126)
Ethyl Benzene	50	0	44	88	(61-131)
m/p-Xylenes	100	0	74	74	(64-125)
o-Xylene	50	0	39	78	(65-126)
Styrene	50	0	16	32*	(40-140)
Bromoform	50	0	37	74	(42-134)
Isopropylbenzene	50	0	45	90	(58-132)
1,1,2,2-Tetrachloroethane	50	0	50	100	(61-136)
1,3-Dichlorobenzene	50	0	48	96	(63-125)
1,4-Dichlorobenzene	50	0	48	96	(64-124)
1,2-Dichlorobenzene	50	0	48	96	(64-126)
1,2-Dibromo-3-Chloropropane	50	0	47	94	(57-139)
1,2,4-Trichlorobenzene	50	0	48	96	(57-130)

 # Column to be used to flag recovery and RPD values with an asterisk
*** Values outside of QC limits**

RPD : 0 Out of 0 outside limits

Spike Recovery : 1 Out of 49 outside limits

9/13/11

TC 15

CHEMTECH

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH **Client:** MACTEC Inc.

Lab Code: CHEM **Cas No:** C3214 **SAS No :** C3214 **SDG No:** C3214

Matrix Spike - EPA Sample No : C3214-16 **Analytical Method:** EPA SW846 8260 **Datafile :** VR000320.D

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD %	% (ug/L)	QC LIMITS RPD	REC
Dichlorodifluoromethane	50	42	84	0	20	(47-161)
Chloromethane	50	52	104	2	20	(53-157)
Vinyl Chloride	50	52	98	2	20	(57-149)
Bromomethane	50	49	98	11	20	(45-165)
Chloroethane	50	51	102	0	20	(47-166)
Trichlorofluoromethane	50	51	102	0	20	(51-165)
1,1,2-Trichlorotrifluoroethane	50	42	84	2	20	(61-145)
1,1-Dichloroethene	50	42	84	2	20	(55-148)
Acetone	250	180	72	6	20	(11-159)
Carbon Disulfide	50	26	52	4	20	(13-149)
Methyl tert-butyl Ether	50	44	88	2	20	(60-145)
Methyl Acetate	50	44	88	5	20	(27-167)
Methylene Chloride	50	50	100	0	20	(56-146)
trans-1,2-Dichloroethene	50	45	89	0	20	(60-141)
1,1-Dichloroethane	50	47	94	0	20	(61-144)
Cyclohexane	50	44	88	2	20	(57-142)
2-Butanone	250	240	96	4	20	(42-145)
Carbon Tetrachloride	50	48	96	2	20	(60-140)
cis-1,2-Dichloroethene	50	53	88	0	20	(48-156)
Chloroform	50	48	96	2	20	(63-140)
1,1,1-Trichloroethane	50	46	92	0	20	(65-140)
Methylcyclohexane	50	40	80	2	20	(62-128)
Benzene	50	47	94	0	20	(62-134)
1,2-Dichloroethane	50	46	92	0	20	(67-136)
Trichloroethene	50	48	90	4	20	(64-131)
1,2-Dichloropropane	50	48	96	0	20	(69-130)
Bromodichloromethane	50	45	90	2	20	(66-132)
4-Methyl-2-Pentanone	250	240	96	0	20	(57-148)
Toluene	50	45	90	0	20	(68-129)
t-1,3-Dichloropropene	50	45	90	0	20	(54-136)
cis-1,3-Dichloropropene	50	46	92	2	20	(56-133)
1,1,2-Trichloroethane	50	48	96	2	20	(68-134)
2-Hexanone	250	210	84	0	20	(46-158)

 # Column to be used to flag recovery and RPD values with an asterisk
*** Values outside of QC limits**

RPD : 1 Out of 49 outside limits

Spike Recovery : 0 Out of 49 outside limits

9/13/11
TC

CHEMTECH

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH **Client:** MACTEC Inc.

Lab Code: CHEM **Cas No:** C3214 **SAS No :** C3214 **SDG No:** C3214

Matrix Spike - EPA Sample No : C3214-16 **Analytical Method:** EPA SW846 8260 **Datafile :** VR000320.D

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD %	%	QC LIMITS RPD	QC LIMITS REC
			(ug/L)			
Dibromochloromethane	50	46	92	2	20	(59-136)
1,2-Dibromoethane	50	48	96	2	20	(65-138)
Tetrachloroethene	50	43	74	3	20	(29-137)
Chlorobenzene	50	48	96	0	20	(68-126)
Ethyl Benzene	50	45	90	2	20	(61-131)
m/p-Xylenes	100	79	79	7	20	(64-125)
o-Xylene	50	41	82	5	20	(65-126)
Styrene	50	21	42	27*	20	(40-140)
Bromoform	50	37	74	0	20	(42-134)
Isopropylbenzene	50	45	90	0	20	(58-132)
1,1,2,2-Tetrachloroethane	50	48	96	4	20	(61-136)
1,3-Dichlorobenzene	50	47	94	2	20	(63-125)
1,4-Dichlorobenzene	50	47	94	2	20	(64-124)
1,2-Dichlorobenzene	50	47	94	2	20	(64-126)
1,2-Dibromo-3-Chloropropane	50	47	94	0	20	(57-139)
1,2,4-Trichlorobenzene	50	48	96	0	20	(57-130)

 # Column to be used to flag recovery and RPD values with an asterisk
*** Values outside of QC limits**

RPD : 1 Out of 49 outside limits

Spike Recovery : 0 Out of 49 outside limits

9/13/11
TC

CHEMTECH

SOLID VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH **Client:** MACTEC Inc.

Lab Code: CHEM **Cas No:** C3214 **SAS No :** C3214 **SDG No:** C3214

Matrix Spike - EPA Sample No : C3219-12 **Analytical Method:** EPA SW846 8260 **Datafile :** VF028085.D

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS (ug/Kg)	MS % REC#	QC REC	
Dichlorodifluoromethane	68	0	53	78	(42-135)	
Chloromethane	68	0	57	84	(50-130)	
Vinyl Chloride	68	0	51	75	(60-125)	
Bromomethane	68	0	60	88	(40-154)	
Chloroethane	68	0	63	93	(40-155)	
Trichlorofluoromethane	68	0	65	96	(46-159)	
1,1,2-Trichlorotrifluoroethane	68	0	58	85	(59-140)	
1,1-Dichloroethene	68	0	73	107	(65-135)	
Acetone	338	10	230	65	(31-158)	*
Carbon Disulfide	68	0	65	96	(45-144)	
Methyl tert-butyl Ether	68	0	56	82	(56-146)	
Methyl Acetate	68	0	69	101	(16-205)	
Methylene Chloride	68	0	73	107	(55-140)	
trans-1,2-Dichloroethene	68	0	66	97	(65-135)	
1,1-Dichloroethane	68	0	62	91	(75-125)	
Cyclohexane	68	0	71	104	(51-136)	
2-Butanone	338	0	270	80	(40-157)	
Carbon Tetrachloride	68	0	63	93	(65-135)	
cis-1,2-Dichloroethene	68	0	60	88	(65-125)	
Chloroform	68	0	62	91	(70-125)	
1,1,1-Trichloroethane	68	0	59	87	(70-135)	
Methylcyclohexane	68	0	69	101	(43-133)	
Benzene	68	0	63	93	(75-125)	
1,2-Dichloroethane	68	0	58	85	(70-135)	
Trichloroethene	68	0	62	91	(75-125)	
1,2-Dichloropropane	68	0	60	88	(70-120)	
Bromodichloromethane	68	0	59	87	(70-130)	
4-Methyl-2-Pentanone	338	0	290	86	(53-145)	
Toluene	68	0	65	96	(70-125)	
t-1,3-Dichloropropene	68	0	59	87	(65-125)	
cis-1,3-Dichloropropene	68	0	58	85	(70-125)	
1,1,2-Trichloroethane	68	0	58	85	(67-125)	
2-Hexanone	338	0	310	92	(45-145)	

 # Column to be used to flag recovery and RPD values with an asterisk
*** Values outside of QC limits**

RPD : 0 Out of 0 outside limits

Spike Recovery : 0 Out of 49 outside limits

Not spiked on a sample from the Site [No Action]

TC
9/13/11

CHEMTECH

SOLID VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH **Client:** MACTEC Inc.

Lab Code: CHEM **Cas No:** C3214 **SAS No :** C3214 **SDG No:** C3214

Matrix Spike - EPA Sample No : C3219-13 **Analytical Method:** EPA SW846 8260 **Datafile :** VF028086.D

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD %	% (ug/Kg)	QC LIMITS RPD	REC	
Dichlorodifluoromethane	68	44	65	18	20	(42-135)	*
Chloromethane	68	54	79	6	20	(50-130)	
Vinyl Chloride	68	56	82	9	20	(60-125)	
Bromomethane	68	64	94	7	20	(40-154)	
Chloroethane	68	64	94	1	20	(40-155)	
Trichlorofluoromethane	68	61	90	6	20	(46-159)	
1,1,2-Trichlorotrifluoroethane	68	60	88	3	20	(59-140)	
1,1-Dichloroethene	68	72	106	1	20	(65-135)	
Acetone	338	240	68	5	20	(31-158)	*
Carbon Disulfide	68	68	100	4	20	(45-144)	
Methyl tert-butyl Ether	68	63	93	13	20	(56-146)	
Methyl Acetate	68	76	112	10	20	(16-205)	
Methylene Chloride	68	81	119	11	20	(55-140)	
trans-1,2-Dichloroethene	68	69	101	4	20	(65-135)	
1,1-Dichloroethane	68	65	96	5	20	(75-125)	
Cyclohexane	68	75	110	6	20	(51-136)	
2-Butanone	338	280	83	4	20	(40-157)	
Carbon Tetrachloride	68	63	93	0	20	(65-135)	
cis-1,2-Dichloroethene	68	66	97	10	20	(65-125)	
Chloroform	68	65	96	5	20	(70-125)	
1,1,1-Trichloroethane	68	61	90	3	20	(70-135)	
Methylcyclohexane	68	71	104	3	20	(43-133)	
Benzene	68	66	97	4	20	(75-125)	
1,2-Dichloroethane	68	61	90	6	20	(70-135)	
Trichloroethene	68	61	90	1	20	(75-125)	
1,2-Dichloropropane	68	64	94	7	20	(70-120)	
Bromodichloromethane	68	64	94	8	20	(70-130)	
4-Methyl-2-Pentanone	338	300	89	3	20	(53-145)	
Toluene	68	66	97	1	20	(70-125)	
t-1,3-Dichloropropene	68	65	96	10	20	(65-125)	
cis-1,3-Dichloropropene	68	63	93	9	20	(70-125)	
1,1,2-Trichloroethane	68	62	91	7	20	(67-125)	
2-Hexanone	338	320	95	3	20	(45-145)	

 # Column to be used to flag recovery and RPD values with an asterisk
*** Values outside of QC limits**

RPD : 0 Out of 49 outside limits

Spike Recovery : 0 Out of 49 outside limits

*not a sample from the Site NO ACTION

9/13/11
TC

CHEMTECH

WATER VOLATILE LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: MACTEC Inc.

Lab Code: CHEM Cas No: C3214 SAS No : C3214 SDG No: C3214

Matrix Spike - EPA Sample No : BSG0815W1 Analytical Method: EPA SW846 8260 Datafile : VG036663.D

COMPOUND	SPIKE ADDED (ug/L)	CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC#	QC LIMITS REC
Dichlorodifluoromethane	20		30	150*	(46-139)
Chloromethane	20		23	115	(58-139)
Vinyl Chloride	20		24	120	(65-137)
Bromomethane	20		28	140	(50-162)
Chloroethane	20		30	150	(54-160)
Trichlorofluoromethane	20		30	150*	(67-143)
1,1,2-Trichlorotrifluoroethane	20		26	130	(71-136)
1,1-Dichloroethene	20		24	120	(69-134)
Acetone	100		150	150	(41-181)
Carbon Disulfide	20		25	125	(63-138)
Methyl tert-butyl Ether	20		25	125	(72-136)
Methyl Acetate	20		21	105	(51-158)
Methylene Chloride	20		26	130	(67-138)
trans-1,2-Dichloroethene	20		23	115	(72-132)
1,1-Dichloroethane	20		25	125	(74-135)
Cyclohexane	20		23	115	(67-132)
2-Butanone	100		120	120	(64-146)
Carbon Tetrachloride	20		24	120	(71-134)
cis-1,2-Dichloroethene	20		23	115	(74-130)
Chloroform	20		26	130	(74-134)
1,1,1-Trichloroethane	20		29	145*	(74-133)
Methylcyclohexane	20		22	110	(71-125)
Benzene	20		23	115	(75-125)
1,2-Dichloroethane	20		28	140*	(76-130)
Trichloroethene	20		23	115	(73-127)
1,2-Dichloropropane	20		23	115	(76-125)
Bromodichloromethane	20		23	115	(78-127)
4-Methyl-2-Pentanone	100		110	110	(71-140)
Toluene	20		21	105	(74-125)
t-1,3-Dichloropropene	20		22	110	(74-131)
cis-1,3-Dichloropropene	20		21	105	(74-128)
1,1,2-Trichloroethane	20		22	110	(75-129)
2-Hexanone	100		100	100	(62-153)
Dibromochloromethane	20		22	110	(74-131)

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD : 0 Out of 0 outside limits

Spike Recovery :4 Out of 49 outside limits

* = Associated sample has this compound detected and was estimated (J)

Comments:

9/13/14
TC

CHEMTECH

WATER VOLATILE LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: MACTEC Inc.

Lab Code: CHEM Cas No: C3214 SAS No : C3214 SDG No: C3214

Matrix Spike - EPA Sample No : BSG0815W1 Analytical Method: EPA SW846 8260 Datafile : VG036663.D

COMPOUND	SPIKE ADDED (ug/L)	CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC#	QC LIMITS REC	
1,2-Dibromoethane	20		23	115	(74-129)	
Tetrachloroethene	20		27	135	(46-157)	*
Chlorobenzene	20		23	115	(76-123)	
Ethyl Benzene	20		23	115	(75-126)	
m/p-Xylenes	40		46	115	(74-126)	
o-Xylene	20		22	110	(73-127)	
Styrene	20		23	115	(75-126)	
Bromoform	20		18	90	(66-130)	
Isopropylbenzene	20		24	120	(70-127)	
1,1,2,2-Tetrachloroethane	20		22	110	(66-131)	
1,3-Dichlorobenzene	20		23	115	(70-125)	
1,4-Dichlorobenzene	20		23	115	(71-124)	
1,2-Dichlorobenzene	20		22	110	(71-126)	
1,2-Dibromo-3-Chloropropane	20		21	105	(62-134)	
1,2,4-Trichlorobenzene	20		22	110	(62-129)	

* = Associated sample has this compound detected and was estimated (J).

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD : 0 Out of 0 outside limits

Spike Recovery : 4 Out of 49 outside limits

Comments: _____

9/13/14
TC

CHEMTECH

WATER VOLATILE LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: MACTEC Inc.

Lab Code: CHEM Cas No: C3214 SAS No : C3214 SDG No: C3214

Matrix Spike - EPA Sample No : BSR0815W1 Analytical Method: EPA SW846 8260 Datafile : VR000351.D

COMPOUND	SPIKE ADDED (ug/L)	CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC#	QC LIMITS REC
Dichlorodifluoromethane	20		29	145*	(46-139)
Chloromethane	20		31	155*	(58-139)
Vinyl Chloride	20		29	145*	(65-137)
Bromomethane	20		25	125	(50-162)
Chloroethane	20		28	140	(54-160)
Trichlorofluoromethane	20		28	140	(67-143)
1,1,2-Trichlorotrifluoroethane	20		22	110	(71-136)
1,1-Dichloroethene	20		22	110	(69-134)
Acetone	100		110	110	(41-181)
Carbon Disulfide	20		25	125	(63-138)
Methyl tert-butyl Ether	20		19	95	(72-136)
Methyl Acetate	20		20	100	(51-158)
Methylene Chloride	20		24	120	(67-138)
trans-1,2-Dichloroethene	20		23	115	(72-132)
1,1-Dichloroethane	20		22	110	(74-135)
Cyclohexane	20		22	110	(67-132)
2-Butanone	100		110	110	(64-146)
Carbon Tetrachloride	20		23	115	(71-134)
cis-1,2-Dichloroethene	20		22	110	(74-130)
Chloroform	20		21	105	(74-134)
1,1,1-Trichloroethane	20		21	105	(74-133)
Methylcyclohexane	20		21	105	(71-125)
Benzene	20		22	110	(75-125)
1,2-Dichloroethane	20		22	110	(76-130)
Trichloroethene	20		24	120	(73-127)
1,2-Dichloropropane	20		22	110	(76-125)
Bromodichloromethane	20		22	110	(78-127)
4-Methyl-2-Pentanone	100		110	110	(71-140)
Toluene	20		22	110	(74-125)
t-1,3-Dichloropropene	20		21	105	(74-131)
cis-1,3-Dichloropropene	20		21	105	(74-128)
1,1,2-Trichloroethane	20		22	110	(75-129)
2-Hexanone	100		100	100	(62-153)
Dibromochloromethane	20		24	120	(74-131)

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD : 0 Out of 0 outside limits

Spike Recovery : 3 Out of 49 outside limits

Comments:

* Associated sample has this compound detected and was estimated (J)

9/13/11 TC

CHEMTECH

WATER VOLATILE LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: MACTEC Inc.

Lab Code: CHEM Cas No: C3214 SAS No : C3214 SDG No: C3214

Matrix Spike - EPA Sample No : BSR0815W1 Analytical Method: EPA SW846 8260 Datafile : VR000351.D

COMPOUND	SPIKE ADDED (ug/L)	CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC#	QC LIMITS REC	
1,2-Dibromoethane	20		23	115	(74-129)	
Tetrachloroethene	20		29	145	(46-157)	*
Chlorobenzene	20		23	115	(76-123)	
Ethyl Benzene	20		22	110	(75-126)	
m/p-Xylenes	40		45	113	(74-126)	
o-Xylene	20		22	110	(73-127)	
Styrene	20		22	110	(75-126)	
Bromoform	20		22	110	(66-130)	
Isopropylbenzene	20		21	105	(70-127)	
1,1,2,2-Tetrachloroethane	20		22	110	(66-131)	
1,3-Dichlorobenzene	20		23	115	(70-125)	
1,4-Dichlorobenzene	20		22	110	(71-124)	
1,2-Dichlorobenzene	20		22	110	(71-126)	
1,2-Dibromo-3-Chloropropane	20		20	100	(62-134)	
1,2,4-Trichlorobenzene	20		23	115	(62-129)	

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD : 0 Out of 0 outside limits

Spike Recovery : 3 Out of 49 outside limits

Comments: _____

* Associated Sample has this compound detected and was estimated (J).

9/13/14 TC

CHEMTECH

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C3214 SAS No.: C3214 SDG NO.: C3214

Lab File ID: VR000364.D Date Analyzed: 08/16/2011

Instrument ID: MSVOA_R Time Analyzed: 10:31

GC Column: RTX-VMS ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	1182139	8.19	1962034	9.07	1789602	11.81
UPPER LIMIT	2364278	8.69	3924068	9.57	3579204	12.31
LOWER LIMIT	591069.5	7.69	981017	8.57	894801	11.31
EPA SAMPLE NO.						
BSR0816W1	1095227	8.19	1845604	9.07	1672958	11.81
828131A-MW6035	975344	8.19	1653810	9.07	1483665	11.81
828131A-MW07012DL	580718 *	8.19	998336	9.07	873309 *	11.81
VBR0816W2	1072603	8.19	1832253	9.07	1630860	11.81

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

J Qual (is 12DCE reported from the 50X dilution.

9/13/11 TC

CHEMTECH

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C3214 SAS No.: C3214 SDG NO.: C3214

Lab File ID: VR000364.D Date Analyzed: 08/16/2011

Instrument ID: MSVOA_R Time Analyzed: 10:31

GC Column: RTX-VMS ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS4 AREA #	RT #				
12 HOUR STD	935833	13.73				
UPPER LIMIT	1871666	14.23				
LOWER LIMIT	467916.5	13.23				
EPA SAMPLE NO.						
BSR0816W1	862498	13.73				
828131A-MW6035	754530	13.73				
828131A-MW07012DL	438009 *	13.73				
VBR0816W2	813716	13.73				

IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

9/13/11
TC

Response Factor Report MSVOAG

Method Path : W:\HPCHEM1\MSVOA_G\METHOD\
Method File : 82G080511W.M
Title : SW846 8260
Last Update : Sat Aug 06 01:22:44 2011
Response Via : Initial Calibration

Calibration Files
1 =VG036440.D 5 =VG036441.D 20 =VG036442.D
50 =VG036443.D 100 =VG036444.D 150 =VG036445.D

		Compound	1	5	20	50	100	150	Avg	%RSD
1)	I	Pentafluorobenzene	ISTD							
2)	T	Dichlorodifluorom	0.324	0.363	0.324	0.356	0.340	0.335	0.340	4.72
3)	P	Chloromethane	0.886	0.778	0.685	0.683	0.636	0.622	0.715	13.99
4)	C	Vinyl Chloride	0.633	0.555	0.517	0.508	0.477	0.473	0.527	11.31#
5)	T	Bromomethane	0.344	0.328	0.306	0.293	0.256	0.241	0.295	13.54
6)	T	Chloroethane	0.362	0.270	0.290	0.265	0.225	0.198	0.268	21.11
7)	T	Trichlorofluorome	0.692	0.628	0.582	0.604	0.572	0.552	0.605	8.28
8)	T	Diethyl Ether	0.361	0.292	0.281	0.297	0.293	0.286	0.302	9.79
9)	T	1,1,2-Trichlorotr	0.428	0.394	0.359	0.376	0.367	0.360	0.381	7.01
10)	T	Methyl Iodide	1.093	0.982	0.889	0.895	0.863	0.849	0.928	9.99
11)	T	Tert butyl alcoho	0.066	0.061	0.056	0.058	0.056	0.055	0.059	7.39
12)	CM	1,1-Dichloroethen	0.594	0.513	0.449	0.464	0.442	0.429	0.482	12.95#
13)	T	Acrolein	0.085	0.069	0.039	0.043	0.040	0.041	0.053	36.21
14)	T	Allyl chloride	0.929	1.027	0.905	0.936	0.895	0.866	0.926	5.97
15)	T	Acrylonitrile	0.196	0.187	0.181	0.193	0.183	0.183	0.187	3.20
16)	T	Acetone	0.205	0.200	0.150	0.164	0.160	0.154	0.172	13.97
17)	T	Carbon Disulfide	1.738	1.627	1.465	1.494	1.398	1.341	1.511	9.77
18)	T	Methyl Acetate	0.890	0.722	0.655	0.682	0.662	0.654	0.711	12.88
19)	T	Methyl tert-butyl	1.383	1.377	1.265	1.296	1.253	1.240	1.302	4.84
20)	T	Methylene Chlorid	0.678	0.589	0.499	0.504	0.479	0.472	0.537	15.07
21)	T	trans-1,2-Dichlor	0.579	0.525	0.470	0.474	0.457	0.450	0.492	10.19
22)	T	Acetonitrile							0.000	-1.00
23)	T	Diisopropyl ether	2.100	1.989	1.861	1.873	1.796	1.743	1.894	6.89
24)	T	Vinyl Acetate	1.017	0.932	0.883	0.853	0.829	0.775	0.881	9.58
25)	P	1,1-Dichloroethan	1.141	1.005	0.930	0.935	0.923	0.893	0.971	9.37
26)	T	2-Butanone	0.490	0.447	0.326	0.321	0.301	0.293	0.363	23.12
27)	T	2,2-Dichloropropa	0.625	0.534	0.472	0.490	0.460	0.443	0.504	13.24
28)	T	cis-1,2-Dichloroe	0.712	0.708	0.619	0.653	0.624	0.618	0.656	6.68
29)	T	Bromochloromethan	0.540	0.499	0.248	0.467	0.442	0.362	0.426	24.84
30)	C	Chloroform	1.046	0.939	0.853	0.870	0.839	0.817	0.894	9.53#
31)	T	Cyclohexane	0.938	0.863	0.711	0.750	0.708	0.694	0.777	12.87
32)	T	1,1,1-Trichloroet	0.861	0.749	0.662	0.673	0.649	0.633	0.705	12.29
33)	S	1,2-Dichloroethan	0.446	0.470	0.292	0.488	0.477	0.485	0.443	17.07
34)	I	1,4-Difluorobenzene	ISTD							
35)	S	Dibromofluorometh	0.377	0.361	0.229	0.363	0.340	0.341	0.335	16.09
36)	T	1,1-Dichloroprope	0.556	0.507	0.474	0.473	0.440	0.441	0.482	9.14
37)	T	Ethyl Acetate	0.645	0.546	0.477	0.476	0.446	0.430	0.503	15.89
38)	T	Carbon Tetrachlor	0.605	0.578	0.512	0.501	0.481	0.471	0.525	10.37
39)	T	Methylcyclohexane	0.525	0.521	0.468	0.483	0.454	0.439	0.482	7.34
40)	TM	Benzene	1.572	1.394	1.301	1.280	1.218	1.205	1.328	10.34
41)	T	Methacrylonitrile	0.314	0.340	0.250	0.256	0.236	0.235	0.272	16.35
42)	TM	1,2-Dichloroethan	0.416	0.434	0.418	0.427	0.421	0.419	0.423	1.60
43)	T	Isopropyl Acetate	0.882	0.791	0.755	0.735	0.673	0.660	0.749	10.89
44)	T	Isobutyl alcohol							0.000	-1.00
45)	TM	Trichloroethene	0.447	0.435	0.381	0.378	0.359	0.361	0.393	9.62
46)	C	1,2-Dichloropropa	0.423	0.363	0.357	0.358	0.337	0.336	0.362	8.80#
47)	T	Dibromomethane	0.285	0.267	0.235	0.239	0.231	0.231	0.248	9.01
48)	T	Bromodichlorometh	0.509	0.518	0.457	0.458	0.441	0.438	0.470	7.38
49)	T	Methyl methacryla	0.456	0.405	0.365	0.348	0.329	0.330	0.372	13.31
50)	T	1,4-Dioxane	0.004	0.004	0.004	0.004	0.004	0.003	0.004	3.51
51)	S	Toluene-d8	1.430	1.295	0.822	1.292	1.202	1.172	1.202	17.19
52)	T	4-Methyl-2-Pentan	0.549	0.525	0.479	0.458	0.408	0.388	0.468	13.55

I-Cal Calculation Checks on Vinyl Chloride

1ppb 6475(50) = 511753(1) = 0.0326

5ppb 29022(50) = 522904(5) = 0.5550

20ppb 108396(50) = 523933(20) = 0.51722

50ppb 253785(50) = 499920(50) = 0.50765

100 488870(50) = 512191(100) = 0.47723

150 732689(50) = 516008(150) = 0.4733

RSD = 0.113074 ✓

TC 9/14/11

Evaluate Continuing Calibration Report

Data Path : W:\HPCHEM1\MSVOA_R\DATA\VR081211\
Data File : VR000298.D
Acq On : 12 Aug 2011 17:48
Operator : PS
Sample : 50 PPB CCC
Misc : 5 ml 8260
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 12 18:23:11 2011
Quant Method : W:\HPCHEM1\MSVOA_R\METHOD\82R081211W.M
Quant Title : SW846 8260
QLast Update : Fri Aug 12 15:45:25 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	98	0.00
2	T	Dichlorodifluoromethane	0.540	0.467	13.5	97	0.00
3	P	Chloromethane	0.695	0.621	10.6	97	0.00
4	C	Vinyl Chloride	0.757	0.697	7.9#	98	0.00
5	T	Bromomethane	0.426	0.365	14.3	95	0.00
6	T	Chloroethane	0.477	0.444	6.9	97	0.00
7	T	Trichlorofluoromethane	0.958	0.890	7.1	97	0.00
8	T	Diethyl Ether	0.432	0.404	6.5	99	0.00
9	T	1,1,2-Trichlorotrifluoroeth	0.545	0.506	7.2	100	0.00
10	T	Methyl Iodide	0.465	0.532	-14.4	102	0.00
11	T	Tert butyl alcohol	0.041	0.045	-9.8	114	0.00
12	CM	1,1-Dichloroethene	0.542	0.519	4.2#	104	0.00
13	T	Acrolein	0.055	0.045	18.2	91	0.00
14	T	Allyl chloride	0.922	0.911	1.2	100	0.00
15	T	Acrylonitrile	0.185	0.183	1.1	101	0.00
16	T	Acetone	0.225	0.180	20.0#	101	0.00
17	T	Carbon Disulfide	1.539	1.485	3.5	98	0.00
18	T	Methyl Acetate	0.626	0.618	1.3	104	0.00
19	T	Methyl tert-butyl Ether	1.688	1.637	3.0	99	0.00
20	T	Methylene Chloride	0.629	0.565	10.2	100	0.00
21	T	trans-1,2-Dichloroethene	0.538	0.502	6.7	100	0.00
22	T	Acetonitrile	0.000	0.000	0.0	0#	-4.55#
23	T	Diisopropyl ether	1.972	1.936	1.8	100	0.00
24	T	Vinyl Acetate	1.189	1.183	0.5	97	0.00
25	P	1,1-Dichloroethane	1.150	1.103	4.1	99	0.00
26	T	2-Butanone	0.035	0.032	8.6	102	0.00
27	T	2,2-Dichloropropane	1.056	1.024	3.0	97	0.00
28	T	cis-1,2-Dichloroethene	0.749	0.723	3.5	100	0.00
29	T	Bromochloromethane	0.452	0.493	-9.1	102	0.00
30	C	Chloroform	1.159	1.119	3.5#	100	0.00
31	T	Cyclohexane	1.368	1.045	23.6#	98	0.00
32	T	1,1,1-Trichloroethane	1.027	1.000	2.6	99	0.00
33	S	1,2-Dichloroethane-d4	0.751	0.757	-0.8	100	0.00
34	I	1,4-Difluorobenzene	1.000	1.000	0.0	98	0.00
35	S	Dibromofluoromethane	0.294	0.299	-1.7	98	0.00
36	T	1,1-Dichloropropene	0.571	0.549	3.9	98	0.00
37	T	Ethyl Acetate	0.788	0.700	11.2	101	0.00
38	T	Carbon Tetrachloride	0.437	0.446	-2.1	97	0.00
39	T	Methylcyclohexane	0.735	0.669	9.0	97	0.00
40	TM	Benzene	1.600	1.528	4.5	99	0.00
41	T	Methacrylonitrile	0.197	0.196	0.5	102	0.00
42	TM	1,2-Dichloroethane	0.540	0.519	3.9	100	0.00
43	T	Isopropyl Acetate	0.537	0.531	1.1	99	0.00
44	T	Isobutyl alcohol	0.000	0.000	0.0	0#	-6.21#
45	TM	Trichloroethene	0.347	0.327	5.8	99	0.00

V.C. calc check

757 967820 (50)
.433 = 1398475 (50)

4603 / 50 = 92%

→ UJ Associated

9/14/11 TC

CHEMTECH

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBG0815W1

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C3214 SAS No.: C3214 SDG NO.: C3214

Lab File ID: VG036662.D Lab Sample ID: VBG0815W1

Date Analyzed: 08/15/2011 Time Analyzed: 12:47

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: MSVOAG

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
BSG0815W1	BSG0815W1	VG036663.D	08/15/2011
828131A-MW05012	C3214-04	VG036665.D	08/15/2011
828131A-MW07012	C3214-05	VG036666.D	08/15/2011
828131A-DP23015	C3214-13	VG036668.D	08/15/2011
828131A-DP23015DL	C3214-13DL	VG036669.D	08/15/2011
828131A-DP10013	C3214-07	VG036670.D	08/15/2011
828131A-DP10013DL	C3214-07DL	VG036671.D	08/15/2011
828131A-MW12055	C3214-09	VG036672.D	08/15/2011

(J) Qual detections of 111 TCA & PCE: LCS ↑

COMMENTS:

9/14/11
TC

CHEMTECH

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBR0815W1

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C3214 SAS No.: C3214 SDG NO.: C3214

Lab File ID: VR000350.D Lab Sample ID: VBR0815W1

Date Analyzed: 08/15/2011 Time Analyzed: 11:43

GC Column: RTX-VMS ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: MSVOA_R

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
BSR0815W1	BSR0815W1	VR000351.D	08/15/2011
828131A-MW02012DUPDL	C3214-03DL	VR000354.D	08/15/2011
828131A-MW02012DL	C3214-02DL	VR000355.D	08/15/2011
828131A-DP15013	C3214-12	VR000356.D	08/15/2011
828131A-DP15013DL	C3214-12DL	VR000357.D	08/15/2011
828131A-DP28018	C3214-14	VR000362.D	08/15/2011

Vinyl Chloride & PCE Qualified J: ↑ LCS

COMMENTS:

9/14/11
TC

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_R\data\VR081211\
Data File : VR000324.D
Acq On : 13 Aug 2011 5:59
Operator : PS
Sample : 50 PPB CCC
Misc : 5 ml 8260
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Aug 16 04:03:13 2011
Quant Method : W:\HPCHEM1\MSVOA_R\METHOD\82R081211W.M
Quant Title : SW846 8260
QLast Update : Fri Aug 12 15:45:25 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	8.19	168	1061890	50.00	ug/l	0.00
34) 1,4-Difluorobenzene	9.07	114	1829710	50.00	ug/l	0.00
64) Chlorobenzene-d5	11.81	117	1645478	50.00	ug/l	0.00
73) 1,4-Dichlorobenzene-d4	13.73	152	846688	50.00	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.53	65	772246	48.43	ug/l	0.00
Spiked Amount 50.000			Recovery =	96.86%		
35) Dibromofluoromethane	8.11	113	545379	50.63	ug/l	0.00
Spiked Amount 50.000			Recovery =	101.26%		
51) Toluene-d8	10.53	98	2496301	50.22	ug/l	0.00
Spiked Amount 50.000			Recovery =	100.44%		
63) 4-Bromofluorobenzene	12.79	95	953194	48.23	ug/l	0.00
Spiked Amount 50.000			Recovery =	96.46%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.90	85	425501	41.31	ug/l	98
3) Chloromethane	2.13	50	678204	50.10	ug/l	99
4) Vinyl Chloride	2.27	62	795645	49.49	ug/l	98
5) Bromomethane	2.70	94	403013	49.95	ug/l	97
6) Chloroethane	2.87	64	519979	51.30	ug/l	99
7) Trichlorofluoromethane	3.24	101	1043249	51.26	ug/l	99
8) Diethyl Ether	3.70	74	448313	53.00	ug/l	96
9) 1,1,2-Trichlorotrifluoroet	4.11	101	489839	42.28	ug/l	99
10) Methyl Iodide	4.31	142	562638	50.32	ug/l	97
11) Tert butyl alcohol	5.34	59	148813	169.83	ug/l	99
12) 1,1-Dichloroethene	4.07	96	506576	44.04	ug/l	98
13) Acrolein	3.92	56	160363	158.52	ug/l	97
14) Allyl chloride	4.77	41	821882	41.99	ug/l	96
15) Acrylonitrile	5.51	53	927919	235.86	ug/l	99
16) Acetone	4.18	43	846155	219.94	ug/l	98
17) Carbon Disulfide	4.42	76	1407827	43.07	ug/l	100
18) Methyl Acetate	4.79	43	632008	47.51	ug/l	99
19) Methyl tert-butyl Ether	5.59	73	1531460	42.71	ug/l	99
20) Methylene Chloride	5.04	84	594530	49.56	ug/l	99
21) trans-1,2-Dichloroethene	5.58	96	528516	46.21	ug/l	96
23) Diisopropyl ether	6.52	45	1959175	46.77	ug/l	99
24) Vinyl Acetate	6.45	43	5149659m	203.96	ug/l	
25) 1,1-Dichloroethane	6.39	63	1139922	46.66	ug/l	99
26) 2-Butanone	7.74	43	157527	231.97	ug/l	89
27) 2,2-Dichloropropane	7.36	77	782629	34.89	ug/l	96
28) cis-1,2-Dichloroethene	7.36	96	751886	47.24	ug/l	95
29) Bromochloromethane	7.72	49	530075	52.75	ug/l	98
30) Chloroform	7.89	83	1161672	47.18	ug/l	97
31) Cyclohexane	8.17	56	1026349	44.67	ug/l	98
32) 1,1,1-Trichloroethane	8.09	97	1008525	46.24	ug/l	99
36) 1,1-Dichloropropene	8.30	75	961637	46.06	ug/l	100
37) Ethyl Acetate	7.37	43	1164649	45.09	ug/l	100
38) Carbon Tetrachloride	8.28	117	781874	48.92	ug/l	99
39) Methylcyclohexane	9.55	83	1079088m	40.10	ug/l	

.757 = 795645 (50) / 1061890 (X)

49.49 / 50 = 99% Rec

9/14/11

TC

Evaluate Continuing Calibration Report

Data Path : W:\HPCHEM1\MSVOA_R\data\VR081511\
Data File : VR000348.D
Acq On : 15 Aug 2011 10:39
Operator : PS
Sample : 50 PPB CCC
Misc : 5 ml
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 16 07:51:47 2011
Quant Method : W:\HPCHEM1\MSVOA_R\METHOD\82R081211W.M
Quant Title : SW846 8260
QLast Update : Fri Aug 12 15:45:25 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	
1	I	Pentafluorobenzene	1.000	1.000	0.0	86	0.00	
2	T	Dichlorodifluoromethane	0.540	0.703	-30.2#	128	0.00	LR
3	P	Chloromethane	0.695	0.932	-34.1#	128	0.00	LR
4	C	Vinyl Chloride	0.757	1.029	-35.9#	126	0.00	*
5	T	Bromomethane	0.426	0.518	-21.6#	117	0.00	LR
6	T	Chloroethane	0.477	0.611	-28.1#	117	0.00	*
7	T	Trichlorofluoromethane	0.958	1.271	-32.7#	121	0.00	*
8	T	Diethyl Ether	0.432	0.460	-6.5	98	0.00	
9	T	1,1,2-Trichlorotrifluoroeth	0.545	0.590	-8.3	102	0.00	
10	T	Methyl Iodide	0.465	0.643	-38.3#	108	0.00	
11	T	Tert butyl alcohol	0.041	0.038	7.3	84	0.00	
12	CM	1,1-Dichloroethene	0.542	0.563	-3.9#	99	0.00	
13	T	Acrolein	0.055	0.040	27.3#	71	0.00	Not Reported
14	T	Allyl chloride	0.922	0.942	-2.2	90	0.00	
15	T	Acrylonitrile	0.185	0.192	-3.8	93	0.00	
16	T	Acetone	0.225	0.191	15.1	94	0.00	
17	T	Carbon Disulfide	1.539	1.936	-25.8#	111	0.00	*
18	T	Methyl Acetate	0.626	0.610	2.6	90	0.00	
19	T	Methyl tert-butyl Ether	1.688	1.614	4.4	86	0.00	
20	T	Methylene Chloride	0.629	0.632	-0.5	97	0.00	
21	T	trans-1,2-Dichloroethene	0.538	0.569	-5.8	99	0.00	
22	T	Acetonitrile	0.000	0.000	0.0	0#	-4.55#	
23	T	Diisopropyl ether	1.972	2.052	-4.1	93	0.00	
24	T	Vinyl Acetate	1.189	1.123	5.6	81	0.00	
25	P	1,1-Dichloroethane	1.150	1.190	-3.5	93	0.00	
26	T	2-Butanone	0.035	0.034	2.9	95	0.00	
27	T	2,2-Dichloropropane	1.056	1.051	0.5	87	0.00	
28	T	cis-1,2-Dichloroethene	0.749	0.782	-4.4	94	0.00	
29	T	Bromochloromethane	0.452	0.481	-6.4	87	0.00	
30	C	Chloroform	1.159	1.184	-2.2#	92	0.00	
31	T	Cyclohexane	1.368	1.207	11.8	99	0.00	
32	T	1,1,1-Trichloroethane	1.027	1.040	-1.3	90	0.00	
33	S	1,2-Dichloroethane-d4	0.751	0.701	6.7	81	0.00	
34	I	1,4-Difluorobenzene	1.000	1.000	0.0	83	0.00	
35	S	Dibromofluoromethane	0.294	0.304	-3.4	84	0.00	
36	T	1,1-Dichloropropene	0.571	0.632	-10.7	95	0.00	
37	T	Ethyl Acetate	0.788	0.755	4.2	92	0.00	
38	T	Carbon Tetrachloride	0.437	0.517	-18.3	95	0.00	
39	T	Methylcyclohexane	0.735	0.789	-7.3	96	0.00	
40	TM	Benzene	1.600	1.706	-6.6	94	0.00	
41	T	Methacrylonitrile	0.197	0.206	-4.6	90	0.00	
42	TM	1,2-Dichloroethane	0.540	0.561	-3.9	91	0.00	
43	T	Isopropyl Acetate	0.537	0.546	-1.7	86	0.00	
44	T	Isobutyl alcohol	0.000	0.000	0.0	0#	-6.21#	
45	TM	Trichloroethene	0.347	0.389	-12.1	99	0.00	

TC 9/14/11

* = J/UJ in associated

Evaluate Continuing Calibration Report

Data Path : W:\HPCHEM1\MSVOA_R\data\VR081511\
Data File : VR000348.D
Acq On : 15 Aug 2011 10:39
Operator : PS
Sample : 50 PPB CCC
Misc : 5 ml
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 16 07:51:47 2011
Quant Method : W:\HPCHEM1\MSVOA_R\METHOD\82R081211W.M
Quant Title : SW846 8260
QLast Update : Fri Aug 12 15:45:25 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
90	T	n-Butylbenzene	2.079	2.193	-5.5	90	0.00
91	T	Hexachloroethane	0.550	0.664	-20.7#	96	0.00 *
92	T	1,2-Dichlorobenzene	1.544	1.638	-6.1	96	0.00
93	T	1,2,4,5-Tetramethylbenzene	0.000	0.000	0.0	0#	-14.63#
94	T	1,2-Dibromo-3-Chloropropane	0.152	0.165	-8.6	89	0.00
95	T	1,2,4-Trichlorobenzene	1.014	1.142	-12.6	99	0.00
96	T	Hexachlorobutadiene	0.459	0.512	-11.5	98	0.00
97	T	Naphthalene	2.149	2.504	-16.5	93	0.00
98	T	1,2,3-Trichlorobenzene	0.914	1.006	-10.1	98	0.00
99	T	p-ethyltoluene	0.000	0.000	0.0	0#	-10.06#
100	T	p-diethylbenzene	0.000	0.000	0.0	0#	-12.13#

(#) = Out of Range SPCC's out = 0 CCC's out = 6

* = J/UJ in associated

TC 9/14/4

Evaluate Continuing Calibration Report

Data Path : W:\HPCHEM1\MSVOA_R\data\VR081611\
Data File : VR000364.D
Acq On : 16 Aug 2011 10:31
Operator : PS
Sample : 50 PPB CCC
Misc : 5 ml
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 16 11:07:52 2011
Quant Method : W:\HPCHEM1\MSVOA_R\METHOD\82R081211W.M
Quant Title : SW846 8260
QLast Update : Fri Aug 12 15:45:25 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	
1	I	Pentafluorobenzene	1.000	1.000	0.0	84	0.00	
2	T	Dichlorodifluoromethane	0.540	0.625	-15.7	111	0.00	
3	P	Chloromethane	0.695	0.842	-21.2#	112	0.00	LR
4	C	Vinyl Chloride	0.757	0.929	-22.7#	111	0.00	*
5	T	Bromomethane	0.426	0.490	-15.0	108	0.00	
6	T	Chloroethane	0.477	0.566	-18.7	106	0.00	
7	T	Trichlorofluoromethane	0.958	1.160	-21.1#	108	0.00	*
8	T	Diethyl Ether	0.432	0.364	15.7	76	0.00	
9	T	1,1,2-Trichlorotrifluoroeth	0.545	0.536	1.7	90	0.00	
10	T	Methyl Iodide	0.465	0.571	-22.8#	93	0.00	
11	T	Tert butyl alcohol	0.041	0.031	24.4#	67	-0.02	
12	CM	1,1-Dichloroethene	0.542	0.506	6.6#	87	0.00	
13	T	Acrolein	0.055	0.034	38.2#	60	0.00	
14	T	Allyl chloride	0.922	0.828	10.2	77	0.00	
15	T	Acrylonitrile	0.185	0.176	4.9	82	0.00	
16	T	Acetone	0.225	0.171	24.0#	82	0.00	LR
17	T	Carbon Disulfide	1.539	1.593	-3.5	89	0.00	
18	T	Methyl Acetate	0.626	0.564	9.9	81	0.00	
19	T	Methyl tert-butyl Ether	1.688	1.413	16.3	73	0.00	
20	T	Methylene Chloride	0.629	0.579	7.9	87	0.00	
21	T	trans-1,2-Dichloroethene	0.538	0.514	4.5	87	0.00	
22	T	Acetonitrile	0.000	0.000	0.0	0#	-4.55#	
23	T	Diisopropyl ether	1.972	1.851	6.1	81	0.00	
24	T	Vinyl Acetate	1.189	1.156	2.8	81	0.00	
25	P	1,1-Dichloroethane	1.150	1.073	6.7	82	0.00	
26	T	2-Butanone	0.035	0.030	14.3	82	0.00	
27	T	2,2-Dichloropropane	1.056	0.911	13.7	73	0.00	
28	T	cis-1,2-Dichloroethene	0.749	0.711	5.1	84	0.00	
29	T	Bromochloromethane	0.452	0.434	4.0	77	0.00	
30	C	Chloroform	1.159	1.072	7.5#	81	0.00	
31	T	Cyclohexane	1.368	1.071	21.7#	85	0.00	LR
32	T	1,1,1-Trichloroethane	1.027	0.933	9.2	79	0.00	
33	S	1,2-Dichloroethane-d4	0.751	0.672	10.5	75	0.00	
34	I	1,4-Difluorobenzene	1.000	1.000	0.0	81	0.00	
35	S	Dibromofluoromethane	0.294	0.292	0.7	79	0.00	
36	T	1,1-Dichloropropene	0.571	0.566	0.9	84	0.00	
37	T	Ethyl Acetate	0.788	0.684	13.2	82	0.00	
38	T	Carbon Tetrachloride	0.437	0.453	-3.7	82	0.00	
39	T	Methylcyclohexane	0.735	0.707	3.8	84	0.00	
40	TM	Benzene	1.600	1.551	3.1	83	0.00	
41	T	Methacrylonitrile	0.197	0.188	4.6	81	0.00	
42	TM	1,2-Dichloroethane	0.540	0.502	7.0	80	0.00	
43	T	Isopropyl Acetate	0.537	0.476	11.4	74	0.00	
44	T	Isobutyl alcohol	0.000	0.000	0.0	0#	-6.21#	
45	TM	Trichloroethene	0.347	0.348	-0.3	87	0.00	

TC 9/14/11

642

* VJ in associated sample

CHEMTECH

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C3214 SAS No.: C3214 SDG NO.: C3214

Lab File ID: VE023443.D BFB Injection Date: 08/16/2011

Instrument ID: MSVOAE BFB Injection Time: 12:56

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.8
75	30.0 - 60.0% of mass 95	45.7
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0) 1
174	50.0 - 100.0% of mass 95	61.5
175	5.0 - 9.0% of mass 174	4.2 (6.9) 1
176	95.0 - 101.0% of mass 174	59.9 (97.4) 1
177	5.0 - 9.0% of mass 176	3.9 (6.4) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD050	50 PPB CCC	VE023444.D	08/16/2011	13:39
VBE0816W1	VBE0816W1	VE023446.D	08/16/2011	15:18
BSE0816W1	BSE0816W1	VE023447.D	08/16/2011	16:05
828131A-MW11055	C3214-08	VE023450.D	08/16/2011	17:51
828131A-DP27015	C3214-10	VE023451.D	08/16/2011	18:25
828131A-DP12013	C3214-06	VE023452.D	08/16/2011	18:59
828131A-DP22015	C3214-11	VE023453.D	08/16/2011	19:34

clean

9/14/4

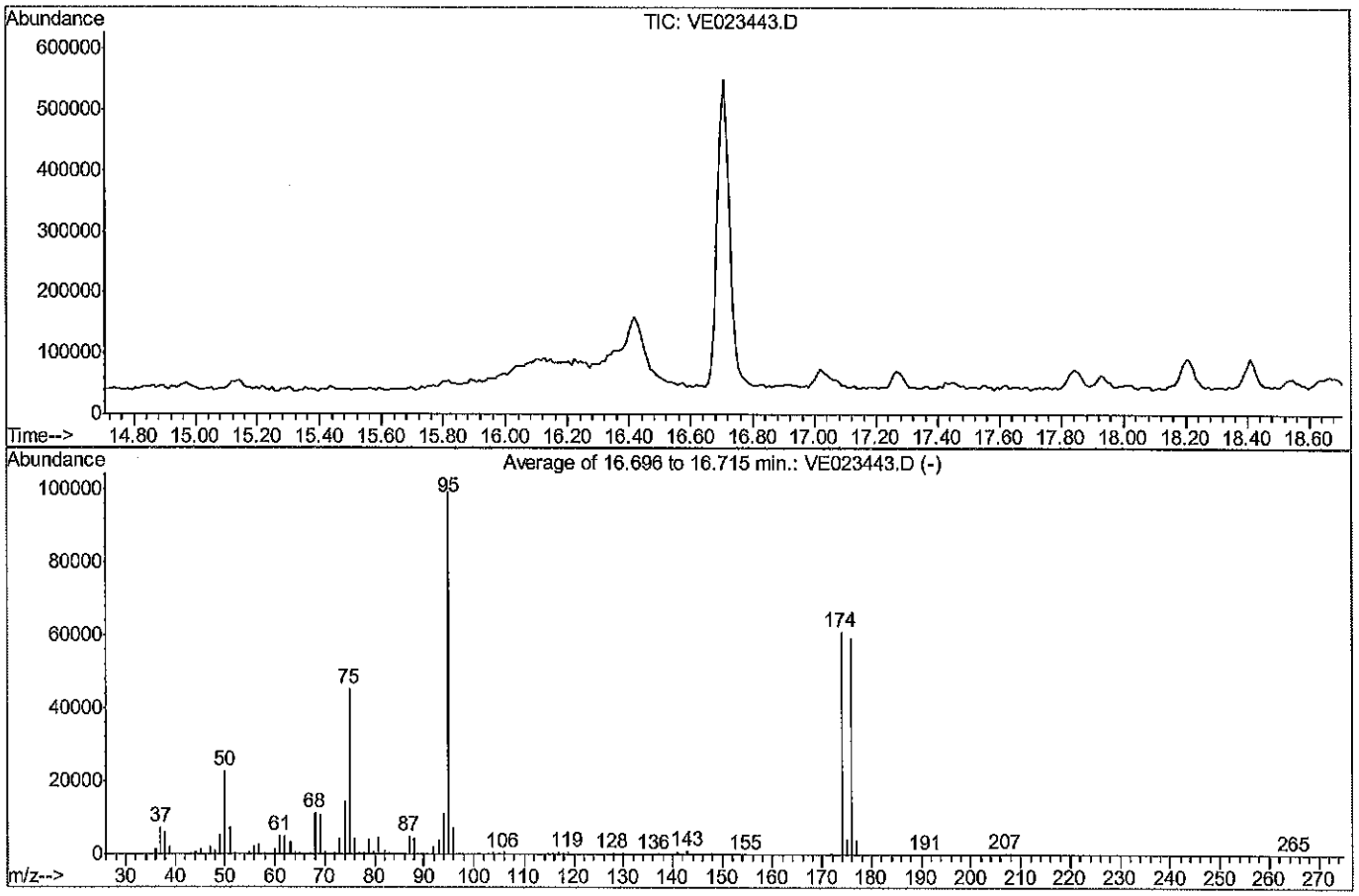
TC 44

BFB

Data Path : W:\HPCHEM1\Msvoa E\Data\VE081611\
Data File : VE023443.D
Acq On : 16 Aug 2011 12:56
Operator : NS
Sample : BFB TUNE CHECK
Misc : 5mL, MSVOA E
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : W:\HPCHEM1\MSVOA_E\METHOD\82E081211W.M
Title : SW846 8260
Last Update : Fri Aug 12 17:55:10 2011



AutoFind: Scans 1427, 1428, 1429; Background Corrected with Scan 1420

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.8	22663	PASS
75	95	30	60	45.7	45400	PASS
95	95	100	100	100.0	99362	PASS
96	95	5	9	7.2	7113	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	61.5	61112	PASS
175	174	5	9	6.9	4203	PASS
176	174	95	101	97.4	59541	PASS
177	176	5	9	6.4	3839	PASS

Tune calc check

$\frac{174}{95} = \frac{61112}{99362} = 61.50\%$ ✓

9/14/11 TC

CHEMTECH

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C3214 SAS No.: C3214 SDG NO.: C3214

Lab File ID: VR000296.D BFB Injection Date: 08/12/2011

Instrument ID: MSVOA_R BFB Injection Time: 16:40

GC Column: RTX-VMS ID: 0.25 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.6
75	30.0 - 60.0% of mass 95	54.9
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.2 (0.4) 1
174	50.0 - 100.0% of mass 95	61.5
175	5.0 - 9.0% of mass 174	4.6 (7.4) 1
176	95.0 - 101.0% of mass 174	60.8 (98.9) 1
177	5.0 - 9.0% of mass 176	3.7 (6.1) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD050	50 PPB CCC	VR000298.D	08/12/2011	17:48
VBR0812W1 (lean	VBR0812W1	VR000299.D	08/12/2011	19:13
BSR0812W1	BSR0812W1	VR000300.D	08/12/2011	19:52
TRIPBLANK	C3214-18	VR000304.D	08/12/2011	21:32
828131A-MW02012	C3214-02	VR000317.D	08/13/2011	03:03
828131A-DP28018MS	C3214-15MS	VR000319.D	08/13/2011	03:54
828131A-DP28018MSD	C3214-16MSD	VR000320.D	08/13/2011	04:19

Cyclohexane %D = 23.6 UJ Qual samples

TC ✓
8/14/11

CHEMTECH

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C3214 SAS No.: C3214 SDG NO.: C3214

Lab File ID: VR000323.D BFB Injection Date: 08/13/2011

Instrument ID: MSVOA_R BFB Injection Time: 05:34

GC Column: RTX-VMS ID: 0.25 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.1
75	30.0 - 60.0% of mass 95	54.5
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.2 (0.3) 1
174	50.0 - 100.0% of mass 95	64.6
175	5.0 - 9.0% of mass 174	4.8 (7.5) 1
176	95.0 - 101.0% of mass 174	62.6 (96.8) 1
177	5.0 - 9.0% of mass 176	4.1 (6.5) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD050	50 PPB CCC	VR000324.D	08/13/2011	05:59
VBR0812W2 Clean	VBR0812W2	VR000326.D	08/13/2011	06:50
BSR0812W3	BSR0812W3	VR000327.D	08/13/2011	07:15
828131A-MW02012DUP	C3214-03	VR000329.D	08/13/2011	08:05

PCE @ %D = -24.> ~~F data~~ TC 9/14/11 not reported from this run.

TC
9/14/11

CHEMTECH

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C3214 SAS No.: C3214 SDG NO.: C3214

Lab File ID: VR000347.D BFB Injection Date: 08/15/2011

Instrument ID: MSVOA_R BFB Injection Time: 09:04

GC Column: RTX-VMS ID: 0.25 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.9
75	30.0 - 60.0% of mass 95	54.7
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.3 (0.5) 1
174	50.0 - 100.0% of mass 95	66.5
175	5.0 - 9.0% of mass 174	4.9 (7.4) 1
176	95.0 - 101.0% of mass 174	65.4 (98.2) 1
177	5.0 - 9.0% of mass 176	4.1 (6.3) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD050	50 PPB CCC	VR000348.D	08/15/2011	10:39
VBR0815W1 Clean	VBR0815W1	VR000350.D	08/15/2011	11:43
BSR0815W1	BSR0815W1	VR000351.D	08/15/2011	12:30
828131A-MW02012DUPDL	C3214-03DL	VR000354.D	08/15/2011	14:25
828131A-MW02012DL	C3214-02DL	VR000355.D	08/15/2011	15:21
828131A-DP15013	C3214-12	VR000356.D	08/15/2011	15:59
828131A-DP15013DL	C3214-12DL	VR000357.D	08/15/2011	16:24
828131A-DP28018	C3214-14	VR000362.D	08/15/2011	19:18

o/d

VC -35

Chloroethane -28

Trichlorofluoromethane -32

CS_2 -25

~~Hexachloroethane -20~~

(TC)

J/UJ associated

TC
9/14/11

CHEMTECH

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C3214 SAS No.: C3214 SDG NO.: C3214

Lab File ID: VR000363.D BFB Injection Date: 08/16/2011

Instrument ID: MSVOA_R BFB Injection Time: 09:10

GC Column: RTX-VMS ID: 0.25 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.7
75	30.0 - 60.0% of mass 95	56.2
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	0.5 (0.7) 1
174	50.0 - 100.0% of mass 95	66.9
175	5.0 - 9.0% of mass 174	5.2 (7.8) 1
176	95.0 - 101.0% of mass 174	63.7 (95.2) 1
177	5.0 - 9.0% of mass 176	4.1 (6.4) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD050	50 PPB CCC	VR000364.D	08/16/2011	10:31
VBR0816W2 Clean	VBR0816W2	VR000366.D	08/16/2011	11:53
BSR0816W1	BSR0816W1	VR000367.D	08/16/2011	12:20
828131A-MW07012DL	C3214-05DL	VR000369.D	08/16/2011	13:21
828131A-MW6035	C3214-01	VR000371.D	08/16/2011	14:24

VC

Trichlorofluoromethane

%D

-22

-21

J/UJ associated samples

9/14/11

TC

CHEMTECH

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: MACT03

Lab Code: CHEM Case No.: C3214 SAS No.: C3214 SDG NO.: C3214

Lab File ID: VG036660.D BFB Injection Date: 08/15/2011

Instrument ID: MSVOAG BFB Injection Time: 09:47

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.8
75	30.0 - 60.0% of mass 95	45.6
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0) 1
174	50.0 - 100.0% of mass 95	89.5
175	5.0 - 9.0% of mass 174	6.2 (7) 1
176	95.0 - 101.0% of mass 174	85.6 (95.7) 1
177	5.0 - 9.0% of mass 176	5.7 (6.6) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD020	20 PPB CCC	VG036661.D	08/15/2011	11:15
VBG0815W1	VBG0815W1	VG036662.D	08/15/2011	12:47
BSG0815W1	BSG0815W1	VG036663.D	08/15/2011	13:15
828131A-MW05012	C3214-04	VG036665.D	08/15/2011	15:20
828131A-MW07012	C3214-05	VG036666.D	08/15/2011	15:48
828131A-DP23015	C3214-13	VG036668.D	08/15/2011	16:59
828131A-DP23015DL	C3214-13DL	VG036669.D	08/15/2011	17:28
828131A-DP10013	C3214-07	VG036670.D	08/15/2011	17:56
828131A-DP10013DL	C3214-07DL	VG036671.D	08/15/2011	18:25
828131A-MW12055	C3214-09	VG036672.D	08/15/2011	18:53

111TCA @ 2.6 K5 = 38 ug/L

9/14/11 ✓

TC 48

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_G\DATA\VG081511\
Data File : VG036666.D
Acq On : 15 Aug 2011 15:48
Operator : PS
Sample : C3214-05
Misc : 5mL MSVOA_G
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 16 08:23:26 2011
Quant Method : W:\HPCHEM1\MSVOA_G\METHOD\82G080511W.M
Quant Title : SW846 8260
QLast Update : Tue Aug 16 07:18:52 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	3.94	168	688131	50.00	ug/l		0.03
34) 1,4-Difluorobenzene	4.75	114	961013	50.00	ug/l		0.03
64) Chlorobenzene-d5	9.70	117	986994	50.00	ug/l		0.02
73) 1,4-Dichlorobenzene-d4	13.40	152	450307	50.00	ug/l		0.02
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4	3.92	65	391197	60.15	ug/l		0.02
Spiked Amount 50.000			Recovery = 120.30%				
35) Dibromofluoromethane	3.26	113	373253	57.52	ug/l		0.02
Spiked Amount 50.000			Recovery = 115.04%				
51) Toluene-d8	7.20	98	1168823	51.51	ug/l		0.03
Spiked Amount 50.000			Recovery = 103.02%				
63) 4-Bromofluorobenzene	11.66	95	482007	53.95	ug/l		0.01
Spiked Amount 50.000			Recovery = 107.90%				
Target Compounds							Qvalue
4) Vinyl Chloride	0.94	62	643602	88.71	ug/l		98
12) 1,1-Dichloroethene	1.43	96	50598	7.63	ug/l	#	73
21) trans-1,2-Dichloroethene	1.87	96	214632	31.67	ug/l		89
28) cis-1,2-Dichloroethene	2.77	96	9164928	1015.62	ug/l		92
45) Trichloroethene	4.63	130	589749	78.00	ug/l		99
65) Tetrachloroethene	7.89	164	123322	10.77	ug/l		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sample calculation check

V.C.

$$0.527 = \frac{643602(50)}{688131(X)} = 88.737 \text{ ppb}$$

OK ✓

9/14/11

TC

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_G\DATA\VG081511\
Data File : VG036671.D
Acq On : 15 Aug 2011 18:25
Operator : PS
Sample : C3214-07DL 10X
Misc : 5mL MSVOA_G
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 16 09:00:41 2011
Quant Method : W:\HPCHEM1\MSVOA_G\METHOD\82G080511W.M
Quant Title : SW846 8260
QLast Update : Tue Aug 16 07:18:52 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	3.94	168	669879	50.00	ug/l	0.03
34) 1,4-Difluorobenzene	4.75	114	967087	50.00	ug/l	0.04
64) Chlorobenzene-d5	9.70	117	987561	50.00	ug/l	0.02
73) 1,4-Dichlorobenzene-d4	13.41	152	452213	50.00	ug/l	0.02
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	3.92	65	383345	60.54	ug/l	0.02
Spiked Amount 50.000			Recovery =	121.08%		
35) Dibromofluoromethane	3.26	113	371413	56.88	ug/l	0.02
Spiked Amount 50.000			Recovery =	113.76%		
51) Toluene-d8	7.21	98	1126971	49.37	ug/l	0.03
Spiked Amount 50.000			Recovery =	98.74%		
63) 4-Bromofluorobenzene	11.66	95	482343	53.66	ug/l	0.01
Spiked Amount 50.000			Recovery =	107.32%		
Target Compounds						Qvalue
4) Vinyl Chloride	0.94	62	60650	8.59	ug/l	96
28) cis-1,2-Dichloroethene	2.78	96	363977	41.43	ug/l	97
45) Trichloroethene	4.63	130	53600	7.04	ug/l	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sample calculation check

V.C.

$$0.527 = \frac{60650(50)}{669879(x)} = 8.590 \times 10 = 86 ppb$$

OK

TC
9/14/11

Quantitation Report (QT Reviewed)

Data Path : W:\HPCHEM1\MSVOA_G\DATA\VG081511\
Data File : VG036672.D
Acq On : 15 Aug 2011 18:53
Operator : PS
Sample : C3214-09
Misc : 5mL MSVOA_G
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 16 09:08:01 2011
Quant Method : W:\HPCHEM1\MSVOA_G\METHOD\82G080511W.M
Quant Title : SW846 8260
QLast Update : Tue Aug 16 07:18:52 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	3.94	168	670318	50.00	ug/l		0.03
34) 1,4-Difluorobenzene	4.75	114	982858	50.00	ug/l		0.04
64) Chlorobenzene-d5	9.71	117	974393	50.00	ug/l		0.02
73) 1,4-Dichlorobenzene-d4	13.41	152	455612	50.00	ug/l		0.02
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4	3.93	65	385694	60.86	ug/l		0.03
Spiked Amount 50.000			Recovery =	121.72%			
35) Dibromofluoromethane	3.28	113	368707	55.59	ug/l		0.03
Spiked Amount 50.000			Recovery =	111.18%			
51) Toluene-d8	7.21	98	1115533	48.10	ug/l		0.03
Spiked Amount 50.000			Recovery =	96.20%			
63) 4-Bromofluorobenzene	11.67	95	495501	54.23	ug/l		0.02
Spiked Amount 50.000			Recovery =	108.46%			
Target Compounds							Qvalue
4) Vinyl Chloride	0.94	62	778058	110.09	ug/l		95
19) Methyl tert-butyl Ether	1.96	73	19804	1.13	ug/l	#	87
21) trans-1,2-Dichloroethene	1.87	96	28031	4.25	ug/l		96
28) cis-1,2-Dichloroethene	2.78	96	1177425	133.95	ug/l		98
45) Trichloroethene	4.63	130	22597	2.92	ug/l		99
65) Tetrachloroethene	7.88	164	11096	0.98	ug/l		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sample Calculation check

V.C.

$$0.527 = \frac{778058(50)}{670318(X)} = 110.12\ ppb$$

9/14/11
TC

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	
Project:	Carriage Cleantown	Date Received:	
Client Sample ID:	VBG0815W1	SDG No.:	C3214
Lab Sample ID:	VBG0815W1	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036662.D	1		08/15/11	VG081511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	1	U	0.34	1	ug/L
74-83-9	Bromomethane	1	U	0.2	1	ug/L
75-00-3	Chloroethane	1	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	1	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	1	U	0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	7.6		0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	1	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

Method Blank

Action (ppb)

X5 = 38

9/14/11 TC

METALS

NYSDEC DUSR PROJECT CHEMIST REVIEW RECORD
Project: Off Site Carriage Cleaners
Method : 6010B
Laboratory and SDG(s): C3214
Date: 9-14-11
Reviewer: Tige Cunningham

Review Level [X] NYSDEC DUSR [ ] USEPA Region II Guideline

1. ☑ Case Narrative Review and Data Package Completeness — COMMENTS
2. Where all the samples on the COC analyzed for the requested analyses? (YES) NO (circle one)

3. ☑ Holding time and Sample Collection
Were all samples were all prepped and analyzed with the holding time (6 month). (YES) NO (circle one)

4. ☑ QC Blanks
Are method blanks clean? YES (NO) (circle one) Fe @ 32.58 Action level @ 5x = 162ppb
Are Initial and continuing calibration blanks clean? YES (NO) (circle one)
Low level Fe @ 21.6ppb x5 = 108ppb No samples Qualified

☑ Interference Check Standard
OK ✓

☑ Instrument Calibration
Initial calibration criteria met for the method? (YES) NO (circle one)
90-110% (80-120% Hg) recovery on continuing calibration standards met? (YES) NO (circle one)

☑ Serial Dilutions
Were all results were within the control limit of 10% (for values > 50X MDL)? Yes
Fe was @ 18.8% but value was < 50X MDL ∴ Not evaluated

☑ Laboratory Control Sample Results
Were all results were within 80-120% limits? (YES) NO (circle one)

☑ Matrix Spike
Were MS/MSDs submitted/analyzed? YES (NO)
however lab spiked DP10013 and analyzed as a MS/MSD
Were all results were within 75-125% limits? (YES) NO NA (circle one)

☑ Duplicates/replicates
Were Field Duplicates submitted/analyzed? YES (NO)
Aqueous RPD within limit? (50%) YES NO (NA) (circle one)
Soil RPD within limit? (100%) YES NO (NA) (circle one)

Was the lab dup RPD <20% for values > 5X the CRQL (or ± CRQL) Yes

☑ Were both Total and Dissolved metals reported? YES NO (NA) (circle one)
If the dissolved concentration is > 20% of the total concentration then estimate (J) both results

☑ Percent solids < 50% for any soil/sediment sample? YES NO (NA) (circle one)
If yes, estimate all results.

5. ☑ Raw Data Review and Calculation Checks

6. ☑ Electronic Data Review and Edits. Does the EDD match the Form I's? (YES) NO (circle one)

7. ☑ DUSR Tables: **Table 1** (sample Listing), **Table 2** (results summary), **Table 3** (Reason Codes).
Were all tables produced? (YES) NO (circle one)

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW02012	SDG No.:	C3214
Lab Sample ID:	C3214-02	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	1920		1	20.4	50	ug/L	08/04/11	08/05/11	SW6010B
7439-96-5	Manganese	564		1	1.7	10	ug/L	08/04/11	08/05/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TS
9/14/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW07012	SDG No.:	C3214
Lab Sample ID:	C3214-05	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	728		1	20.4	50	ug/L	08/04/11	08/05/11	SW6010B
7439-96-5	Manganese	711		1	1.7	10	ug/L	08/04/11	08/05/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC
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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP10013	SDG No.:	C3214
Lab Sample ID:	C3214-07	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	834		1	20.4	50	ug/L	08/04/11	08/05/11	SW6010B
7439-96-5	Manganese	831		1	1.7	10	ug/L	08/04/11	08/05/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC
9/14/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW11055	SDG No.:	C3214
Lab Sample ID:	C3214-08	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	254		1	20.4	50	ug/L	08/04/11	08/05/11	SW6010B
7439-96-5	Manganese	98.7		1	1.7	10	ug/L	08/04/11	08/05/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Deteetion
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC
9/14/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP15013	SDG No.:	C3214
Lab Sample ID:	C3214-12	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	121	U	1	20.4	50	ug/L	08/04/11	08/05/11	SW6010B
7439-96-5	Manganese	412		1	1.7	10	ug/L	08/04/11	08/05/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

8/14/11
TC

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP23015	SDG No.:	C3214
Lab Sample ID:	C3214-13	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	1450		1	20.4	50	ug/L	08/04/11	08/05/11	SW6010B
7439-96-5	Manganese	219		1	1.7	10	ug/L	08/04/11	08/05/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC 9/14/11

CHEMTECH

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: MACTEC Inc. **SDG No.:** C3214

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	MDL ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB57196BL		WATER		Batch Number:	PB57196			Prep Date:	08/04/2011	
	Iron	32.580	<50.000	J	20.400	50.000	P	08/05/2011	13:53	LB56297
	Manganese	1.700	<10.000	U	1.700	10.000	P	08/05/2011	13:53	LB56297

Iron 32.58 x 5 = 163 Pb

(U) Qual Fe @ 121 in DP150 13

9/19/11
TC

CHEMTECH

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: MACTEC Inc. **SDG No.:** C3214

Contract: MACT03 **Lab Code:** CHEM **Case No.:** C3214 **SAS No.:** C3214

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	MDL	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Iron	20.4	+/-50.0	U	20.4	50.0	P	08/05/2011	13:14	LB56297
	Manganese	1.7	+/-10.0	U	1.7	10.0	P	08/05/2011	13:14	LB56297
CCB01	Iron	20.4	+/-50.0	U	20.4	50.0	P	08/05/2011	13:32	LB56297
	Manganese	1.7	+/-10.0	U	1.7	10.0	P	08/05/2011	13:32	LB56297
CCB02	Iron	21.6	+/-50.0	J	20.4	50.0	P	08/05/2011	14:08	LB56297
	Manganese	1.7	+/-10.0	U	1.7	10.0	P	08/05/2011	14:08	LB56297
CCB03	Iron	20.4	+/-50.0	U	20.4	50.0	P	08/05/2011	14:45	LB56297
	Manganese	1.7	+/-10.0	U	1.7	10.0	P	08/05/2011	14:45	LB56297
CCB04	Iron	20.4	+/-50.0	U	20.4	50.0	P	08/05/2011	14:54	LB56297
	Manganese	1.7	+/-10.0	U	1.7	10.0	P	08/05/2011	14:54	LB56297

Action

21.6 x 5 = 108ppb

not affecting samples

✓

Sample Name: CCB Acquired: 8/5/2011 14:45:06 Type: Unk
Method: P4 (v248) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1937	Tl1908	Pb2203	Se1960	Sb2068	Al3082	Ba4934	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00228	.00776	.00145	.00797	.00385	.01985	-.00259	-.00015
Stddev	.00366	.00172	.00482	.00557	.00268	.00638	.00005	.00017
%RSD	160.75	22.194	332.79	69.941	69.814	32.125	2.0349	116.53
#1	-.00031	.00898	-.00196	.00403	.00195	.02436	-.00263	-.00027
#2	.00486	.00655	.00486	.01191	.00574	.01534	-.00256	-.00003

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2598	Mn2576	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00011	-.00058	.00016	-.00080	.00104	.00521	.00083	.10108
Stddev	.00022	.01119	.00041	.00024	.00017	.01905	.00124	.05314
%RSD	212.06	1937.0	255.79	30.185	16.709	365.42	149.61	52.576
#1	-.00005	-.00849	.00045	-.00097	.00091	.01868	-.00005	.06350
#2	.00026	.00734	-.00013	-.00063	.00116	-.00826	.00171	.13865

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2062	K_7664	Mo2020	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00018	.00079	.02362	.00057	-.00060	-.00242	.00500	.00461
Stddev	.00126	.00027	.00118	.00019	.00048	.04169	.00098	.00227
%RSD	705.98	34.053	4.9864	33.341	80.694	1722.3	19.560	49.356
#1	-.00107	.00060	.02279	.00044	-.00026	.02706	.00569	.00300
#2	.00071	.00098	.02445	.00071	-.00094	-.03190	.00431	.00621

Elem	S_1820	Si2881	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00282	-.01965	.00038	-.00086	.00087
Stddev	.00119	.03194	.00187	.00045	.00051
%RSD	42.193	162.50	495.96	52.319	59.375
#1	.00198	.00293	.00170	-.00118	.00050
#2	.00367	-.04224	-.00094	-.00054	.00123

ND ✓

5.2 < 21.6 OK ✓

TC 9/14/4

Sample Name: CCV Acquired: 8/5/2011 14:42:16 Type: Unk
Method: P4 (v248) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1937	Tl1908	Pb2203	Se1960	Sb2068	Al3082	Ba4934	Be2348	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.2237	5.0557	4.9818	5.2529	5.3334	10.085	10.993	.24430	2.4381
Stddev	.0853	.0990	.1044	.0909	.0987	.006	.087	.00036	.0429
%RSD	1.6321	1.9580	2.0948	1.7300	1.8497	.06160	.79402	.14674	1.7601
#1	5.1634	4.9857	4.9080	5.1886	5.2637	10.081	10.931	.24455	2.4077
#2	5.2839	5.1257	5.0556	5.3172	5.4032	10.089	11.055	.24405	2.4684

Elem	Ca3736	Cr2677	Co2286	Cu2247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.172	.95708	2.5061	1.2654	5.0641	2.4923	25.540	2.4993	1.1918
Stddev	.151	.00608	.0476	.0012	.0461	.0295	.028	.0427	.0082
%RSD	.59810	.63536	1.8997	.09572	.91105	1.1842	.11136	1.7081	.68628
#1	25.065	.96138	2.4724	1.2646	5.0315	2.4714	25.560	2.4691	1.1975
#2	25.278	.95278	2.5397	1.2663	5.0967	2.5132	25.520	2.5295	1.1860

Elem	Na5895	V_2924	Zn2062	K_7664	Mo2020	B_2496	S_1820	Si2881	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.148	2.5140	2.5372	27.486	5.2660	4.8491	4.9306	5.2697	4.9792
Stddev	.193	.0000	.0466	.156	.0839	.0125	.0884	.0626	.0931
%RSD	.70948	.00144	1.8386	.56677	1.5931	.25862	1.7937	1.1881	1.8701
#1	27.011	2.5140	2.5042	27.376	5.2067	4.8579	4.8681	5.2254	4.9134
#2	27.284	2.5139	2.5702	27.597	5.3254	4.8402	4.9931	5.3139	5.0451

Elem	Ti3361	Li6707
Units	ppm	ppm
Avg	5.3375	5.5141
Stddev	.0401	.0423
%RSD	.75215	.76641
#1	5.3091	5.4842
#2	5.3659	5.5440

CCV check

9/14/11
JC

Sample Name: PB57196BS Acquired: 8/5/2011 13:56:52 Type: Unk
Method: P4 (v248) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1937	Tl1908	Pb2203	Se1960	Sb2068	Al3082	Ba4934	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.82179	1.9969	.98988	2.0762	.83485	2.0177	.22450	.20536
Stddev	.02147	.0437	.02597	.0453	.01941	.0026	.00007	.00013
%RSD	2.6121	2.1888	2.6232	2.1816	2.3244	.13078	.03323	.06376
#1	.83697	2.0279	1.0082	2.1082	.84857	2.0196	.22444	.20527
#2	.80661	1.9660	.97152	2.0441	.82112	2.0158	.22455	.20545

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2598	Mn2576	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.20200	1.0926	.41084	.20570	.32389	3.2033	.21191	2.1668
Stddev	.00389	.0420	.00399	.00542	.00288	.0123	.00003	.0157
%RSD	1.9272	3.8437	.97045	2.6342	.89048	.38384	.01342	.72361
#1	.20476	1.1223	.40802	.20953	.32593	3.1946	.21193	2.1557
#2	.19925	1.0629	.41366	.20187	.32185	3.2120	.21189	2.1779

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2062	K_7664	Mo2020	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.52218	.07530	3.1955	.32171	.20986	10.728	.43291	.29918
Stddev	.01278	.00052	.0204	.00005	.00256	.062	.00756	.00336
%RSD	2.4475	.69359	.63701	.01510	1.2190	.57827	1.7452	1.1218
#1	.53122	.07493	3.1811	.32167	.21167	10.772	.43825	.29681
#2	.51315	.07567	3.2099	.32174	.20806	10.684	.42757	.30156

Elem	S_1820	Si2881	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm
Avg	F.01260	1.0111	.72175	.21217	.21454
Stddev	.00043	.0021	.01246	.00399	.00171
%RSD	3.4531	.20543	1.7270	1.8795	.79504
#1	.01290	1.0125	.73057	.20935	.21333
#2	.01229	1.0096	.71294	.21499	.21574

$\frac{3203}{3000} = 107\%$

$\frac{2119}{2000} = 106\%$

9/14/11
TC104

Sample Name: C3214-02 Acquired: 8/5/2011 14:11:57 Type: Unk
Method: P4 (v248) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1937	Tl1908	Pb2203	Se1960	Sb2068	Al3082	Ba4934	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00254	.00767	.00190	.00464	-.00078	.03576	.30972	-.00028
Stddev	.00318	.00068	.00528	.00182	.00024	.00482	.00204	.00006
%RSD	124.97	8.8642	278.08	39.267	31.038	13.488	.65763	22.757
#1	.00479	.00719	.00563	.00593	-.00061	.03917	.31116	-.00033
#2	.00030	.00815	-.00183	.00336	-.00095	.03235	.30828	-.00024

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2598	Mn2576	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00004	168.90	-.00483	-.00125	.00254	1.9241	56409	49.331
Stddev	.00027	2.55	.00059	.00010	.00142	.0100	.00016	.467
%RSD	670.10	1.5069	12.279	8.1604	55.849	.52094	.02763	.94692
#1	-.00015	170.70	-.00441	-.00132	.00154	1.9312	.56398	49.661
#2	.00023	167.10	-.00525	-.00118	.00355	1.9170	.56420	49.001

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2062	K_7664	Mo2020	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00133	-.00064	183.40	.00100	.00925	2.2917	.00107	.03011
Stddev	.00152	.00039	1.83	.00002	.00028	.0634	.00044	.00029
%RSD	114.67	61.699	.99720	1.9797	2.9724	2.7656	40.708	.96032
#1	-.00240	-.00036	184.69	.00099	.00945	2.3365	.00076	.03032
#2	-.00025	-.00092	182.10	.00102	.00906	2.2469	.00138	.02991

Elem	S_1820	Si2881	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm
Avg	36.073	8.4846	.00259	-.00393	.00679
Stddev	.493	.1907	.00161	.00042	.00011
%RSD	1.3666	2.2480	62.147	10.784	1.6631
#1	36.421	8.6195	.00372	-.00423	.00671
#2	35.724	8.3498	.00145	-.00363	.00687

7/14/11
TC

Sample Name: PB57196BL Acquired: 8/5/2011 13:53:48 Type: Unk
Method: P4 (v248) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1937	Tl1908	Pb2203	Se1960	Sb2068	Al3082	Ba4934	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00250	.00384	.00063	.00568	.00485	.01659	-.00274	-.00010
Stddev	.00186	.00008	.00105	.00004	.00103	.00094	.00002	.00003
%RSD	74.347	2.0062	168.16	.69746	21.293	5.6604	.69362	30.364
#1	.00382	.00379	-.00012	.00565	.00558	.01593	-.00272	-.00012
#2	.00119	.00390	.00137	.00571	.00412	.01725	-.00275	-.00008

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2598	Mn2576	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00013	-.00854	-.00089	.00020	.00098	.03258	.00112	.11149
Stddev	.00019	.00749	.00046	.00018	.00009	.04406	.00013	.03169
%RSD	153.40	87.796	51.422	87.036	9.2306	135.25	11.385	28.426
#1	-.00001	-.00324	-.00056	.00033	.00092	.00142	.00103	.13390
#2	.00026	-.01383	-.00121	.00008	.00104	.06374	.00122	.08908

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2062	K_7664	Mo2020	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00087	-.00016	-.00245	.00081	.00055	-.02614	.00012	-.00313
Stddev	.00091	.00039	.00457	.00054	.00015	.00481	.00044	.00255
%RSD	105.17	251.22	186.51	66.795	27.869	18.416	355.68	81.341
#1	-.00151	.00012	-.00568	.00119	.00066	-.02955	.00044	-.00493
#2	-.00022	-.00043	.00078	.00043	.00044	-.02274	-.00019	-.00133

Elem	S_1820	Si2881	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00448	-.00861	.00060	-.00249	-.00368
Stddev	.00123	.01236	.00062	.00183	.00051
%RSD	27.399	143.51	101.97	73.255	13.958
#1	-.00361	-.01735	.00017	-.00120	-.00404
#2	-.00534	.00013	.00104	-.00379	-.00332

TC
9/14/11

Dissolved Gases, Anions, Sulfide, CO_2, TOC, Alkalinity

NYSDEC DUSR PROJECT CHEMIST REVIEW RECORD

Project Name: Off-Site Carriage Cleaners
Method : Laboratory and SDG(s): Chemtech SDG # C3214
Date: 9-15-11
Reviewer: Tige Cunningham
Review Level ☒ Level B/CLP DUSR ☐ USEPA Validation

1. ☑ Case Narrative Review and COC/Data Package Completeness COMMENTS

OK ✓

2. ☑ Holding time and Sample Collection
RSK-175 - 14days met ✓ Sulfide 7days ✓ CO_2/Alkalinity 14days ✓
Anions NO_2/NO_3 48hrs met ✓ TOC 28days ✓

3. ☑ QC Blanks
RSK-175 - clean ✓ TOC - OK ✓
Method 300 - OK ✓ Alk OK ✓
☑ Instrument Tuning

N/A

☑ Instrument Calibration
RSK-175 OK ✓
TOC - OK ✓
☑ Surrogate Recovery

N/A

☑ Matrix Spike
RSK-175: Not Analyzed
Sulfide w/in limits 75-125% | Sulfate on MW11055 @ 32% but sample was above calibration @ 98 mg/L so no action.
☑ Duplicates/replicates
Lab Dup for Method 300 - OK ✓ w/in RPD of 20
Sulfide ; Alkalinity; CO_2 OK ✓
☑ Laboratory Control Sample Results
RSK-175 - w/in Limits set by Lab 70-130% | TOC w/in lab limits 84-118%
Alkalinity ✓ w/in Lab limits of 80-120% | Anions w/in 90-110% limits
Sulfide w/in Lab Limits 80-120% | CO_2 w/in 80-120 limits
☑ TIC Review and DUSR Table Reporting

N/A

4. ☑ Raw Data Review and Calculation Checks
Anions ✓ Sulfide ✓ Dissolved Gas ✓
TOC ✓ Alkalinity ✓
5. ☑ Electronic Data Review and Edits

828131A - MW05012 was analyzed for nitrate/nitrite/sulfate but not requested on the COC. Data was reported and not refused, per Chuck Staples

CHEMTECH

GC Volatiles
DETECTOR: FID

Tabulated Analytical Results
Gases

CLIENT: MACTEC Inc.
PROJECT: Carriage Cleantown
SAMPLE ID: 828131A-MW02012
LAB ID: C3214-02
FILENAME: FA000281.D
LAB PROJECT: C3214

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 8/10/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 5.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 5.0	U	5.0	2.6	3.0
74-82-8	METHANE	5.63		5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

TC
9/12/11

CHEMTECH

GC Volatiles
DETECTOR: FID

Tabulated Analytical Results
Gases

CLIENT: MACTEC Inc.
PROJECT: Carriage Cleantown
SAMPLE ID: 828131A-MW07012
LAB ID: C3214-05
FILENAME: FA000282.D
LAB PROJECT: C3214

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 8/10/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 5.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 5.0	U	5.0	2.6	3.0
74-82-8	METHANE	12.64		5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

TC
9/12/11

CHEMTECH

GC Volatiles
DETECTOR: FID

Tabulated Analytical Results
Gases

CLIENT: MACTEC Inc.
PROJECT: Carriage Cleantown
SAMPLE ID: 828131A-DP10013
LAB ID: C3214-07
FILENAME: FA000283.D
LAB PROJECT: C3214

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 8/10/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 5.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 5.0	U	5.0	2.6	3.0
74-82-8	METHANE	13.56		5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

TC
9/12/11

CHEMTECH

GC Volatiles
DETECTOR: FID

Tabulated Analytical Results
Gases

CLIENT: MACTEC Inc.
PROJECT: Carriage Cleantown
SAMPLE ID: 828131A-MW11055
LAB ID: C3214-08
FILENAME: FA000284.D
LAB PROJECT: C3214

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 8/10/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 5.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 5.0	U	5.0	2.6	3.0
74-82-8	METHANE	3.59	J	5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

TC
9/12/11

CHEMTECH

GC Volatiles
DETECTOR: FID

Tabulated Analytical Results
Gases

CLIENT: MACTEC Inc.
PROJECT: Carriage Cleantown
SAMPLE ID: 828131A-DP15013
LAB ID: C3214-12
FILENAME: FA000285.D
LAB PROJECT: C3214

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 8/10/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 5.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 5.0	U	5.0	2.6	3.0
74-82-8	METHANE	4.10	J	5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

TC
9/12/11

CHEMTECH

GC Volatiles
DETECTOR: FID

Tabulated Analytical Results
Gases

CLIENT: MACTEC Inc.
PROJECT: Carriage Cleantown
SAMPLE ID: 828131A-DP23015
LAB ID: C3214-13
FILENAME: FA000286.D
LAB PROJECT: C3214

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 8/10/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 5.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 5.0	U	5.0	2.6	3.0
74-82-8	METHANE	16.85		5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

TC
9/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW02012	SDG No.:	C3214
Lab Sample ID:	C3214-02	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	1920		1	20.4	50	ug/L	08/04/11	08/05/11	SW6010B
7439-96-5	Manganese	564		1	1.7	10	ug/L	08/04/11	08/05/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC
9/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW07012	SDG No.:	C3214
Lab Sample ID:	C3214-05	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	728		1	20.4	50	ug/L	08/04/11	08/05/11	SW6010B
7439-96-5	Manganese	711		1	1.7	10	ug/L	08/04/11	08/05/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP10013	SDG No.:	C3214
Lab Sample ID:	C3214-07	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	834		1	20.4	50	ug/L	08/04/11	08/05/11	SW6010B
7439-96-5	Manganese	831		1	1.7	10	ug/L	08/04/11	08/05/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW11055	SDG No.:	C3214
Lab Sample ID:	C3214-08	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	254		1	20.4	50	ug/L	08/04/11	08/05/11	SW6010B
7439-96-5	Manganese	98.7		1	1.7	10	ug/L	08/04/11	08/05/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC 9/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP15013	SDG No.:	C3214
Lab Sample ID:	C3214-12	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	121		1	20.4	50	ug/L	08/04/11	08/05/11	SW6010B
7439-96-5	Manganese	412		1	1.7	10	ug/L	08/04/11	08/05/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP23015	SDG No.:	C3214
Lab Sample ID:	C3214-13	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	1450		1	20.4	50	ug/L	08/04/11	08/05/11	SW6010B
7439-96-5	Manganese	219		1	1.7	10	ug/L	08/04/11	08/05/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

9/12/11
TC

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW02012	SDG No.:	C3214
Lab Sample ID:	C3214-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	420		1	0.4	2	mg/L	08/04/11	08/04/11	SM2320 B
Chloride	480	OR	1	0.075	0.15	mg/L	08/03/11	08/03/11	E300
Nitrite	0.15	U	1	0.022	0.15	mg/L	08/03/11	08/03/11	E300
Nitrate	0.1	U	1	0.027	0.1	mg/L	08/03/11	08/03/11	E300
Sulfate	130	OR	1	0.132	0.75	mg/L	08/03/11	08/03/11	E300
Carbon Dioxide	440		1	2	2	mg/L	08/04/11	08/04/11	SM2320B
Sulfide	1	U	1	1	1	mg/L	08/05/11	08/05/11	SM4500 S E or F
TOC	4.9		1	0.08	0.5	mg/L	08/05/11	08/05/11	SM5310B

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC
9/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW02012DL	SDG No.:	C3214
Lab Sample ID:	C3214-02DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	350	D	50	3.8	7.5	mg/L	08/04/11	08/04/11	E300
Sulfate	120	D	5	0.66	3.8	mg/L	08/04/11	08/04/11	E300

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC
8/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW05012	SDG No.:	C3214
Lab Sample ID:	C3214-04	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	420		1	0.4	2	mg/L	08/04/11	08/04/11	SM2320 B
Chloride	440	OR	1	0.075	0.15	mg/L	08/03/11	08/03/11	E300
Nitrite	0.15	U	1	0.022	0.15	mg/L	08/03/11	08/03/11	E300
Nitrate	0.1	U	1	0.027	0.1	mg/L	08/03/11	08/03/11	E300
Sulfate	140	OR	1	0.132	0.75	mg/L	08/03/11	08/03/11	E300
Carbon Dioxide	430		1	2	2	mg/L	08/04/11	08/04/11	SM2320B

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC
8/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW05012DL	SDG No.:	C3214
Lab Sample ID:	C3214-04DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	320	D	50	3.8	7.5	mg/L	08/04/11	08/04/11	E300
Sulfate	120	D	5	0.66	3.8	mg/L	08/04/11	08/04/11	E300

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC
8/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW07012	SDG No.:	C3214
Lab Sample ID:	C3214-05	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	430		1	0.4	2	mg/L	08/04/11	08/04/11	SM2320 B
Chloride	480	OR	1	0.075	0.15	mg/L	08/03/11	08/03/11	E300
Nitrite	0.15	U	1	0.022	0.15	mg/L	08/03/11	08/03/11	E300
Nitrate	0.1	U	1	0.027	0.1	mg/L	08/03/11	08/03/11	E300
Sulfate	140	OR	1	0.132	0.75	mg/L	08/03/11	08/03/11	E300
Carbon Dioxide	440		1	2	2	mg/L	08/04/11	08/04/11	SM2320B
Sulfide	1	U	1	1	1	mg/L	08/05/11	08/05/11	SM4500 S E or F
TOC	4		1	0.08	0.5	mg/L	08/05/11	08/05/11	SM5310B

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW07012DL	SDG No.:	C3214
Lab Sample ID:	C3214-05DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	350	D	50	3.8	7.5	mg/L	08/04/11	08/04/11	E300
Sulfate	130	D	5	0.66	3.8	mg/L	08/04/11	08/04/11	E300

Comments:

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LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC
9/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP10013	SDG No.:	C3214
Lab Sample ID:	C3214-07	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	520		1	0.4	2	mg/L	08/04/11	08/04/11	SM2320 B
Chloride	340	OR	1	0.075	0.15	mg/L	08/03/11	08/03/11	E300
Nitrite	0.15	U	1	0.022	0.15	mg/L	08/03/11	08/03/11	E300
Nitrate	0.1	U	1	0.027	0.1	mg/L	08/03/11	08/03/11	E300
Sulfate	330	OR	1	0.132	0.75	mg/L	08/03/11	08/03/11	E300
Carbon Dioxide	540		1	2	2	mg/L	08/04/11	08/04/11	SM2320B
Sulfide	1	U	1	1	1	mg/L	08/05/11	08/05/11	SM4500 S E or F
TOC	2		1	0.08	0.5	mg/L	08/05/11	08/05/11	SM5310B

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC
9/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP10013DL	SDG No.:	C3214
Lab Sample ID:	C3214-07DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	250	D	50	3.8	7.5	mg/L	08/04/11	08/04/11	E300
Sulfate	280	D	5	0.66	3.8	mg/L	08/04/11	08/04/11	E300

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC
9/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW11055	SDG No.:	C3214
Lab Sample ID:	C3214-08	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	400		1	0.4	2	mg/L	08/04/11	08/04/11	SM2320 B
Chloride	680	OR	1	0.075	0.15	mg/L	08/03/11	08/03/11	E300
Nitrite	0.15	U	1	0.022	0.15	mg/L	08/03/11	08/03/11	E300
Nitrate	0.1	U	1	0.027	0.1	mg/L	08/03/11	08/03/11	E300
Sulfate	98	OR	1	0.132	0.75	mg/L	08/03/11	08/03/11	E300
Carbon Dioxide	390		1	2	2	mg/L	08/04/11	08/04/11	SM2320B
Sulfide	1	U	1	1	1	mg/L	08/05/11	08/05/11	SM4500 S E or F
TOC	2.9		1	0.08	0.5	mg/L	08/05/11	08/05/11	SM5310B

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

8/12/11
TC

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-MW11055DL	SDG No.:	C3214
Lab Sample ID:	C3214-08DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	500	D	50	3.8	7.5	mg/L	08/04/11	08/04/11	E300
Sulfate	88	D	2	0.264	1.5	mg/L	08/04/11	08/04/11	E300

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC
9/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP15013	SDG No.:	C3214
Lab Sample ID:	C3214-12	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	400		1	0.4	2	mg/L	08/04/11	08/04/11	SM2320 B
Chloride	340	OR	1	0.075	0.15	mg/L	08/03/11	08/03/11	E300
Nitrite	0.15	U	1	0.022	0.15	mg/L	08/03/11	08/03/11	E300
Nitrate	0.1	U	1	0.027	0.1	mg/L	08/03/11	08/03/11	E300
Sulfate	180	OR	1	0.132	0.75	mg/L	08/03/11	08/03/11	E300
Carbon Dioxide	400		1	2	2	mg/L	08/04/11	08/04/11	SM2320B
Sulfide	1	U	1	1	1	mg/L	08/05/11	08/05/11	SM4500 S E or F
TOC	3.7		1	0.08	0.5	mg/L	08/05/11	08/05/11	SM5310B

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC
9/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP15013DL	SDG No.:	C3214
Lab Sample ID:	C3214-12DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	250	D	50	3.8	7.5	mg/L	08/04/11	08/04/11	E300
Sulfate	150	D	5	0.66	3.8	mg/L	08/04/11	08/04/11	E300

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC 9/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP23015	SDG No.:	C3214
Lab Sample ID:	C3214-13	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	420		1	0.4	2	mg/L	08/04/11	08/04/11	SM2320 B
Chloride	350	OR	1	0.075	0.15	mg/L	08/03/11	08/03/11	E300
Nitrite	0.15	U	1	0.022	0.15	mg/L	08/03/11	08/03/11	E300
Nitrate	0.1	U	1	0.027	0.1	mg/L	08/03/11	08/03/11	E300
Sulfate	76	OR	1	0.132	0.75	mg/L	08/03/11	08/03/11	E300
Carbon Dioxide	420		1	2	2	mg/L	08/04/11	08/04/11	SM2320B
Sulfide	1	U	1	1	1	mg/L	08/05/11	08/05/11	SM4500 S E or F
TOC	3.9		1	0.08	0.5	mg/L	08/05/11	08/05/11	SM5310B

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC
9/12/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	08/02/11
Project:	Carriage Cleantown	Date Received:	08/03/11
Client Sample ID:	828131A-DP23015DL	SDG No.:	C3214
Lab Sample ID:	C3214-13DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	260	D	50	3.8	7.5	mg/L	08/04/11	08/04/11	E300
Sulfate	71	D	2	0.264	1.5	mg/L	08/04/11	08/04/11	E300

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

TC
9/12/11

			Std	Filename						
			50	FA000277.D						
			100	FA000276.D						
			200	FA000275.D						
			500	FA000274.D						
Date Analyzed	8/10/2011		1000	FA000273.D						
	50 ppm	100 ppm	200 ppm	500 ppm	1000 ppm					CORR
Analyte	Cal Fac 1	Cal Fac 2	Cal Fac 3	Cal Fac 4	Cal Fac 5	Ave CF	Std Dev	% RSD	Flag	COEFF
ETHANE	3.53	3.74	3.93	3.02	2.23	3.29	0.7	21		0.98660
ETHYLENE	3.48	3.69	3.89	3.00	2.23	3.26	0.7	20		0.99404
METHANE	1.53	1.60	1.70	1.34	1.01	1.43	0.3	19		0.98798

Methane: $\frac{1010974}{1000ppm} = 1010.97$ (RF)

$\frac{669540}{500ppm} = 1339.08$ $\quad \frac{76243}{50ppm} = 1524$

$\frac{339276}{200ppm} = 1696.$ $\quad \frac{159635}{100ppm} = 1596.$

$\bar{X} = 1433.17$

* Denotes outside control criteria: 30% RSD for initial calibration 25% drift for continuing calibration
(When calibration factor fails correlation coeficient is used as per RSK-175)

Quantitation Report (QT Reviewed)

Data Path : P:\HPCHEM1\FID_A\Data\FA081011\
Data File : FA000281.D
Signal(s) : FID1A.CH
Acq On : 10 Aug 2011 15:33
Operator : UA
Sample : C3214-02
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 10 19:34:44 2011
Quant Method : P:\HPCHEM1\FID_A\GASES\Method\FA081011.M
Quant Title :
QLast Update : Wed Aug 10 13:24:21 2011
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase : RT-U Plot
Signal Info : 30M x 0.32mm

Compound	R.T.	Response	Conc Units
Target Compounds			
3) Methane	4.403	114005	79.528 ug/mlm

(f)=RT Delta > 1/2 Window (m)=manual int.

$\frac{114005}{1433} = 79.547$

9/15/14

TC

Quantitation Report (QT Reviewed)

Data Path : P:\HPCHEM1\FID_A\Data\FA081011\
Data File : FA000286.D
Signal(s) : FID1A.CH
Acq On : 10 Aug 2011 18:37
Operator : UA
Sample : C3214-13
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 10 19:35:45 2011
Quant Method : P:\HPCHEM1\FID_A\GASES\Method\FA081011.M
Quant Title :
QLast Update : Wed Aug 10 13:24:21 2011
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase : RT-U Plot
Signal Info : 30M x 0.32mm

Compound	R.T.	Response	Conc Units
Target Compounds			
3) Methane	4.414	341304	238.087 ug/mlm

(f)=RT Delta > 1/2 Window (m)=manual int.

Density Factor = $\frac{(16 \times 273)}{(22.4 \times 373)} = \frac{4368}{8355.2} = .5228$

Conc. in ~~Water~~ Headspace = $\frac{238.08 \times 55.5 \times \cancel{16} \times .5228}{\cancel{70100}\ 36} = \cancel{1.576}\ 13.82$ (.5228, 4, 1)

Conc in ~~Headspace~~ Water = $\frac{238.08 \times 55.5 \times 16 \times \cancel{.5228}}{70100} = \cancel{1.576}\ 3.0159$ (1)

16.83

TC 9/15/11

				Methane Gases Calculation			
Concentration in Water							
	Raw Data	Density Factor	Vol. Head space	Dilution Factor			
	238.087	0.5228	4	1			
		Vol. of water:	36				
Conc In Water							
	13.83021						
Concentration in Head Space							
	Raw Data		Molecular weight	Dilution Factor			
	238.087	55.5	16	1			
		Henry's Constant:	70100				
Conc in HS							
	3.015995						
Final Conc.							
	16.8462						

TC 9/15/11

CHEMTECH

Matrix Spike Summary

Client:	MACTEC Inc.	**SDG No.:**	C3214
Project:	Carriage Cleantown	**Sample ID:**	C3214-08
Client ID:	828131A-MW11055S	**Percent Solids for Spike Sample:**	0

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Nitrate+Nitrite	mg/L	80-120	12.20		0.25	U	13.20	1	92		08/03/2011
Chloride	mg/L	80-120	520.00		680		7.50	1	-2133		08/03/2011
Nitrite	mg/L	80-120	7.00		0.022	U	7.60	1	92		08/03/2011
Nitrate	mg/L	80-120	5.30		0.027	U	5.60	1	95		08/03/2011
Sulfate	mg/L	80-120	110.00		98		37.50	1	32		08/03/2011

Concentration of un-spiked sample was over the instrument calibration at 98 mg/L
No action taken on 32% Recovery

9/15/11
TC

Chemtech Consulting Group

Analytical Review Report

Date Printed : 8/10/11
Analyst : SIS
Data File : lb56361.MDB

Approved By :
Approved Date :
Worksheet # :

Lab Sample ID / Parameter	Client ID		Raw Amt PPB / Final Conc	Dil	Matrix	A. Date / %Rec	Prep Method / LCL	Analysis Method / UCL	RPD	Max RPD	Units	Line 1 / Line 2
Carbon Dioxide												
LB56361BLW	LB56361BLW				W	8/4/11						
Carbon Dioxide		PASS	0.800		0.80			+/-2.0000			mg/L	
LB56361BSW	LB56361BSW				W	8/4/11						
Carbon Dioxide		PASS	54.800		54.80	110.0	80	120			mg/L	
C3214-02	828131A-MW02012			1	W	8/4/11						
Carbon Dioxide		PASS	438.460		440						mg/L	
C3214-04	828131A-MW05012			1	W	8/4/11						
Carbon Dioxide		PASS	432.130		430						mg/L	
C3214-05	828131A-MW07012			1	W	8/4/11						
Carbon Dioxide		PASS	440.210		440						mg/L	
C3214-07	828131A-DP10013			1	W	8/4/11						
Carbon Dioxide		PASS	538.810		540						mg/L	
C3214-08	828131A-MW11055			1	W	8/4/11						
Carbon Dioxide		PASS	386.500		390						mg/L	
C3214-12	828131A-DP15013			1	W	8/4/11						
Carbon Dioxide		PASS	395.980		400						mg/L	
C3214-13	828131A-DP23015			1	W	8/4/11						
Carbon Dioxide		PASS	418.180		420						mg/L	
C3214-13D	828131A-DP23015D			1	W	8/4/11						
Carbon Dioxide		PASS	429.400		430.00				2.4	20	mg/L	

TC 8/15/11

TitriSoft Report

Ident	Amount	DateTime	Alkalinity	Initial pH (sample)	slope	offset	CO_2 mg/L
LB56361BLW	100	04/08/2011 17:09	0.80	4.76	97.8	6.72	
LB56361BSW	100	04/08/2011 17:11	54.80	9.68	97.8	6.72	
~~C3209-01~~	~~50~~	~~04/08/2011 17:17~~	~~73.28~~	~~6.95~~	~~97.8~~	~~6.72~~	
C3209-02	50	04/08/2011 17:21	70.08	8.70	97.8	6.72	
C3209-03	50	04/08/2011 17:25	77.84	7.20	97.8	6.72	
~~C3209-04~~	~~50~~	~~04/08/2011 17:30~~	~~72.80~~	~~8.43~~	~~97.8~~	~~6.72~~	
C3214-02	50	04/08/2011 17:34	417.76	7.07	97.8	6.72	438.46
C3214-04	50	04/08/2011 17:41	420.56	7.13	97.8	6.72	432.13
C3214-05	50	04/08/2011 17:47	425.52	7.11	97.8	6.72	440.21
C3214-07	50	04/08/2011 17:54	515.28	7.08	97.8	6.72	538.81
C3214-08	50	04/08/2011 18:00	399.20	7.35	97.8	6.72	386.50
C3214-12	50	04/08/2011 18:06	399.36	7.25	97.8	6.72	395.98
C3214-13	50	04/08/2011 18:12	420.64	7.24	97.8	6.72	418.18
C3214-13D	50	04/08/2011 18:20	427.12	7.20	97.8	6.72	429.40

AM 8/14/11

S/B

TC 8/15/11

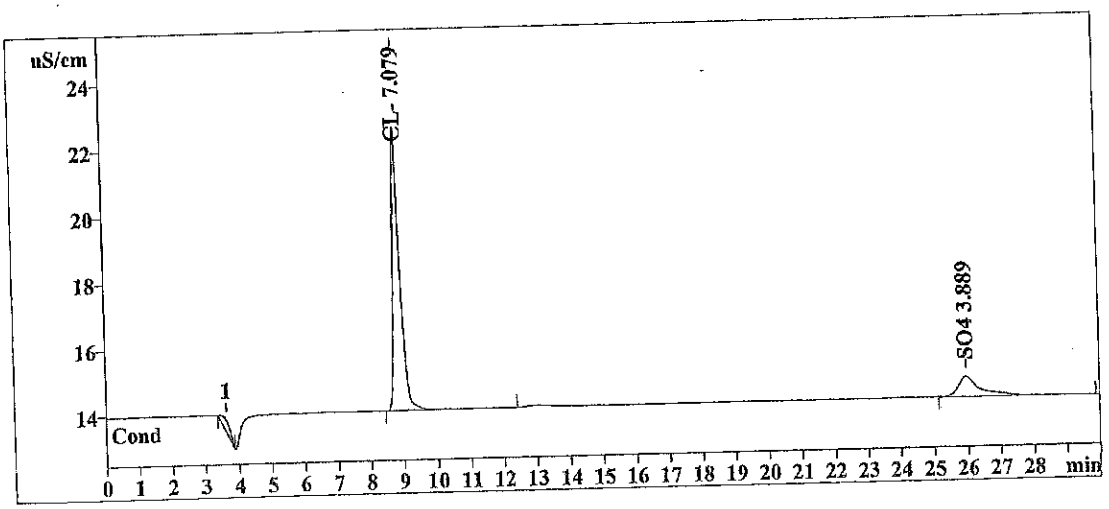
Report date: 8/8/2011 9:03:24 AM
Printed by: wet

Ident: C3214-02 50X
Analysis from: 8/4/2011 4:26:40 AM
File: v8040426.chw
Modified! Manual peaks!
Method: ANIONS 08-01-11.mtw
Run operator: wet
Analysis number: 29599

Last save: 8/4/2011 4:56:28 AM

Last save: 8/3/2011 1:46:26 PM

SAMPLE:
:
Vial number: 29
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.84	0.207	8.58	89.78	127.862	78.61	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	25.97	0.553	0.61	6.38	28.439	17.48	0.
7	30.00	0.109	9.19	96.16	156.301	96.10	0.

This report has been created by IC Net
METROHM LTD

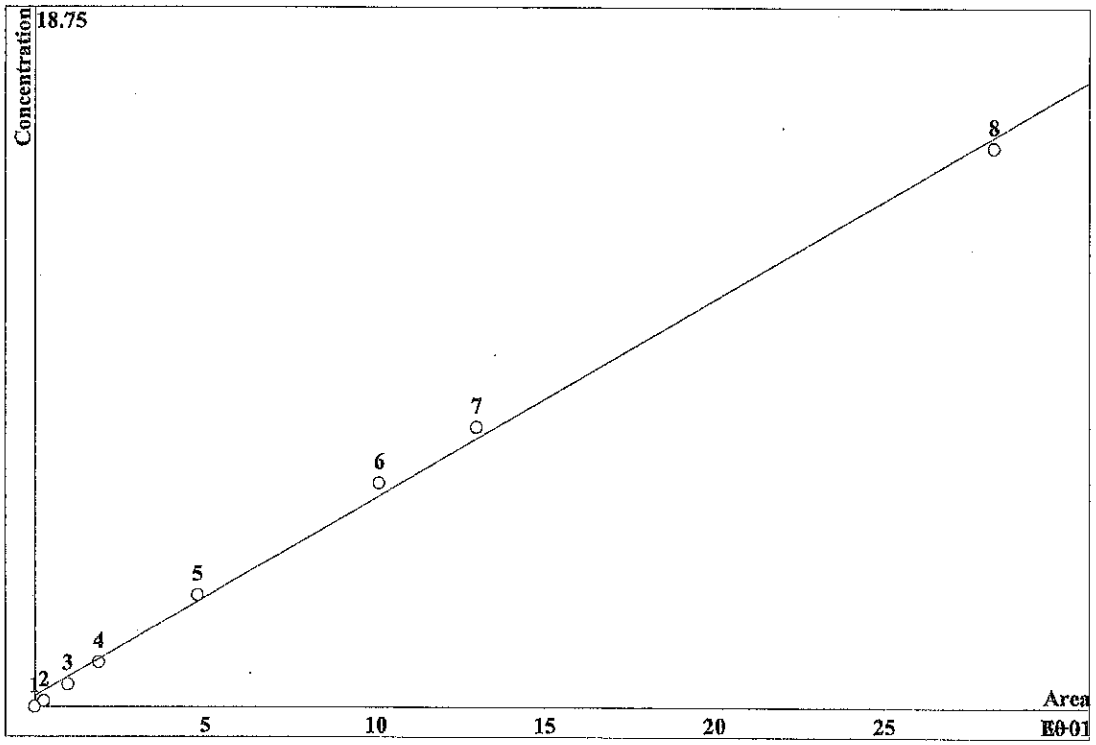
Calc check done on excel

Final = 550 mg/L

9/15/14
TC

CALIBRATION OF COMPONENT CL-

Method: ANIONS 08-01-11.mtw
Equation: Q = 1.06349·A + 5.59094
RSD: 6.391 %
Correlation coefficient: 0.998613



K3 = 0 K2 = 0 K1 = 1.06349 K0 = 5.59094
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	
2	0.2425	2.873	0.15	20	9.31	Yes	
3	0.8421	9.826	0.6	20	9.31	Yes	
4	1.614	18.82	1.2	20	9.31	Yes	
5	4.165	47.7	3	20	9.31	Yes	
6	8.936	100.9	6	20	9.31	Yes	
7	11.52	129.9	7.5	20	9.31	Yes	
8	24.79	282.2	15	20	9.31	Yes	

Calculation check
done on excel sheet
9/15/14
✓ TC

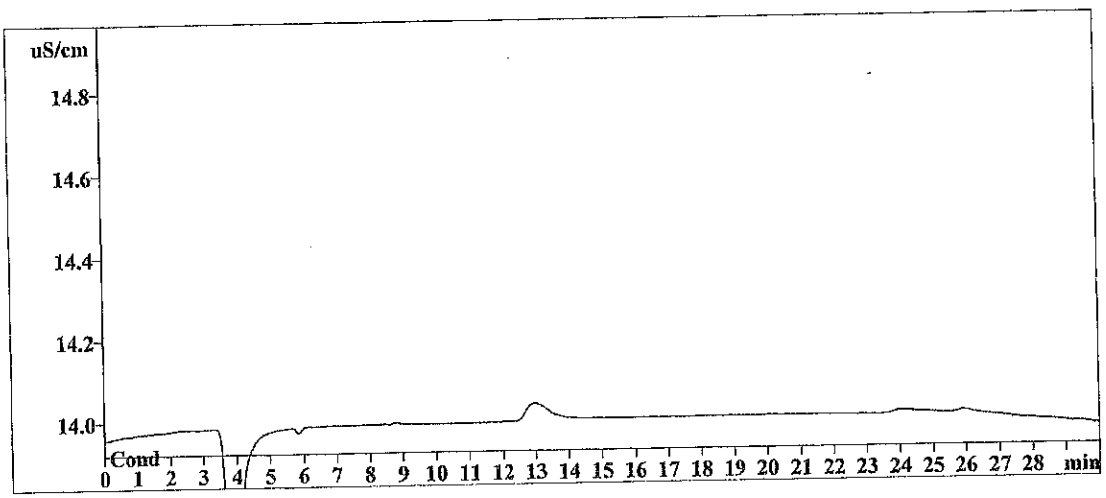
Report date: 8/8/2011 9:01:42 AM
Printed by: wet

MS6330 BLW2

Ident: MBW
Analysis from: 8/4/2011 1:09:15 AM
File: v8040109.chw Last save: 8/8/2011 8:36:58 AM

Method: ANIONS 08-01-11.mtw Last save: 8/3/2011 1:46:26 PM
Run operator: wet
Analysis number: 29593

SAMPLE:
:
Vial number: 4
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

This report has been created by IC Net
METROHM LTD

Blank verified on Raw data

TC
9/15/11

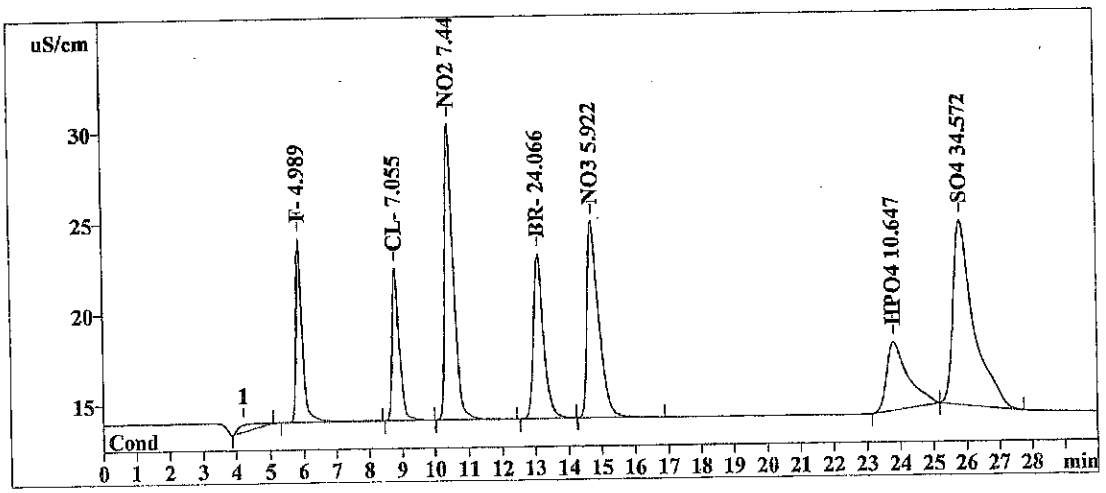
Report date: 8/8/2011 9:01:50 AM
Printed by: wet

LR56830 BLW2 M 8/8/11

Ident: LCSW
Analysis from: 8/4/2011 1:42:09 AM
File: v8040142.chw Last save: 8/4/2011 2:11:58 AM

Method: ANIONS 08-01-11.mtw Last save: 8/3/2011 1:46:26 PM
Run operator: wet
Analysis number: 29594

SAMPLE:
:
Vial number: 5
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.88	0.186	10.11	14.63	134.611	8.19	0.
2	8.80	0.221	8.42	12.18	127.425	7.75	0.
3	10.45	0.266	16.33	23.63	293.540	17.86	0.
4	13.11	0.307	9.08	13.14	191.167	11.63	0.
5	14.70	0.370	10.83	15.68	267.607	16.28	0.
6	23.80	0.617	3.77	5.45	166.607	10.14	0.
7	25.84	0.578	10.18	14.73	446.458	27.16	0.
7	30.00	0.363	68.72	99.44	1627.415	99.02	0.

This report has been created by IC Net
METROHM LTD

LCS Calculated on excel to 7.03 mg/L

7.06 reported on Form ✓

9/15/11 TC

Report date: 8/8/2011 9:02:40 AM
Printed by: wet

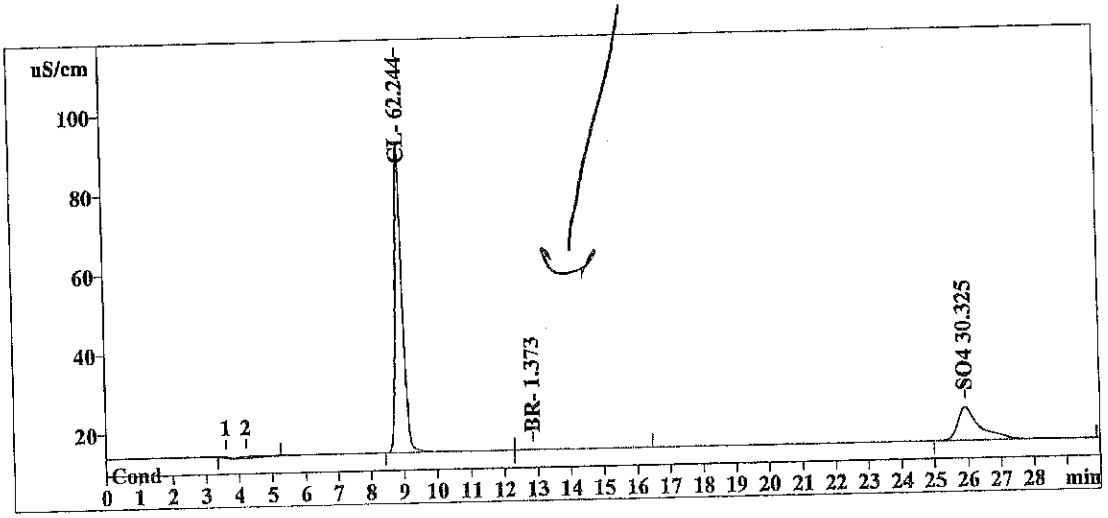
Ident: C3214-12 5X
Analysis from: 8/4/2011 3:20:51 AM
File: v8040320.chw Last save: 8/4/2011 3:50:40 AM

Method: ANIONS 08-01-11.mtw Last save: 8/3/2011 1:46:26 PM
Run operator: wet
Analysis number: 29597

Boron

SAMPLE:
:
Vial number: 26
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000

Wrong identification M 8/8/11



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.93	0.217	78.16	89.55	1165.296	73.68	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	12.85	0.775	0.12	0.14	6.717	0.42	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	25.93	0.577	8.42	9.64	388.591	24.57	0.
7	30.00	0.224	86.70	99.34	1560.605	98.67	0.

This report has been created by IC Net
METROHM LTD

Sulfate Sample check

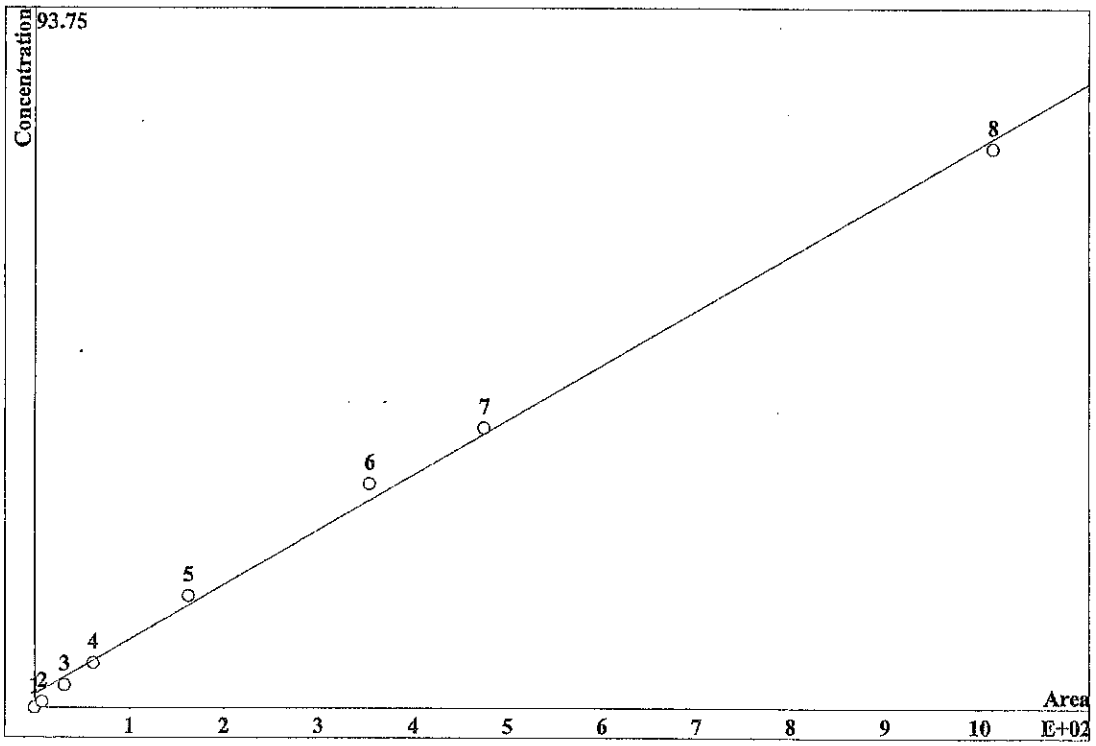
Line std 30mg/L = 353.6 area counts

≈ 30 mg/L x 5 = 150 mg/L

9/15/11 TC

CALIBRATION OF COMPONENT SO4

Method: ANIONS 08-01-11.mtw
Equation: Q = 1.46804·A + 36.0307
RSD: 6.750 %
Correlation coefficient: 0.998453



K3 = 0 K2 = 0 K1 = 1.46804 K0 = 36.0307
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0		No
2	0.2159	7.781	0.75	20	27.04		Yes
3	0.8721	31.43	3	20	27.04		Yes
4	1.676	61.32	6	20	27.04		Yes
5	4.493	162.6	15	20	27.04		Yes
6	9.808	353.6	30	20	27.04		Yes
7	12.97	474.9	37.5	20	27.04		Yes
8	27.17	1015	75	20	27.04		Yes

30 mg/L = 353.6

9/15/11
TC

Sample Results Report Print Date/Time: 2011/08/09 12:45:26

SIS
SM5310D

Sample ID	Result	Std. Dev.	RSD	Mode	ALT
ICV	10.0491			TOC	
ICB	0.3155			TOC	
CCV	8.9734			TOC	
CCB	0.2493			TOC	
LB56299BLW	0.1705	0.0105	6.14	TOC	
LB56299BSW	9.5301	0.3043	3.19	TOC	
C3214-02	4.9318	0.5877	11.92	TOC	
C3214-05	4.0185	0.6266	15.59	TOC	
C3214-07	2.0247	2.3581	116.47	TOC	
C3214-08	2.8747	0.6059	21.08	TOC	
C3214-12	3.7275	0.5629	15.10	TOC	
C3214-13	3.8573	0.5859	15.19	TOC	
C3260-01	6.1194	0.0955	1.56	TOC	
C3260-01D	6.4301	0.0167	0.26	TOC	
C3260-01S	15.0297	0.0585	0.39	TOC	
CCV	10.4180			TOC	
CCB	0.3843			TOC	

TOC

NO Raw area amounts provided to check concentrations reported

TC
9/15/11

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-892

Analytical Summary Report

Analysis Method: SM4500 S E or F Sulfide
Parameter: Sulfide
Run Number: LB56288
Instrument: Titroline Alpha Titrator

ANALYST : PM
REVIEWED BY: PM

Standard Type: LCSW/LCSWD Lot #: WP13026 Concentration: 25PPM
Titrant 1 = Iodine Conc. Titrant 2 = Sodium Thiosulphate
Normality 1 = 0.0250N Normality 2 = 0.0250N
Constant = 16000

Formula = ((Titrant 1 * Normality 1) - (Titrant 2 * Normality 2)) * Constant / ml of Sample

Seq	Lab ID	Sample Type	mL of Sample	mL Titrant 1	Normality 1	mL Titrant 2	Normality 2	Time	Analytical Date
1	LB56288BLW	MB	50	5	0.0250	5.00	0.0250	11:25 AM	8-5-2011
2	LB56288BSW	LCS				1.99		11:28	
3	LB56288BSWD	LCSD				1.98		11:31	
4	C3214-02	SAM				5.00		11:34	
5	C3214-05	SAM				5.00		11:37	
6	C3214-07	SAM				5.00		11:40	
7	C3214-08	SAM				4.96		11:43	
8	C3214-12	SAM				4.99		11:46	
9	C3214-13	SAM				5.00		11:49	
10	C3214-13DUP	SAM				5.00		11:52	
11	C3214-13MS	SAM				1.84		11:55	

Samples are all ND

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-892

Analytical Summary Report

Analysis Method: SM4500 S E or F Sulfide
Parameter: Sulfide
Run Number: LB56288
Instrument: Titroline Alpha Titrator

ANALYST RUN: PM
REVIEWED BY: NM

Standard Type: LCSW/LCSWD Lot #: WP13026 Concentration: 25PPM
Titrant 1 = Iodine Soln Titrant 2 = Sodium ThioSulphate
Normality 1 = 0.0250N Normality 2 = 0.0250N
Constant = 16000

Formula = ((Titrant 1 * Normality 1) - (Titrant 2 * Normality 2)) * Constant / ml of Sample

Seq	Lab ID	Sample Type	mL of Sample	Titrant 1 mL	Normality 1	Titrant 2 mL	Normality 2	Result ppm/ppb	Analytical Date
1	LB56288BLW	MB	50.0	5.00	0.025	5.00	0.025	0.000	8/5/11
2	LB56288BSW	LCS	50.0	5.00	0.025	1.99	0.025	24.080	8/5/11
3	LB56288BSWD	LCSD	50.0	5.00	0.025	1.98	0.025	24.160	8/5/11
4	C3214-02	SAM	50.0	5.00	0.025	5.00	0.025	0.000	8/5/11
5	C3214-05	SAM	50.0	5.00	0.025	5.00	0.025	0.000	8/5/11
6	C3214-07	SAM	50.0	5.00	0.025	5.00	0.025	0.000	8/5/11
7	C3214-08	SAM	50.0	5.00	0.025	4.96	0.025	0.320	8/5/11
8	C3214-12	SAM	50.0	5.00	0.025	4.99	0.025	0.080	8/5/11
9	C3214-13	SAM	50.0	5.00	0.025	5.00	0.025	0.000	8/5/11
10	C3214-13D	DUP	50.0	5.00	0.025	5.00	0.025	0.000	8/5/11
11	C3214-13S	MS	50.0	5.00	0.025	1.84	0.025	25.280	8/5/11

Matrix Spike Calculated

$$\frac{(5.0 \times .025) - (1.84 \times 0.025)\ 16000}{50} = 25.28$$

(0.125) (0.046)

OK ✓

9/15/11

TC

TitriSoft Report

SM2320B

Ident	Amount	DateTime	Alkalinity	Initial pH (sample)	slope	offset
LB56280BLW	100 ml	04/08/2011 17:09	0.80	4.76	97.8	6.72
LB56280BSW	100	04/08/2011 17:11	54.80	9.68	97.8	6.72
C3209-01	50	04/08/2011 17:17	73.28	6.95	97.8	6.72
C3209-02	50	04/08/2011 17:21	70.08	8.70	97.8	6.72
C3209-03	50	04/08/2011 17:25	77.84	7.20	97.8	6.72
C3209-04	50	04/08/2011 17:30	72.80	8.43	97.8	6.72
C3214-02	50	04/08/2011 17:34	417.76	7.07	97.8	6.72
C3214-04	50	04/08/2011 17:41	420.56	7.13	97.8	6.72
C3214-05	50	04/08/2011 17:47	425.52	7.11	97.8	6.72
C3214-07	50	04/08/2011 17:54	515.28	7.08	97.8	6.72
C3214-08	50	04/08/2011 18:00	399.20	7.35	97.8	6.72
C3214-12	50	04/08/2011 18:06	399.36	7.25	97.8	6.72
C3214-13	50	04/08/2011 18:12	420.64	7.24	97.8	6.72
C3214-13D	50	04/08/2011 18:20	427.12	7.20	97.8	6.72

ml

520 mg/L reported on form

TC
9/15/11

Date: 8/4/11 6:26:22 PM

Page: 1

SDG C3214	Chloride Line from 8/9/11		
Std Level	**Cl- Std Conc (mg/l)**	**Avg Response Cl-**	
1	0.15	3	
0	0	0	
2	0.6	10	
3	1.2	19	
4	3	48	
6	7.5	129	
7	15	282	
5	6	100	
	y	x	
	chloride		
slope	0.053579455	0.228298426	**intercept**
+-	0.001229528	0.143451759	**+-**
r2	0.996850357	0.314322905	**s(y)**
F	1898.977784	6	**degrees of freedom**
regression ss	187.6168942	0.59279333	**residual ss**
828131A-MW02012 50X			
Cl-			
Response (uS/cm*sec)	127		
Amount Found (mg/l)	7.033		
Final Amount (mg/l)	351.6444631		
Reported on Form I (mg/l)	350		
Percent Diff. (%)	0.47		

DATA USABILITY SUMMARY REPORT
NOVEMBER 2010 AND JANUARY 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

1.0 INTRODUCTION

Air samples were collected at the Off-Site Carriage Cleaners Site (Site) in Penfield, New York, in November 2010 and January 2011 and submitted for off-site laboratory analysis. Samples were analyzed by Enalytic, LLC, located in East Syracuse, New York, and Air Toxics, LTD, located in Folsom, California. Results were reported in the following Sample Delivery Groups (SDGs): E1012003 and E1101003 (Enalytic), and 1102123 (Air Toxics).

A listing of samples included in this Data Usability Summary Report is presented in Table 1. A summary of the analytical results is presented in Table 2. A summary of sample results qualified during this review is presented in Table 3 (Summary of Validation Actions). Tentatively Identified Compounds (TICs) are presented in Table 4. Samples were analyzed by one or more of the following methods:

- Volatile organic compounds (VOCs) by USEPA Method TO-15
- Volatile organic compounds (VOCs) by USEPA Method TO-17

Deliverables for the off-site laboratory analyses included a Category B deliverable as defined in the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocols (NYSDEC, 2005).

A project chemist review was completed based on NYSDEC Division of Environmental Remediation guidance for Data Usability Summary Reports (NYSDEC, 2010). USEPA Region 2 QC limits were used during the data evaluation unless noted otherwise. The project chemist review included evaluations of sample collection, data package completeness, holding times, QC data (blanks, instrument calibrations, duplicates, surrogate recovery, and spike recovery), data transcription, electronic data reporting, calculations, and data qualification. The following laboratory or data validation qualifiers are used in the final data presentation.

U = target analyte is not detected at the reported detection limit
J = concentration is estimated
UJ = target analyte is not detected at the reported detection limit and is estimated
R = result is rejected

Results are interpreted to be usable as reported by the laboratory unless discussed in the following sections.

2.0 VOCS – METHOD TO-15

Sample Collection

SDG E1012003

Per the narrative and based on review of the sample chain of custody documentation, sampling personnel did not sign the chain of custody to receive or relinquish samples 828131A-GV0301 and 828131A-GV0401. Custody of the samples was confirmed via e-mail with the sampler, and the chain of custody was subsequently signed by the sampler on 3/7/2011.

Blanks

SDG E1012003

Isopropanol (2-propanol) [0.8 µg/m^3] was reported in the method blank. An action level was calculated at five times the blank concentration and then was compared to sample results. The low level detection of isopropanol in sample 828131A-GV0401 was below the action level and was qualified as non-detected (U).

SDG E1101003

Acetone (1.7 µg/m^3) and an unknown tentatively identified compound (TIC) were reported in the method blank associated with a subset of samples. Action levels were calculated at ten times the blank concentration for acetone and five times the blank concentration for the unknown TIC, and then action levels were compared to sample results. Low level detections of acetone in samples 828131A-IA0901, 828131A-AA0301, and 828131A-IA0501 were below the action level and were qualified as non-detected (U). The low level detection of the unknown TIC reported in sample 828131A-IA06A01 was below the action level and was rejected from the final results for this sample.

Initial Calibration

SDG E1012003

In the initial calibration associated with all samples of SDG E1012003 (analyzed 12/15/2010) the percent relative standard deviations (RSDs) between relative response factors (RRFs) for a subset of target analytes were above the Region 2 control limit of 30:

Analyte	%RSD	Qualifier
1,1,2,2-Tetrachloroethane	33	UJ
1,2,4-Trichlorobenzene	50	UJ
1,2,4-Trimethylbenzene	46	UJ
1,2-Dichlorobenzene	53	UJ
1,3,5-Trimethylbenzene	68	J/UJ
1,3-Dichlorobenzene	45	UJ
1,4-Dichlorobenzene	41	UJ
4-Ethyltoluene	42	UJ
Benzyl chloride	33	UJ
Bromoform	31	UJ

m,p-Xylene	31	J
o-Xylene	38	J/UJ

Positive and non-detected results for the above listed analytes were qualified as estimated (J/UJ) in all samples of SDG E1012003 as indicated in the table.

Continuing Calibration

A subset of sample results was qualified due to continuing calibration quantitation limit standard recoveries that were outside control limits. Qualified results are summarized on Table 3 with reason codes QLS-H or QLS-L. Qualification actions are described in the following sections.

SDG E1012003

In the continuing calibration, a low concentration standard (run at the quantitation limit and called the CRQL standard) associated with all samples of SDG E1012003 (analyzed 12/15/2010) percent recoveries for a subset of target analytes were outside the laboratory control limits of 65-135. The following analytes were qualified:

Analyte	%R	Qualifier
1,4-Dioxane	0	UJ
Acetone	560	J
Benzene	140	J
m,p-Xylene	170	J
Methylene chloride	140	J
o-Xylene	140	J
Styrene	150	J
Tetrahydrofuran	150	J

1,4-Dioxane was not detected in associated samples 828131A-GV0301 and 828131A-GV0401. The initial calibration was in control for 1,4-dioxane, and LCS/LCSD recoveries were also within control limits. Based on professional judgment the reporting limits for 1,4-dioxane in 828131A-GV0301 and 828131A-GV0401 were not qualified as rejected but were instead qualified as estimated (UJ). Positive detections of acetone, benzene, m,p-xylene, methylene chloride, o-xylene, styrene, and tetrahydrofuran in one or both of the samples were qualified as estimated (J) and may be biased high.

SDG E1101003

In the continuing calibration CRQL standard associated with a subset of samples in SDG E1101003 (analyzed 2/2/2011) percent recoveries for a subset of target analytes were outside the laboratory control limits of 65-135. The following analytes were qualified:

Analyte	%R	Qualifier
Acetone	320	J
Hexane	140	J
Isopropanol	880	J
m,p-Xylene	140	J

Positive detections of acetone, hexane, isopropanol, and m,p-xylene in one or more of the following samples were qualified as estimated (J) and may be biased high.

828131A-IA0101
828131A-AA0101
828131A-IA0201
828131A-IA0301
828131A-IA0401
828131A-IA06A01

In the continuing calibration CRQL standard associated with a subset of samples in SDG E1101003 (analyzed 2/3/2011) percent recoveries for a subset of target analytes were outside the laboratory control limits of 65-135. The following analytes were qualified:

Analyte	%R	Qualifier
Acetone	300	J
Isopropanol	900	J

Positive detections of acetone and isopropanol in one or more of the following samples were qualified as estimated (J) and may be biased high:

828131A-IA06B01	828131A-SS0101DUP
828131A-IA0801	828131A-SS0801
828131A-IA0901	828131A-SS1001
828131A-IA1001	828131A-SS0901
828131A-AA0301	828131A-SS0401
828131A-AA0201	828131A-SS06A01
828131A-IA0501	828131A-SS06B01
828131A-SS0101	828131A-SS0701

Positive detections of isopropanol in samples 828131A-SS0201 and 828131A-SS0301 were qualified as estimated (J) and may be biased high:

In the continuing calibration CRQL standard associated with acetone results for samples 828131A-SS0201 and 828131A-SS0301 (analyzed 2/4/2011), the percent recovery for acetone (340) was above the laboratory control limits of 65-135 indicating a potential high bias. Positive detections of acetone in samples 828131A-SS0201 and 828131A-SS0301 were qualified as estimated (J) and may be biased high:

Laboratory Control Samples (LCS)

SDG E1012003

In the LCS associated with samples 828131A-GV0301 and 828131A-GV0401 percent recoveries for a subset of target analytes were below the Region 2 control limits of 70-130:

Analyte	%R	Qualifier
1,1,2,2-Tetrachloroethane	69	UJ
1,2,4-Trichlorobenzene	58	UJ

1,2,4-Trimethylbenzene	53	UJ
1,2-Dichlorobenzene	60	UJ
1,3,5-Trimethylbenzene	50	J/UJ
1,3-Dichlorobenzene	64	UJ
1,4-Dichlorobenzene	64	UJ
2-Hexanone	65	UJ
4-Ethyltoluene	57	UJ
4-Methyl-2-pentanone	68	UJ
Benzyl chloride	62	UJ
Ethyl benzene	68	J/UJ
Hexachlorobutadiene	49	UJ
o-Xylene	69	J/UJ
Tetrachloroethene	67	J

Positive and/or non-detected results for the above target analytes in samples 828131A-GV0301 and 828131A-GV0401 were qualified as estimated (J/UJ) as indicated in the table.

SDG E1101003

In the LCS associated with a subset of samples (analyzed 2/2/2011) percent recoveries for 1,4-dichlorobenzene (68) and trans-1,3-dichloropropene (68) were below the Region 2 control limits of 70-130 indicating potential low biases. 1,4-Dichlorobenzene and trans-1,3-dichloropropene were not detected in the associated samples and quantitation limits were qualified as estimated (UJ) in the following samples:

828131A-IA0101
828131A-AA0101
828131A-IA0201
828131A-IA0301
828131A-IA0401
828131A-IA06A01

Surrogate Recovery

The recovery of surrogate bromofluorobenzene (BFB) [325%] in sample 828131A-GV0301 was greater than the control limit of 70-130 percent. The sample was reanalyzed with similar surrogate recovery. All results for positive detections in this sample were qualified estimated (J).

Lab Duplicate

In the laboratory duplicate analysis of sample 828131A-GV0301, there was a detection reported in the original sample (2.6 $\mu g/m^3$) above the quantitation limit and no detection in the lab duplicate (1.0 U). The result for dichlorodifluoromethane in the original sample was qualified estimated (J).

Field Duplicates

SDG E1101003

The RPD between results for 2-butanone in sample 828131A-SS0101 (6.7 µg/m^3) and field duplicate 828131A-SS0101DUP (12 µg/m^3) was above the Region 2 control limit. Positive detections of 2-butanone in sample 828131A-SS0101 and field duplicate 828131A-SS0101DUP were qualified as estimated (J).

Internal Standards

SDG E1101003

Responses for all internal standards associated with sample 828131A-SS0901 were above control limits. Internal standard responses for the reanalysis of sample 828131A-SS0901 were within control limits; however, the laboratory elected to report only the initial analysis. The RPDs between target analyte concentrations in both sample analyses were less than 25. Based on professional judgment the initial analysis was reported for sample 828131A-SS0901 and positive and non-detected results were qualified as estimated (J/UJ).

Tentatively Identified Compounds

Tentatively identified compounds (TICs) were reported by the laboratory for SDGs E1012003 and E1101003. TICs being reported as final results in samples are presented in Table 4. If a sample is not listed, no TICs were reported in the sample, or the TICs were removed as blank contaminants or artifacts of the GC/MS instrument system.

3.0 VOCS – METHOD TO-17

Laboratory Control Samples (LCS)

SDG 1102123

Percent recoveries for 1,4-dichlorobenzene (59, 58), ethanol (51, 59), and styrene (44, 46) were below Region 2 control limits of 70-130. Percent recoveries for naphthalene (7.8, 7.8) were below 70-130 and less than 10. Positive and non-detected results for 1,4-dichlorobenzene, ethanol, and styrene in samples 828131A-IA11A01 and 828131A-IA11B01 were qualified as estimated (J/UJ) and may represent potential low biases. Naphthalene was not detected in the samples, and results were qualified as rejected (R) based on percent recoveries below 10 in the LCS/LCSD.

Reference:

New York State Department of Environmental Conservation (NYSDEC), 2005. "Analytical Services Protocols"; July 2005.

New York State Department of Environmental Conservation (NYSDEC), 2010. "Technical Guidance for Site Investigation and Remediation-Appendix 2B"; DER-10; Division of Environmental Remediation; May 2010.

USEPA Region 2, 2006. "Validating Volatile Organic Analysis of Ambient Air in Canister by Method TO-15"; SOP # HW-31, Revision 4, Hazardous Waste Support Branch; October 2006.

Data Validator: Julie Ricardi

Julie Ricardi

Date: 3/7/11

Reviewed by Chris Ricardi, NRCC-EAC
Quality Assurance Officer

Chris Ricardi

Date: 3/28/11

TABLE 1
SUMMARY OF SAMPLES AND ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
NOV 2010 AND JAN 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

						Class	VOC	VOC
						Analysis Method	EPA TO-15	EPA TO-17
								Passive S.E.
						Fraction	T	T
SDG	**Media**	**Location**	**Lab Id**	**Sample ID**	**Sample Date**	**Qc Code**		
1102123	AIR	IA-11A	AT	828131A-IA11A01	1/20/2011	FS		X
1102123	AIR	IA-11B	AT	828131A-IA11B01	1/20/2011	FS		X
E1012003	SV	GV-03	Enalytic	828131A-GV0301	11/29/2010	FS	X	
E1012003	SV	GV-04	Enalytic	828131A-GV0401	11/29/2010	FS	X	
E1101003	AIR	AA-01	Enalytic	828131A-AA0101	1/18/2011	FS	X	
E1101003	AIR	AA-02	Enalytic	828131A-AA0201	1/19/2011	FS	X	
E1101003	AIR	AA-03	Enalytic	828131A-AA0301	1/20/2011	FS	X	
E1101003	AIR	IA-01	Enalytic	828131A-IA0101	1/18/2011	FS	X	
E1101003	AIR	IA-02	Enalytic	828131A-IA0201	1/19/2011	FS	X	
E1101003	AIR	IA-03	Enalytic	828131A-IA0301	1/19/2011	FS	X	
E1101003	AIR	IA-04	Enalytic	828131A-IA0401	1/19/2011	FS	X	
E1101003	AIR	IA-05	Enalytic	828131A-IA0501	1/19/2011	FS	X	
E1101003	AIR	IA-06A	Enalytic	828131A-IA06A01	1/19/2011	FS	X	
E1101003	AIR	IA-06B	Enalytic	828131A-IA06B01	1/19/2011	FS	X	
E1101003	AIR	IA-07	Enalytic	828131A-IA0701	1/19/2011	FS	X	
E1101003	AIR	IA-08	Enalytic	828131A-IA0801	1/20/2011	FS	X	
E1101003	AIR	IA-09	Enalytic	828131A-IA0901	1/20/2011	FS	X	
E1101003	AIR	IA-10	Enalytic	828131A-IA1001	1/20/2011	FS	X	
E1101003	SV	SS-01	Enalytic	828131A-SS0101	1/18/2011	FS	X	
E1101003	SV	SS-01	Enalytic	828131A-SS0101DUP	1/18/2011	FD	X	
E1101003	SV	SS-02	Enalytic	828131A-SS0201	1/19/2011	FS	X	
E1101003	SV	SS-03	Enalytic	828131A-SS0301	1/19/2011	FS	X	
E1101003	SV	SS-04	Enalytic	828131A-SS0401	1/19/2011	FS	X	
E1101003	SV	SS-05	Enalytic	828131A-SS0501	1/19/2011	FS	X	
E1101003	SV	SS-06A	Enalytic	828131A-SS06A01	1/19/2011	FS	X	
E1101003	SV	SS-06B	Enalytic	828131A-SS06B01	1/19/2011	FS	X	
E1101003	SV	SS-07	Enalytic	828131A-SS0701	1/19/2011	FS	X	
E1101003	SV	SS-08	Enalytic	828131A-SS0801	1/20/2011	FS	X	
E1101003	SV	SS-09	Enalytic	828131A-SS0901	1/20/2011	FS	X	
E1101003	SV	SS-10	Enalytic	828131A-SS1001	1/20/2011	FS	X	

FOOTNOTES:

QC CODE

FS = field sample, FD = field duplicate

Media

SV = soil vapor

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
NOVEMBER 2010 AND JANUARY 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Sample Delivery Group	E1012003		E1012003		E1101003		E1101003		E1101003		E1101003		E1101003		E1101003		E1101003	
		Location	GV-03		GV-04		AA-01		AA-02		AA-03		IA-01		IA-02		IA-03		IA-04		IA-05	
		Sample Date	11/29/2010		11/29/2010		1/18/2011		1/19/2011		1/20/2011		1/18/2011		1/19/2011		1/19/2011		1/19/2011		1/19/2011	
		Sample ID	828131A-GV0301		828131A-GV0401		828131A-AA0101		828131A-AA0201		828131A-AA0301		828131A-IA0101		828131A-IA0201		828131A-IA0301		828131A-IA0401		828131A-IA0501	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS		FS		FS	
Analysis	**Param Name**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
EPA TO-15	Tetrachloroethene	UG/M3	2.3	J	2.8	J	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	3		1.4	U	1.4	U
EPA TO-15	Trichloroethene	UG/M3	2	J	1.1	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U
EPA TO-15	1,1,1-Trichloroethane	UG/M3	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
EPA TO-15	1,1,2,2-Tetrachloroethane	UG/M3	1.4	UJ	1.4	UJ	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U
EPA TO-15	1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/M3	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
EPA TO-15	1,1,2-Trichloroethane	UG/M3	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
EPA TO-15	1,1-Dichloroethane	UG/M3	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U
EPA TO-15	1,1-Dichloroethene	UG/M3	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U
EPA TO-15	1,2,4-Trichlorobenzene	UG/M3	1.5	UJ	1.5	UJ	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
EPA TO-15	1,2,4-Trimethylbenzene	UG/M3	1	UJ	1	UJ	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
EPA TO-15	1,2-Dibromoethane	UG/M3	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
EPA TO-15	1,2-Dichloro-1,1,2,2-tetrafluoroethane	UG/M3	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U
EPA TO-15	1,2-Dichlorobenzene	UG/M3	1.2	UJ	1.2	UJ	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U
EPA TO-15	1,2-Dichloroethane	UG/M3	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U
EPA TO-15	1,2-Dichloropropane	UG/M3	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U
EPA TO-15	1,3,5-Trimethylbenzene	UG/M3	1	UJ	1.4	J	1	U	1	U	1	U	1.5		1	U	1	U	1	U	1.2	
EPA TO-15	1,3-Butadiene	UG/M3	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
EPA TO-15	1,3-Dichlorobenzene	UG/M3	1.2	UJ	1.2	UJ	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U
EPA TO-15	1,4-Dichlorobenzene	UG/M3	1.2	UJ	1.2	UJ	1.2	UJ	1.2	U	1.2	U	1.2	UJ	1.2	UJ	1.2	UJ	1.2	UJ	1.2	U
EPA TO-15	1,4-Dioxane	UG/M3	0.73	UJ	0.73	UJ	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
EPA TO-15	2-Butanone	UG/M3	0.6	U	57		1.6		1.6		3.5		3.2		0.6	U	3.4		1.6		3.1	
EPA TO-15	2-Hexanone	UG/M3	0.83	UJ	0.83	UJ	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U
EPA TO-15	2-Propanol	UG/M3	5	U	5	U	5.2	J	8.4	J	11	J	36	J	18	J	10	J	23	J	4	J
EPA TO-15	4-Ethyltoluene	UG/M3	1	UJ	1	UJ	1	U	1	U	1	U	1	U	1	U	1	U	1		1	U
EPA TO-15	4-Methyl-2-pentanone	UG/M3	0.83	UJ	0.83	UJ	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U
EPA TO-15	Acetone	UG/M3	16	J	180	J	11	J	17	J	12	U	17	J	13	J	16	J	11	J	8.9	U
EPA TO-15	Benzene	UG/M3	3.8	J	0.65	U	1.5		1.1		0.65	U	1.6		2.2		1.2		1.2		1.1	
EPA TO-15	Benzyl chloride	UG/M3	1.1	UJ	1.1	UJ	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
EPA TO-15	Bromodichloromethane	UG/M3	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U
EPA TO-15	Bromoform	UG/M3	2.1	UJ	2.1	UJ	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U
EPA TO-15	Bromomethane	UG/M3	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U
EPA TO-15	Carbon disulfide	UG/M3	69	J	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U
EPA TO-15	Carbon tetrachloride	UG/M3	1.3	U	1.3	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
EPA TO-15	Chlorobenzene	UG/M3	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U
EPA TO-15	Chlorodibromomethane	UG/M3	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U
EPA TO-15	Chloroethane	UG/M3	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U
EPA TO-15	Chloroform	UG/M3	0.99	U	2.1		0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U
EPA TO-15	Chloromethane	UG/M3	0.42	U	0.42	U	1.3		1.3		1.2		0.42	U	1.2		1.2		1.2		1.2	
EPA TO-15	Cis-1,2-Dichloroethene	UG/M3	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	1.3		0.81	U
EPA TO-15	cis-1,3-Dichloropropene	UG/M3	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U
EPA TO-15	Cyclohexane	UG/M3	7.1	J	0.7	U	0.7	U	0.7	U	0.7	U	1.4		0.7	U	0.7	U	0.7	U	0.7	U
EPA TO-15	Dichlorodifluoromethane	UG/M3	2.6	J	2.3		2.3		2.5		2.5		1	U	2.4		2.3		2.2		2.4	
EPA TO-15	Ethyl benzene	UG/M3	0.88	UJ	3.6	J	0.88	U	0.88	U	0.88	U	1.2		0.88	U	0.88	U	0.88	U	0.88	U
EPA TO-15	Heptane	UG/M3	21	J	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U
EPA TO-15	Hexachlorobutadiene	UG/M3	2.2	UJ	2.2	UJ	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U
EPA TO-15	Hexane	UG/M3	120	J	0.72	U	0.72	U	0.72	U	0.72	U	2.3	J	1	J	0.72	U	0.72	U	0.75	
EPA TO-15	Methyl Tertbutyl Ether	UG/M3	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U
EPA TO-15	Methylene chloride	UG/M3	0.71	U	0.78	J	0.71	U	0.71	U	0.71	U	1.7		0.71	U	0.71	U	0.71	U	0.71	U
EPA TO-15	Styrene	UG/M3	0.87	U	3.9	J	1.3	U	1.3	U	1.3	U	1.3		1.3	U	1.3	U	1.3	U	1.3	U
EPA TO-15	Tetrahydrofuran	UG/M3	4.9	J	1700		0.6	U	0.6	U	1.6		0.6	U	0.6	U	5.5		0.6	U	0.6	U
EPA TO-15	Toluene	UG/M3	20	J	2.7		2.2		1.6		0.8		6.2		2.4		2.1		2.5		2.2	
EPA TO-15	trans-1,2-Dichloroethene	UG/M3	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U
EPA TO-15	trans-1,3-Dichloropropene	UG/M3	0.92	U	0.92	U	0.92	UJ	0.92	U	0.92	U	0.92	UJ	0.92	UJ	0.92	UJ	0.92	UJ	0.92	U
EPA TO-15	Trichlorofluoromethane	UG/M3	1.1	U	1.1	U	1.3		1.1	U	1.3		2		1.3		1.2		1.3		1.3	
EPA TO-15	Vinyl acetate	UG/M3	0.72	U	0.72	U	0.72	U	0.72	U	0.72	U	0.72	U	0.72	U	0.72	U	0.72	U	0.72	U
EPA TO-15	Vinyl chloride	UG/M3	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U
EPA TO-15	Xylene, m/p	UG/M3	6.5	J	13	J	2.6	U	2.6	U	2.6	U	3.1	J	2.6	U	2.6	U	2.6	U	2.6	U
EPA TO-15	Xylene, o	UG/M3	0.88	UJ	4	J	0.88	U	0.88	U	0.88	U	0.88	U	0.88	U	0.88	U	0.88	U	0.88	U

Notes:
ug/m3 = microgram per cubic meter
Qualifiers-
U = not detected at the reporting limit
J = estimated concentration
QC Code-
FS = Field Sample, FD = field duplicate

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
NOVEMBER 2010 AND JANUARY 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

	Sample Delivery Group	E1101003		E1101003		E1101003		E1101003		E1101003		E1101003		E1101003		E1101003		E1101003	
	Location	IA-06A		IA-06B		IA-07		IA-08		IA-09		IA-10		SS-01		SS-01		SS-02		SS-03	
	Sample Date	1/19/2011		1/19/2011		1/19/2011		1/20/2011		1/20/2011		1/20/2011		1/18/2011		1/18/2011		1/19/2011		1/19/2011	
	Sample ID	828131A-IA06A01		828131A-IA06B01		828131A-IA0701		828131A-IA0801		828131A-IA0901		828131A-IA1001		828131A-SS0101		828131A-SS0101DUP		828131A-SS0201		828131A-SS0301	
	Qc Code	FS		FS		FS		FS		FS		FS		FS		FD		FS		FS	
Analysis	**Param Name**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
EPA TO-15	Tetrachloroethene	UG/M3	2.7		2.1		1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4		1.4	U
EPA TO-15	Trichloroethene	UG/M3	0.22	U	0.22	U	0.22	U	0.22	U	0.93		0.22	U	1.1	U	1.1	U	1.1	U	1.1	U
EPA TO-15	1,1,1-Trichloroethane	UG/M3	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
EPA TO-15	1,1,2,2-Tetrachloroethane	UG/M3	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U
EPA TO-15	1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/M3	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
EPA TO-15	1,1,2-Trichloroethane	UG/M3	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
EPA TO-15	1,1-Dichloroethane	UG/M3	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U
EPA TO-15	1,1-Dichloroethene	UG/M3	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U
EPA TO-15	1,2,4-Trichlorobenzene	UG/M3	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
EPA TO-15	1,2,4-Trimethylbenzene	UG/M3	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	7.2		7		1	U	1	U
EPA TO-15	1,2-Dibromoethane	UG/M3	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
EPA TO-15	1,2-Dichloro-1,1,2,2-tetrafluoroethane	UG/M3	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U
EPA TO-15	1,2-Dichlorobenzene	UG/M3	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U
EPA TO-15	1,2-Dichloroethane	UG/M3	0.82	U	0.82	U	1.2		0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U
EPA TO-15	1,2-Dichloropropane	UG/M3	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U
EPA TO-15	1,3,5-Trimethylbenzene	UG/M3	1	U	1	U	1	U	1	U	1	U	1	U	17		17		1.6		1.9	
EPA TO-15	1,3-Butadiene	UG/M3	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
EPA TO-15	1,3-Dichlorobenzene	UG/M3	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U
EPA TO-15	1,4-Dichlorobenzene	UG/M3	1.2	UJ	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U
EPA TO-15	1,4-Dioxane	UG/M3	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	0.73	U	0.73	U	0.73	U	0.73	U
EPA TO-15	2-Butanone	UG/M3	5.5		5.6		1.9		6		1.1		1.5		6.7	J	12	J	9.7		9.8	
EPA TO-15	2-Hexanone	UG/M3	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U
EPA TO-15	2-Propanol	UG/M3	14	J	19	J	11	J	660	J	65	J	35	J	11	J	6.1	J	13	J	6.9	J
EPA TO-15	4-Ethyltoluene	UG/M3	1	U	1	U	1	U	1	U	1	U	1	U	7.1		7.3		1.7		1.1	
EPA TO-15	4-Methyl-2-pentanone	UG/M3	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	5.1		4		1.2		0.83	U
EPA TO-15	Acetone	UG/M3	130	J	170	J	24	J	170	J	11	U	35	J	230	J	220	J	330	J	150	J
EPA TO-15	Benzene	UG/M3	1.1		1.3		1.4		2.6		0.84		0.84		4.7		4.7		0.65	U	0.68	
EPA TO-15	Benzyl chloride	UG/M3	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
EPA TO-15	Bromodichloromethane	UG/M3	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U
EPA TO-15	Bromoform	UG/M3	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U
EPA TO-15	Bromomethane	UG/M3	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U
EPA TO-15	Carbon disulfide	UG/M3	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U	6.2		6		7		2.6	
EPA TO-15	Carbon tetrachloride	UG/M3	0.26	U	5.8		0.26	U	0.51		0.26	U	0.26	U	1.3	U	1.3	U	1.3	U	1.3	U
EPA TO-15	Chlorobenzene	UG/M3	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U
EPA TO-15	Chlorodibromomethane	UG/M3	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U
EPA TO-15	Chloroethane	UG/M3	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U
EPA TO-15	Chloroform	UG/M3	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U	0.99	U
EPA TO-15	Chloromethane	UG/M3	1.2		1.4		0.42	U	1.6		1.3		1.4		0.42	U	0.42	U	0.42	U	0.42	U
EPA TO-15	Cis-1,2-Dichloroethene	UG/M3	0.81	U	0.81	U	0.81	U	0.81	U	1.7		0.81	U	0.81	U	0.81	U	0.81	U	0.81	U
EPA TO-15	cis-1,3-Dichloropropene	UG/M3	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U
EPA TO-15	Cyclohexane	UG/M3	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	6.7		6.5		0.7	U	0.7	U
EPA TO-15	Dichlorodifluoromethane	UG/M3	2.5		2.6		2.4		2.3		2.5		2.5		3.5		3.3		2.3		2.5	
EPA TO-15	Ethyl benzene	UG/M3	0.88	U	0.88	U	0.88	U	0.88	U	0.88	U	0.88	U	4.2		4.8		2.3		1.1	
EPA TO-15	Heptane	UG/M3	0.83	U	3.1		0.83	U	0.83	U	0.83	U	0.87		21		21		2.5		2.6	
EPA TO-15	Hexachlorobutadiene	UG/M3	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U
EPA TO-15	Hexane	UG/M3	0.72	U	1.1		0.72	U	0.72	U	0.72	U	0.86		14		14		1.2		1.6	
EPA TO-15	Methyl Tertbutyl Ether	UG/M3	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U
EPA TO-15	Methylene chloride	UG/M3	0.71	U	0.71	U	0.71	U	0.71	U	0.71	U	1.2		0.71	U	0.71	U	0.71	U	0.71	U
EPA TO-15	Styrene	UG/M3	1.3	U	3.8		1.3	U	1.3	U	1.3	U	1.3	U	0.87	U	0.87	U	3.9		0.87	U
EPA TO-15	Tetrahydrofuran	UG/M3	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
EPA TO-15	Toluene	UG/M3	2		3.3		3.5		2.9		2		2.6		61		65		170		50	
EPA TO-15	trans-1,2-Dichloroethene	UG/M3	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U
EPA TO-15	trans-1,3-Dichloropropene	UG/M3	0.92	UJ	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U
EPA TO-15	Trichlorofluoromethane	UG/M3	1.3		1.4		1.4		3.7		1.1	U	1.4		1.3		1.3		1.2		1.3	
EPA TO-15	Vinyl acetate	UG/M3	0.72	U	0.72	U	0.72	U	0.72	U	0.72	U	0.72	U	0.72	U	0.72	U	0.72	U	0.72	U
EPA TO-15	Vinyl chloride	UG/M3	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U
EPA TO-15	Xylene, m/p	UG/M3	2.6	U	2.6	U	2.6	U	2.6	U	2.6	U	2.6	U	29		26		8.8		5.1	
EPA TO-15	Xylene, o	UG/M3	0.97		1.3		0.88	U	0.88	U	0.88	U	0.88	U	9.9		7.3		1.8		1.8	

Notes:
ug/m3 = microgram per cubic meter
Qualifiers-
U = not detected at the reporting limit
J = estimated concentration
QC Code-
FS = Field Sample, FD = field duplicate

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
NOVEMBER 2010 AND JANUARY 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Sample Delivery Group	E1101003		E1101003		E1101003		E1101003		E1101003		E1101003		E1101003		E1101003	
		Location	SS-04		SS-05		SS-06A		SS-06B		SS-07		SS-08		SS-09		SS-10	
		Sample Date	1/19/2011		1/19/2011		1/19/2011		1/19/2011		1/19/2011		1/20/2011		1/20/2011		1/20/2011	
		Sample ID	828131A-SS0401		828131A-SS0501		828131A-SS06A01		828131A-SS06B01		828131A-SS0701		828131A-SS0801		828131A-SS0901		828131A-SS1001	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analysis	**Param Name**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
EPA TO-15	Tetrachloroethene	UG/M3	1.4	U	1.4	U	1.7		1.9		1.4	U	1.4	U	650	J	3.8	
EPA TO-15	Trichloroethene	UG/M3	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	400		1.1	U
EPA TO-15	1,1,1-Trichloroethane	UG/M3	1.1	U	1.1	U	1.1	U	1.6		1.1	U	1.1	U	1.1	UJ	1.1	U
EPA TO-15	1,1,2,2-Tetrachloroethane	UG/M3	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	UJ	1.4	U
EPA TO-15	1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/M3	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	UJ	1.6	U
EPA TO-15	1,1,2-Trichloroethane	UG/M3	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	UJ	1.1	U
EPA TO-15	1,1-Dichloroethane	UG/M3	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	UJ	0.82	U
EPA TO-15	1,1-Dichloroethene	UG/M3	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	UJ	0.81	U
EPA TO-15	1,2,4-Trichlorobenzene	UG/M3	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	UJ	1.5	U
EPA TO-15	1,2,4-Trimethylbenzene	UG/M3	1	U	1	U	2.2		5.9		1	U	1.1		1.1	J	1.6	
EPA TO-15	1,2-Dibromoethane	UG/M3	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	UJ	1.6	U
EPA TO-15	1,2-Dichloro-1,1,2,2-tetrafluoroethane	UG/M3	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	UJ	1.4	U
EPA TO-15	1,2-Dichlorobenzene	UG/M3	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	UJ	1.2	U
EPA TO-15	1,2-Dichloroethane	UG/M3	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	UJ	0.82	U
EPA TO-15	1,2-Dichloropropane	UG/M3	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	UJ	0.94	U
EPA TO-15	1,3,5-Trimethylbenzene	UG/M3	1.3		1	U	3.6		11		1	U	2.4		2.6	J	3.3	
EPA TO-15	1,3-Butadiene	UG/M3	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	UJ	0.45	U
EPA TO-15	1,3-Dichlorobenzene	UG/M3	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	UJ	1.2	U
EPA TO-15	1,4-Dichlorobenzene	UG/M3	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	UJ	1.2	U
EPA TO-15	1,4-Dioxane	UG/M3	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.73	UJ	0.73	U
EPA TO-15	2-Butanone	UG/M3	2.5		2.7		2		3.6		2.7		3.6		3.6	J	13	
EPA TO-15	2-Hexanone	UG/M3	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	UJ	0.83	U
EPA TO-15	2-Propanol	UG/M3	14	J	5.2	J	5	U	15	J	5	U	14	J	15	J	8.4	J
EPA TO-15	4-Ethyltoluene	UG/M3	1	U	1	U	1.6		5		1	U	1.2		1.6	J	3.5	
EPA TO-15	4-Methyl-2-pentanone	UG/M3	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U	0.83	UJ	0.83	U
EPA TO-15	Acetone	UG/M3	170	J	240	J	110	J	150	J	180	J	120	J	230	J	160	J
EPA TO-15	Benzene	UG/M3	1.2		0.65	U	2.4		3.2		3.1		0.84		1.7	J	5.7	
EPA TO-15	Benzyl chloride	UG/M3	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	UJ	1.1	U
EPA TO-15	Bromodichloromethane	UG/M3	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	UJ	1.4	U
EPA TO-15	Bromoform	UG/M3	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	UJ	2.1	U
EPA TO-15	Bromomethane	UG/M3	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	UJ	0.79	U
EPA TO-15	Carbon disulfide	UG/M3	1.7		1.9		1.8		2.6		10		1.8		3.4	J	36	
EPA TO-15	Carbon tetrachloride	UG/M3	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	UJ	1.3	U
EPA TO-15	Chlorobenzene	UG/M3	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	U	0.94	UJ	0.94	U
EPA TO-15	Chlorodibromomethane	UG/M3	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	UJ	1.7	U
EPA TO-15	Chloroethane	UG/M3	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	UJ	0.54	U
EPA TO-15	Chloroform	UG/M3	0.99	U	7.4		0.99	U	25		0.99	U	0.99	U	0.99	UJ	0.99	U
EPA TO-15	Chloromethane	UG/M3	0.42	U	0.42	U	0.42	U	0.42	U	4.4		0.42	U	0.42	UJ	0.42	U
EPA TO-15	Cis-1,2-Dichloroethene	UG/M3	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	720		0.81	U
EPA TO-15	cis-1,3-Dichloropropene	UG/M3	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	UJ	0.92	U
EPA TO-15	Cyclohexane	UG/M3	1.6		0.7	U	4		8.5		12		1.2		1.7	J	8.6	
EPA TO-15	Dichlorodifluoromethane	UG/M3	2.3		2.5		2.5		9.8		2.3		2.3		2.5	J	2.5	
EPA TO-15	Ethyl benzene	UG/M3	0.88	U	0.88	U	1		2.3		0.88	U	0.88	U	1.5	J	7.4	
EPA TO-15	Heptane	UG/M3	4.5		0.83	U	5.9		17		1.2		2.9		4.7	J	20	
EPA TO-15	Hexachlorobutadiene	UG/M3	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U	2.2	UJ	2.2	U
EPA TO-15	Hexane	UG/M3	4.1		1.3		4.7		12		7.8		2.1		3.5	J	13	
EPA TO-15	Methyl Tertbutyl Ether	UG/M3	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.73	UJ	0.73	U
EPA TO-15	Methylene chloride	UG/M3	0.71	U	0.71	U	0.71	U	0.71	U	0.71	U	0.71	U	0.71	UJ	0.71	U
EPA TO-15	Styrene	UG/M3	0.87	U	0.87	U	0.87	U	0.87	U	0.87	U	0.87	U	0.87	J	8.9	
EPA TO-15	Tetrahydrofuran	UG/M3	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	UJ	0.6	U
EPA TO-15	Toluene	UG/M3	35		44		26		35		2.3		19		46	J	360	
EPA TO-15	trans-1,2-Dichloroethene	UG/M3	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	6.9	J	0.81	U
EPA TO-15	trans-1,3-Dichloropropene	UG/M3	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	UJ	0.92	U
EPA TO-15	Trichlorofluoromethane	UG/M3	1.2		1.3		1.3		1.3		1.1		2.5		1.3	J	1.3	
EPA TO-15	Vinyl acetate	UG/M3	0.72	U	0.72	U	0.72	U	0.72	U	0.72	U	0.72	U	0.72	UJ	0.72	U
EPA TO-15	Vinyl chloride	UG/M3	0.52	U	0.52	U	0.52	U	0.52	U	1.4		0.52	U	1.8	J	0.52	U
EPA TO-15	Xylene, m/p	UG/M3	3.4		3.2		9.6		19		0.88	U	4.1		6	J	24	
EPA TO-15	Xylene, o	UG/M3	1.1		1.3		2.4		5.9		0.88	U	1.3		1.6	J	5.7	

Notes:
ug/m3 = microgram per cubic meter
Qualifiers-
U = not detected at the reporting limit
J = estimated concentration
QC Code-
FS = Field Sample, FD = field duplicate

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JANUARY 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Sample Delivery Group	1102123		1102123	
		Location	IA-11A		IA-11B	
		Sample Date	1/20/2011		1/20/2011	
		Sample ID	828131A-IA11A01		828131A-IA11B01	
		Qc Code	FS		FS	
Analysis	**Param Name**	**Units**	Result	Qualifier	Result	Qualifier
EPA TO-17	Tetrachloroethene	UG/M3	0.084	U	0.084	U
EPA TO-17	Trichloroethene	UG/M3	0.072	U	0.082	
EPA TO-17	1,1,1-Trichloroethane	UG/M3	0.08	U	0.08	U
EPA TO-17	1,2-Dichloroethane	UG/M3	0.064	U	0.064	U
EPA TO-17	1,4-Dichlorobenzene	UG/M3	0.097	UJ	0.097	UJ
EPA TO-17	2-Butanone	UG/M3	0.41		0.52	
EPA TO-17	2-Propanol	UG/M3	3.7		17	
EPA TO-17	4-Methyl-2-pentanone	UG/M3	0.15		0.16	
EPA TO-17	Acetone	UG/M3	3.5		7.9	
EPA TO-17	Benzene	UG/M3	0.75		0.89	
EPA TO-17	Carbon tetrachloride	UG/M3	0.41		0.48	
EPA TO-17	Chlorobenzene	UG/M3	0.073	U	0.073	U
EPA TO-17	Chloroform	UG/M3	0.2		0.24	
EPA TO-17	Cyclohexane	UG/M3	0.27		0.44	
EPA TO-17	Ethanol	UG/M3	17	J	64	J
EPA TO-17	Ethyl acetate	UG/M3	0.44		0.56	
EPA TO-17	Ethyl benzene	UG/M3	0.16		0.22	
EPA TO-17	Heptane	UG/M3	0.64		1.9	
EPA TO-17	Hexane	UG/M3	0.5		0.53	
EPA TO-17	Methyl Tertbutyl Ether	UG/M3	0.076	U	0.076	U
EPA TO-17	Naphthalene	UG/M3		R		R
EPA TO-17	Propylbenzene	UG/M3	0.087	U	0.095	
EPA TO-17	Styrene	UG/M3	0.13	J	0.3	J
EPA TO-17	Toluene	UG/M3	0.94		1.4	
EPA TO-17	Xylene, m/p	UG/M3	0.39		0.59	
EPA TO-17	Xylene, o	UG/M3	0.2		0.29	

Notes:
ug/m3 = microgram per cubic meter

Qualifiers-

U = not detected at the reporting limit
J = estimated concentration
R = result is rejected

QC Code-

FS = Field Sample

TABLE 3
SUMMARY OF DATA VALIDATION ACTIONS
DATA USABILITY SUMMARY REPORT
NOVEMBER 2010 AND JANUARY 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

SDG	Lab Sample Id	Analysis Method	Field Sample ID	Paramater Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Result Units	Lab Id
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	2-Propanol	2	J	5	U	BL1	UG/M3	Enalytic
E1101003	E1101003-012A	EPA TO-15	828131A-IA0501	Acetone	8.9		8.9	U	BL1	UG/M3	Enalytic
E1101003	E1101003-022A	EPA TO-15	828131A-IA0901	Acetone	11		11	U	BL1	UG/M3	Enalytic
E1101003	E1101003-025A	EPA TO-15	828131A-AA0301	Acetone	12		12	U	BL1	UG/M3	Enalytic
E1101003	E1101003-001A	EPA TO-15	828131A-SS0101	2-Butanone	6.7		6.7	J	FD	UG/M3	Enalytic
E1101003	E1101003-002A	EPA TO-15	828131A-SS0101DUP	2-Butanone	12		12	J	FD	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Bromoform	2.1	U	2.1	UJ	ICVRSD	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	Bromoform	2.1	U	2.1	UJ	ICVRSD	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	1,1,2,2-Tetrachloroethane	1.4	U	1.4	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	1,1,2,2-Tetrachloroethane	1.4	U	1.4	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	1,2,4-Trichlorobenzene	1.5	U	1.5	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	1,2,4-Trichlorobenzene	1.5	U	1.5	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	1,2,4-Trimethylbenzene	1	U	1	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	1,2,4-Trimethylbenzene	1	U	1	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	1,2-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	1,2-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	1,3,5-Trimethylbenzene	1	U	1	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	1,3,5-Trimethylbenzene	1.4		1.4	J	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	1,3-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	1,3-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	1,4-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	1,4-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	4-Ethyltoluene	1	U	1	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	4-Ethyltoluene	1	U	1	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Benzyl chloride	1.1	U	1.1	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	Benzyl chloride	1.1	U	1.1	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Xylene, o	0.88	U	0.88	UJ	ICVRSD, LCS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	Xylene, m/p	13		13	J	ICVRSD, QLS-H	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	Xylene, o	4		4	J	ICVRSD, QLS-H, LCS-L	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Xylene, m/p	6.5		6.5	J	ICVRSD, QLS-H, SS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,1,1-Trichloroethane	1.1	U	1.1	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,1,2,2-Tetrachloroethane	1.4	U	1.4	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.6	U	1.6	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,1,2-Trichloroethane	1.1	U	1.1	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,1-Dichloroethane	0.82	U	0.82	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,1-Dichloroethene	0.81	U	0.81	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,2,4-Trichlorobenzene	1.5	U	1.5	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,2,4-Trimethylbenzene	1.1		1.1	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,2-Dibromoethane	1.6	U	1.6	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.4	U	1.4	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,2-Dichlorobenzene	1.2	U	1.2	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,2-Dichloroethane	0.82	U	0.82	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,2-Dichloropropane	0.94	U	0.94	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,3,5-Trimethylbenzene	2.6		2.6	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,3-Butadiene	0.45	U	0.45	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,3-Dichlorobenzene	1.2	U	1.2	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,4-Dichlorobenzene	1.2	U	1.2	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	1,4-Dioxane	0.73	U	0.73	UJ	IS-H	UG/M3	Enalytic

TABLE 3
SUMMARY OF DATA VALIDATION ACTIONS
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SDG	Lab Sample Id	Analysis Method	Field Sample ID	Paramater Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Result Units	Lab Id
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	2-Butanone	3.6		3.6	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	2-Hexanone	0.83	U	0.83	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	4-Ethyltoluene	1.6		1.6	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	4-Methyl-2-pentanone	0.83	U	0.83	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Benzene	1.7		1.7	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Benzyl chloride	1.1	U	1.1	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Bromodichloromethane	1.4	U	1.4	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Bromoform	2.1	U	2.1	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Bromomethane	0.79	U	0.79	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Carbon disulfide	3.4		3.4	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Carbon tetrachloride	1.3	U	1.3	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Chlorobenzene	0.94	U	0.94	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Chlorodibromomethane	1.7	U	1.7	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Chloroethane	0.54	U	0.54	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Chloroform	0.99	U	0.99	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Chloromethane	0.42	U	0.42	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	cis-1,3-Dichloropropene	0.92	U	0.92	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Cyclohexane	1.7		1.7	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Dichlorodifluoromethane	2.5		2.5	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Ethyl benzene	1.5		1.5	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Heptane	4.7		4.7	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Hexachlorobutadiene	2.2	U	2.2	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Hexane	3.5		3.5	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Methyl Tertbutyl Ether	0.73	U	0.73	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Methylene chloride	0.71	U	0.71	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Styrene	0.87		0.87	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Tetrachloroethene	650		650	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Tetrahydrofuran	0.6	U	0.6	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Toluene	46		46	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	trans-1,2-Dichloroethene	6.9		6.9	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	trans-1,3-Dichloropropene	0.92	U	0.92	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Trichlorofluoromethane	1.3		1.3	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Vinyl acetate	0.72	U	0.72	UJ	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Vinyl chloride	1.8		1.8	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Xylene, m/p	6		6	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Xylene, o	1.6		1.6	J	IS-H	UG/M3	Enalytic
E1101003	E1101003-003A	EPA TO-15	828131A-IA0101	1,4-Dichlorobenzene	1.2	U	1.2	UJ	LCS-L	UG/M3	Enalytic
E1101003	E1101003-004A	EPA TO-15	828131A-AA0101	1,4-Dichlorobenzene	1.2	U	1.2	UJ	LCS-L	UG/M3	Enalytic
E1101003	E1101003-006A	EPA TO-15	828131A-IA0201	1,4-Dichlorobenzene	1.2	U	1.2	UJ	LCS-L	UG/M3	Enalytic
E1101003	E1101003-008A	EPA TO-15	828131A-IA0301	1,4-Dichlorobenzene	1.2	U	1.2	UJ	LCS-L	UG/M3	Enalytic
E1101003	E1101003-010A	EPA TO-15	828131A-IA0401	1,4-Dichlorobenzene	1.2	U	1.2	UJ	LCS-L	UG/M3	Enalytic
E1101003	E1101003-014A	EPA TO-15	828131A-IA06A01	1,4-Dichlorobenzene	1.2	U	1.2	UJ	LCS-L	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	2-Hexanone	0.83	U	0.83	UJ	LCS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	2-Hexanone	0.83	U	0.83	UJ	LCS-L	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	4-Methyl-2-pentanone	0.83	U	0.83	UJ	LCS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	4-Methyl-2-pentanone	0.83	U	0.83	UJ	LCS-L	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Ethyl benzene	0.88	U	0.88	UJ	LCS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	Ethyl benzene	3.6		3.6	J	LCS-L	UG/M3	Enalytic

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SDG	Lab Sample Id	Analysis Method	Field Sample ID	Paramater Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Result Units	Lab Id
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Hexachlorobutadiene	2.2	U	2.2	UJ	LCS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	Hexachlorobutadiene	2.2	U	2.2	UJ	LCS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	Tetrachloroethene	2.8		2.8	J	LCS-L	UG/M3	Enalytic
E1101003	E1101003-003A	EPA TO-15	828131A-IA0101	trans-1,3-Dichloropropene	0.92	U	0.92	UJ	LCS-L	UG/M3	Enalytic
E1101003	E1101003-004A	EPA TO-15	828131A-AA0101	trans-1,3-Dichloropropene	0.92	U	0.92	UJ	LCS-L	UG/M3	Enalytic
E1101003	E1101003-006A	EPA TO-15	828131A-IA0201	trans-1,3-Dichloropropene	0.92	U	0.92	UJ	LCS-L	UG/M3	Enalytic
E1101003	E1101003-008A	EPA TO-15	828131A-IA0301	trans-1,3-Dichloropropene	0.92	U	0.92	UJ	LCS-L	UG/M3	Enalytic
E1101003	E1101003-010A	EPA TO-15	828131A-IA0401	trans-1,3-Dichloropropene	0.92	U	0.92	UJ	LCS-L	UG/M3	Enalytic
E1101003	E1101003-014A	EPA TO-15	828131A-IA06A01	trans-1,3-Dichloropropene	0.92	U	0.92	UJ	LCS-L	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Tetrachloroethene	2.3		2.3	J	LCS-L, SS-H	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Dichlorodifluoromethane	2.6		2.6	J	LD, SS-H	UG/M3	Enalytic
E1101003	E1101003-001A	EPA TO-15	828131A-SS0101	2-Propanol	11		11	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-002A	EPA TO-15	828131A-SS0101DUP	2-Propanol	6.1		6.1	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-003A	EPA TO-15	828131A-IA0101	2-Propanol	36		36	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-004A	EPA TO-15	828131A-AA0101	2-Propanol	5.2		5.2	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-005A	EPA TO-15	828131A-SS0201	2-Propanol	13		13	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-006A	EPA TO-15	828131A-IA0201	2-Propanol	18		18	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-007A	EPA TO-15	828131A-SS0301	2-Propanol	6.9		6.9	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-008A	EPA TO-15	828131A-IA0301	2-Propanol	10		10	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-009A	EPA TO-15	828131A-SS0401	2-Propanol	14		14	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-010A	EPA TO-15	828131A-IA0401	2-Propanol	23		23	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-011A	EPA TO-15	828131A-SS0501	2-Propanol	5.2		5.2	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-012A	EPA TO-15	828131A-IA0501	2-Propanol	4	J	4	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-014A	EPA TO-15	828131A-IA06A01	2-Propanol	14		14	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-015A	EPA TO-15	828131A-SS06B01	2-Propanol	15		15	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-016A	EPA TO-15	828131A-IA06B01	2-Propanol	19		19	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-018A	EPA TO-15	828131A-IA0701	2-Propanol	11		11	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-019A	EPA TO-15	828131A-SS0801	2-Propanol	14		14	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-020A	EPA TO-15	828131A-IA0801	2-Propanol	660		660	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-022A	EPA TO-15	828131A-IA0901	2-Propanol	65		65	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-023A	EPA TO-15	828131A-SS1001	2-Propanol	8.4		8.4	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-024A	EPA TO-15	828131A-IA1001	2-Propanol	35		35	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-025A	EPA TO-15	828131A-AA0301	2-Propanol	11		11	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-026A	EPA TO-15	828131A-AA0201	2-Propanol	8.4		8.4	J	QLS-H	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	Acetone	180		180	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-001A	EPA TO-15	828131A-SS0101	Acetone	230		230	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-002A	EPA TO-15	828131A-SS0101DUP	Acetone	220		220	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-003A	EPA TO-15	828131A-IA0101	Acetone	17		17	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-004A	EPA TO-15	828131A-AA0101	Acetone	11		11	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-005A	EPA TO-15	828131A-SS0201	Acetone	330		330	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-006A	EPA TO-15	828131A-IA0201	Acetone	13		13	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-007A	EPA TO-15	828131A-SS0301	Acetone	150		150	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-008A	EPA TO-15	828131A-IA0301	Acetone	16		16	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-009A	EPA TO-15	828131A-SS0401	Acetone	170		170	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-010A	EPA TO-15	828131A-IA0401	Acetone	11		11	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-011A	EPA TO-15	828131A-SS0501	Acetone	240		240	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-013A	EPA TO-15	828131A-SS06A01	Acetone	110		110	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-014A	EPA TO-15	828131A-IA06A01	Acetone	130		130	J	QLS-H	UG/M3	Enalytic

TABLE 3
SUMMARY OF DATA VALIDATION ACTIONS
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SDG	Lab Sample Id	Analysis Method	Field Sample ID	Paramater Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Result Units	Lab Id
E1101003	E1101003-015A	EPA TO-15	828131A-SS06B01	Acetone	150		150	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-016A	EPA TO-15	828131A-IA06B01	Acetone	170		170	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-017A	EPA TO-15	828131A-SS0701	Acetone	180		180	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-018A	EPA TO-15	828131A-IA0701	Acetone	24		24	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-019A	EPA TO-15	828131A-SS0801	Acetone	120		120	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-020A	EPA TO-15	828131A-IA0801	Acetone	170		170	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-023A	EPA TO-15	828131A-SS1001	Acetone	160		160	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-024A	EPA TO-15	828131A-IA1001	Acetone	35		35	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-026A	EPA TO-15	828131A-AA0201	Acetone	17		17	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-003A	EPA TO-15	828131A-IA0101	Hexane	2.3		2.3	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-006A	EPA TO-15	828131A-IA0201	Hexane	1		1	J	QLS-H	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	Methylene chloride	0.78		0.78	J	QLS-H	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	Styrene	3.9		3.9	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-003A	EPA TO-15	828131A-IA0101	Xylene, m/p	3.1		3.1	J	QLS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	2-Propanol	15		15	J	QLS-H, IS-H	UG/M3	Enalytic
E1101003	E1101003-021A	EPA TO-15	828131A-SS0901	Acetone	230		230	J	QLS-H, IS-H	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Acetone	16		16	J	QLS-H, SS-H	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Benzene	3.8		3.8	J	QLS-H, SS-H	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Tetrahydrofuran	4.9		4.9	J	QLS-H, SS-H	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	1,4-Dioxane	0.73	U	0.73	UJ	QLS-L	UG/M3	Enalytic
E1012003	E1012003-002A	EPA TO-15	828131A-GV0401	1,4-Dioxane	0.73	U	0.73	UJ	QLS-L	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Carbon disulfide	69		69	J	SS-H	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Cyclohexane	7.1		7.1	J	SS-H	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Heptane	21		21	J	SS-H	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Hexane	120		120	J	SS-H	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Toluene	20		20	J	SS-H	UG/M3	Enalytic
E1012003	E1012003-001A	EPA TO-15	828131A-GV0301	Trichloroethene	2		2	J	SS-H	UG/M3	Enalytic
1102123	1102123-01A	EPA TO-17	828131A-IA11A01	1,4-Dichlorobenzene	0.097	U	0.097	UJ	LCS-L	UG/M3	AT
1102123	1102123-02A	EPA TO-17	828131A-IA11B01	1,4-Dichlorobenzene	0.097	U	0.097	UJ	LCS-L	UG/M3	AT
1102123	1102123-01A	EPA TO-17	828131A-IA11A01	Ethanol	17		17	J	LCS-L	UG/M3	AT
1102123	1102123-02A	EPA TO-17	828131A-IA11B01	Ethanol	64		64	J	LCS-L	UG/M3	AT
1102123	1102123-01A	EPA TO-17	828131A-IA11A01	Naphthalene	0.2	U		R	LCS-L	UG/M3	AT
1102123	1102123-02A	EPA TO-17	828131A-IA11B01	Naphthalene	0.2	U		R	LCS-L	UG/M3	AT
1102123	1102123-01A	EPA TO-17	828131A-IA11A01	Styrene	0.13		0.13	J	LCS-L	UG/M3	AT
1102123	1102123-02A	EPA TO-17	828131A-IA11B01	Styrene	0.3		0.3	J	LCS-L	UG/M3	AT

NOTES:

Validation Qualifiers-

U = result is non-detected or qualified as non-detect due to blank contamination
J = estimated value
R = result is rejected

Validation Qualifier Reason Codes-

BL1 = method blank contamination
ICVRSD = initial calibration relative standard deviation exceeds control limit
QLS-L = quantitation limit standard recovery below control limits
QLS-H = quantitation limit standard recovery above control limits
LCS-L = laboratory control sample recovery below control limits
SS-H = surrogate recovery above control limits
IS-H = internal standard recovery above control limits

TABLE 3
SUMMARY OF DATA VALIDATION ACTIONS
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SDG	Lab Sample Id	Analysis Method	Field Sample ID	Paramater Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Result Units	Lab Id

LD = laboratory duplicate results exceed control limit
FD = field duplicate results exceed control limit

TABLE 4
SUMMARY OF TENTATIVELY IDENTIFIED COMPOUNDS
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SDG	Sample ID	Lab Sample ID	Analytical Method	Compound	Final Result (ppbv)	Qualifier	Analysis Date
E1012003	828131A-GV0301	E1012003-001A	EPA TO-15	1-Propene, 2-methyl-	250	JN	12/15/2010
E1012003	828131A-GV0301	E1012003-001A	EPA TO-15	Cyclohexane, 1,2,3-trimethyl-, (1.	180	JN	12/15/2010
E1012003	828131A-GV0301	E1012003-001A	EPA TO-15	Cyclohexane, 1,2,4-trimethyl-, (1.	160	JN	12/15/2010
E1012003	828131A-GV0301	E1012003-001A	EPA TO-15	Isobutane	290	JN	12/15/2010
E1012003	828131A-GV0301	E1012003-001A	EPA TO-15	Pentane	450	JN	12/15/2010
E1012003	828131A-GV0301	E1012003-001A	EPA TO-15	unknown	110	JN	12/15/2010
E1012003	828131A-GV0301	E1012003-001A	EPA TO-15	unknown hydrocarbon (11.485)	130	JN	12/15/2010
E1012003	828131A-GV0301	E1012003-001A	EPA TO-15	unknown hydrocarbon (11.916)	120	JN	12/15/2010
E1012003	828131A-GV0301	E1012003-001A	EPA TO-15	unknown hydrocarbon (12.807)	130	JN	12/15/2010
E1101003	828131A-SS0101	E1101003-001A	EPA TO-15	Butane, 2-methyl-	7.5	JN	02/03/2011
E1101003	828131A-SS0101	E1101003-001A	EPA TO-15	Cyclohexane, methyl-	8.2	JN	02/03/2011
E1101003	828131A-SS0101	E1101003-001A	EPA TO-15	Nonane	8.2	JN	02/03/2011
E1101003	828131A-SS0101	E1101003-001A	EPA TO-15	Octane	7	JN	02/03/2011
E1101003	828131A-SS0101	E1101003-001A	EPA TO-15	Propane	11	JN	02/03/2011
E1101003	828131A-SS0101	E1101003-001A	EPA TO-15	Propene, hexafluoro-	49	JN	02/03/2011
E1101003	828131A-SS0101	E1101003-001A	EPA TO-15	unknown hydrocarbon (4.476)	8.1	JN	02/03/2011
E1101003	828131A-SS0101	E1101003-001A	EPA TO-15	unknown hydrocarbon (4.614)	13	JN	02/03/2011
E1101003	828131A-SS0101DUP	E1101003-002A	EPA TO-15	Butane, 2-methyl-	6.9	JN	02/03/2011
E1101003	828131A-SS0101DUP	E1101003-002A	EPA TO-15	Cyclohexane, methyl-	7.9	JN	02/03/2011
E1101003	828131A-SS0101DUP	E1101003-002A	EPA TO-15	Nonane	7.8	JN	02/03/2011
E1101003	828131A-SS0101DUP	E1101003-002A	EPA TO-15	Octane	7.4	JN	02/03/2011
E1101003	828131A-SS0101DUP	E1101003-002A	EPA TO-15	Propane	12	JN	02/03/2011
E1101003	828131A-SS0101DUP	E1101003-002A	EPA TO-15	Propene, hexafluoro-	38	JN	02/03/2011
E1101003	828131A-SS0101DUP	E1101003-002A	EPA TO-15	unknown	4.6	JN	02/03/2011
E1101003	828131A-SS0101DUP	E1101003-002A	EPA TO-15	unknown hydrocarbon (4.473)	8.2	JN	02/03/2011
E1101003	828131A-SS0101DUP	E1101003-002A	EPA TO-15	unknown hydrocarbon (4.614)	13	JN	02/03/2011
E1101003	828131A-IA0101	E1101003-003A	EPA TO-15	Ethane, 1,1-difluoro-	19	JN	02/02/2011
E1101003	828131A-IA0101	E1101003-003A	EPA TO-15	Isobutane	28	JN	02/02/2011
E1101003	828131A-IA0101	E1101003-003A	EPA TO-15	unknown (14.096)	5.3	JN	02/02/2011
E1101003	828131A-IA0101	E1101003-003A	EPA TO-15	unknown (5.505)	36	JN	02/02/2011
E1101003	828131A-IA0101	E1101003-003A	EPA TO-15	unknown hydrocarbon (4.273)	11	JN	02/02/2011
E1101003	828131A-IA0101	E1101003-003A	EPA TO-15	unknown hydrocarbon (4.611)	25	JN	02/02/2011
E1101003	828131A-IA0101	E1101003-003A	EPA TO-15	unknown hydrocarbon (5.058)	3.8	JN	02/02/2011
E1101003	828131A-SS0201	E1101003-005A	EPA TO-15	1-Propene, 2-methyl-	11	JN	02/03/2011
E1101003	828131A-SS0201	E1101003-005A	EPA TO-15	Cyclopentane	2.6	JN	02/03/2011
E1101003	828131A-SS0201	E1101003-005A	EPA TO-15	Octane	2	JN	02/03/2011
E1101003	828131A-SS0201	E1101003-005A	EPA TO-15	unknown	5.9	JN	02/03/2011
E1101003	828131A-SS0201	E1101003-005A	EPA TO-15	unknown hydrocarbon (10.939)	1.4	JN	02/03/2011

TABLE 4
SUMMARY OF TENTATIVELY IDENTIFIED COMPOUNDS
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E1101003	828131A-SS0201	E1101003-005A	EPA TO-15	unknown hydrocarbon (12.897)	3	JN	02/03/2011
E1101003	828131A-SS0201	E1101003-005A	EPA TO-15	unknown hydrocarbon (5.595)	5.6	JN	02/03/2011
E1101003	828131A-SS0301	E1101003-007A	EPA TO-15	Cyclopropanecarboxamide	1.5	JN	02/03/2011
E1101003	828131A-SS0301	E1101003-007A	EPA TO-15	unknown hydrocarbon (10.939)	1.4	JN	02/03/2011
E1101003	828131A-SS0301	E1101003-007A	EPA TO-15	unknown hydrocarbon (4.476)	1.2	JN	02/03/2011
E1101003	828131A-SS0301	E1101003-007A	EPA TO-15	unknown hydrocarbon (4.617)	4.4	JN	02/03/2011
E1101003	828131A-SS0401	E1101003-009A	EPA TO-15	Butane, 2-methyl-	2.8	JN	02/03/2011
E1101003	828131A-SS0401	E1101003-009A	EPA TO-15	Cyclopropanecarboxamide	2.6	JN	02/03/2011
E1101003	828131A-SS0401	E1101003-009A	EPA TO-15	unknown	3.3	JN	02/03/2011
E1101003	828131A-SS0401	E1101003-009A	EPA TO-15	unknown hydrocarbon (4.476)	3.5	JN	02/03/2011
E1101003	828131A-SS0401	E1101003-009A	EPA TO-15	unknown hydrocarbon (4.611)	6.4	JN	02/03/2011
E1101003	828131A-IA0501	E1101003-012A	EPA TO-15	Ethyl alcohol	3.2	JN	02/03/2011
E1101003	828131A-SS06A01	E1101003-013A	EPA TO-15	Butane, 2-methyl-	3.6	JN	02/03/2011
E1101003	828131A-SS06A01	E1101003-013A	EPA TO-15	Cyclohexane, methyl-	4.2	JN	02/03/2011
E1101003	828131A-SS06A01	E1101003-013A	EPA TO-15	Octane	2.1	JN	02/03/2011
E1101003	828131A-SS06A01	E1101003-013A	EPA TO-15	Propane	3.2	JN	02/03/2011
E1101003	828131A-SS06A01	E1101003-013A	EPA TO-15	unknown hydrocarbon (4.473)	3.9	JN	02/03/2011
E1101003	828131A-SS06A01	E1101003-013A	EPA TO-15	unknown hydrocarbon (4.617)	4.2	JN	02/03/2011
E1101003	828131A-SS06A01	E1101003-013A	EPA TO-15	unknown hydrocarbon (5.933)	2.3	JN	02/03/2011
E1101003	828131A-SS06B01	E1101003-015A	EPA TO-15	Butane	7.1	JN	02/03/2011
E1101003	828131A-SS06B01	E1101003-015A	EPA TO-15	Butane, 2-methyl-	5.5	JN	02/03/2011
E1101003	828131A-SS06B01	E1101003-015A	EPA TO-15	Cyclohexane, methyl-	8.8	JN	02/03/2011
E1101003	828131A-SS06B01	E1101003-015A	EPA TO-15	Cyclohexanol	9.6	JN	02/03/2011
E1101003	828131A-SS06B01	E1101003-015A	EPA TO-15	Isobutane	5.2	JN	02/03/2011
E1101003	828131A-SS06B01	E1101003-015A	EPA TO-15	Nonane	8.2	JN	02/03/2011
E1101003	828131A-SS06B01	E1101003-015A	EPA TO-15	Octane	5.6	JN	02/03/2011
E1101003	828131A-SS06B01	E1101003-015A	EPA TO-15	unknown	8.4	JN	02/03/2011
E1101003	828131A-IA06B01	E1101003-016A	EPA TO-15	1R-.alpha.-Pinene	3	JN	02/03/2011
E1101003	828131A-IA06B01	E1101003-016A	EPA TO-15	Butane, 2-methyl-	2.2	JN	02/03/2011
E1101003	828131A-IA06B01	E1101003-016A	EPA TO-15	Hexanal	5.6	JN	02/03/2011
E1101003	828131A-IA06B01	E1101003-016A	EPA TO-15	unknown (11.713)	2.5	JN	02/03/2011
E1101003	828131A-IA06B01	E1101003-016A	EPA TO-15	unknown (5.508)	2.9	JN	02/03/2011
E1101003	828131A-SS0701	E1101003-017A	EPA TO-15	Butane, 2-methyl-	26	JN	02/03/2011
E1101003	828131A-SS0701	E1101003-017A	EPA TO-15	Cyclopentane	3.2	JN	02/03/2011
E1101003	828131A-SS0701	E1101003-017A	EPA TO-15	Cyclopentane, methyl-	5.8	JN	02/03/2011
E1101003	828131A-SS0701	E1101003-017A	EPA TO-15	Isobutane	40	JN	02/03/2011
E1101003	828131A-SS0701	E1101003-017A	EPA TO-15	Pentane, 2-methyl-	5.9	JN	02/03/2011
E1101003	828131A-SS0701	E1101003-017A	EPA TO-15	Propane	36	JN	02/03/2011
E1101003	828131A-SS0701	E1101003-017A	EPA TO-15	unknown	2.7	JN	02/03/2011

TABLE 4
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E1101003	828131A-SS0701	E1101003-017A	EPA TO-15	unknown hydrocarbon	1.2	JN	02/03/2011
E1101003	828131A-IA0701	E1101003-018A	EPA TO-15	Butane	5.4	JN	02/03/2011
E1101003	828131A-IA0701	E1101003-018A	EPA TO-15	Ethyl alcohol	19	JN	02/03/2011
E1101003	828131A-IA0701	E1101003-018A	EPA TO-15	Isobutane	200	JN	02/03/2011
E1101003	828131A-IA0701	E1101003-018A	EPA TO-15	Propane	21	JN	02/03/2011
E1101003	828131A-SS0801	E1101003-019A	EPA TO-15	Butane, 2-methyl-	1.2	JN	02/03/2011
E1101003	828131A-SS0801	E1101003-019A	EPA TO-15	unknown (14.093)	10	JN	02/03/2011
E1101003	828131A-SS0801	E1101003-019A	EPA TO-15	unknown (6.99)	1.2	JN	02/03/2011
E1101003	828131A-SS0801	E1101003-019A	EPA TO-15	unknown hydrocarbon (10.935)	1.1	JN	02/03/2011
E1101003	828131A-SS0801	E1101003-019A	EPA TO-15	unknown hydrocarbon (4.473)	1.8	JN	02/03/2011
E1101003	828131A-SS0801	E1101003-019A	EPA TO-15	unknown hydrocarbon (4.614)	1.8	JN	02/03/2011
E1101003	828131A-IA0801	E1101003-020A	EPA TO-15	Ethyl alcohol	83	JN	02/03/2011
E1101003	828131A-IA0801	E1101003-020A	EPA TO-15	Isobutane	180	JN	02/03/2011
E1101003	828131A-IA0801	E1101003-020A	EPA TO-15	Propane	13	JN	02/03/2011
E1101003	828131A-IA0801	E1101003-020A	EPA TO-15	unknown	34	JN	02/03/2011
E1101003	828131A-IA0801	E1101003-020A	EPA TO-15	unknown hydrocarbon (13.414)	6.5	JN	02/03/2011
E1101003	828131A-IA0801	E1101003-020A	EPA TO-15	unknown hydrocarbon (13.627)	8.4	JN	02/03/2011
E1101003	828131A-IA0801	E1101003-020A	EPA TO-15	unknown hydrocarbon (14.62)	6.7	JN	02/03/2011
E1101003	828131A-SS0901	E1101003-021A	EPA TO-15	Propane	2.8	JN	02/03/2011
E1101003	828131A-SS0901	E1101003-021A	EPA TO-15	unknown	3.7	JN	02/03/2011
E1101003	828131A-SS0901	E1101003-021A	EPA TO-15	unknown hydrocarbon	3.2	JN	02/03/2011
E1101003	828131A-IA0901	E1101003-022A	EPA TO-15	Ethyl alcohol	7.3	JN	02/03/2011
E1101003	828131A-IA0901	E1101003-022A	EPA TO-15	unknown hydrocarbon	4.5	JN	02/03/2011
E1101003	828131A-SS1001	E1101003-023A	EPA TO-15	1-Pentene	8.4	JN	02/03/2011
E1101003	828131A-SS1001	E1101003-023A	EPA TO-15	Cyclohexane, methyl-	9.4	JN	02/03/2011
E1101003	828131A-SS1001	E1101003-023A	EPA TO-15	Decane, 2,2,8-trimethyl-	24	JN	02/03/2011
E1101003	828131A-SS1001	E1101003-023A	EPA TO-15	unknown hydrocarbon (13.447)	47	JN	02/03/2011
E1101003	828131A-SS1001	E1101003-023A	EPA TO-15	unknown hydrocarbon (13.63)	11	JN	02/03/2011
E1101003	828131A-SS1001	E1101003-023A	EPA TO-15	unknown hydrocarbon (4.614)	15	JN	02/03/2011
E1101003	828131A-SS1001	E1101003-023A	EPA TO-15	unknown hydrocarbon (5.598)	7.8	JN	02/03/2011
E1101003	828131A-IA1001	E1101003-024A	EPA TO-15	Ethyl alcohol	67	JN	02/03/2011
E1101003	828131A-IA1001	E1101003-024A	EPA TO-15	unknown	9.3	JN	02/03/2011
E1101003	828131A-AA0301	E1101003-025A	EPA TO-15	unknown hydrocarbon	2.6	JN	02/03/2011
E1101003	828131A-AA0201	E1101003-026A	EPA TO-15	unknown	10	JN	02/03/2011

FOOTNOTES:

Qualifiers

JN = estimated value with presumptive evidence that the compound is present in the sample

Form 1

CLIENT SAMPLE NO.

828131A-GV0301

Lab Name: Enalytic,LLC Contract: MACTEC

Lab Code: 11920 Case No.: _____ SAS No.: _____ SDG No.: MT001

Matrix: (soil/water/air) Air Lab Sample ID: E1012003-001A

Sample wt/vol: 5 (g/mL) G Lab File ID: EN4400.D

Level: (low/med) LOW Date Received: 12/2/2010

% Moisture: not dec. Date Analyzed: 12/15/2010

GC Column: Rtx-VMS ID: (mm) Dilution Factor: 1.00

Extract Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ppbV or ug/m3) ug/m3	Q	
71-55-6	1,1,1-Trichloroethane	1.1	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.4	U	J
79-00-5	1,1,2-Trichloroethane	1.1	U	
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (	1.6	U	
75-34-3	1,1-Dichloroethane	0.82	U	
75-35-4	1,1-Dichloroethene	0.81	U	
120-82-1	1,2,4-Trichlorobenzene	1.5	U	J
95-63-6	1,2,4-Trimethylbenzene	1.0	U	J
106-93-4	1,2-Dibromoethane	1.6	U	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.4	U	
95-50-1	1,2-Dichlorobenzene	1.2	U	J
107-06-2	1,2-Dichloroethane	0.82	U	
78-87-5	1,2-Dichloropropane	0.94	U	
108-67-8	1,3,5-Trimethylbenzene	1.0	U	J
106-99-0	1,3-Butadiene	0.45	U	
541-73-1	1,3-Dichlorobenzene	1.2	U	J
106-46-7	1,4-Dichlorobenzene	1.2	U	J
123-91-1	1,4-Dioxane	0.73	U	J
78-93-3	2-Butanone (MEK)	0.60	U	
591-78-6	2-Hexanone (*)	0.83	U	J
622-96-8	4-Ethyltoluene (*)	1.0	U	J
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.83	U	J
67-64-1	Acetone	16		J
71-43-2	Benzene	3.8		J
100-44-7	Benzyl chloride	1.1	U	J
75-27-4	Bromodichloromethane	1.4	U	
75-25-2	Bromoform	2.1	U	J
74-83-9	Bromomethane	0.79	U	
75-15-0	Carbon disulfide	69		J
56-23-5	Carbon tetrachloride	1.3	U	
108-90-7	Chlorobenzene	0.94	U	
75-00-3	Chloroethane	0.54	U	
67-66-3	Chloroform	0.99	U	

3/1/11

Form 1

CLIENT SAMPLE NO.

828131A-GV0301

Lab Name: Enalytic,LLC Contract: MACTEC

Lab Code: 11920 Case No.: ____ SAS No.: _____ SDG No.: MT001

Matrix: (soil/water/air) Air Lab Sample ID: E1012003-001A

Sample wt/vol: 5 (g/mL) G Lab File ID: EN4400.D

Level: (low/med) LOW Date Received: 12/2/2010

% Moisture: not dec. Date Analyzed: 12/15/2010

GC Column: Rtx-VMS ID: (mm) Dilution Factor: 1.00

Extract Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ppbV or ug/m3) ug/m3	Q	
74-87-3	Chloromethane	0.42	U	
156-59-2	cis-1,2-Dichloroethene	0.81	U	
10061-01-5	cis-1,3-Dichloropropene	0.92	U	
110-82-7	Cyclohexane	7.1		J
124-48-1	Dibromochloromethane	1.7	U	
75-71-8	Dichlorodifluoromethane (Freon 12)	2.6	J	
100-41-4	Ethyl benzene	0.88	U	J
87-68-3	Hexachlorobutadiene	2.2	U	J
110-54-3	Hexane	120		J
67-63-0	Isopropanol	5.0	U	
1330-20-7	m,p-Xylene	6.5		J
1634-04-4	Methyl tert-butyl ether (MTBE)	0.73	U	
75-09-2	Methylene chloride	0.71	U	
142-82-5	n-Heptane	21		J
95-47-6	o-Xylene	0.88	U	J
100-42-5	Styrene	0.87	U	
127-18-4	Tetrachloroethene	2.3		J
109-99-9	Tetrahydrofuran (*)	4.9		J
108-88-3	Toluene	20		J
156-60-5	trans-1,2-Dichloroethene	0.81	U	
10061-02-6	trans-1,3-Dichloropropene	0.92	U	
79-01-6	Trichloroethene	2.0		J
75-69-4	Trichlorofluoromethane (Freon 11)	1.1	U	
108-05-4	Vinyl acetate	0.72	U	
75-01-4	Vinyl chloride	0.52	U	

3/11/11

Form 1 TIC

EPA TO-15 ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

828131A-GV0301

Lab Name: Enalytic,LLC Contract: MACTEC

Lab Code: 11920 Case No.: _____ SAS No.: _____ SDG No.: MT001

Matrix: (soil/water/air) Air Lab Sample ID: E1012003-001A

Sample wt/vol: 5 (g/mL) G Lab File ID: EN4400.D

Level: LOW Date Received: 12/2/2010

% Moisture: not dec. Date Analyzed: 12/15/2010

GC Column: Rtx-VMS ID: (mm) Dilution Factor: 1.00

Extract Volume: _____ (µl)

Number TICs found: 9 CONCENTRATION UNITS: ppbV

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1	000075-28-5	Isobutane	4.38	290	
2	000115-11-7	1-Propene, 2-methyl-	4.52	250	
3	000109-66-0	Pentane	5.16	450	
4	007667-60-9	Cyclohexane, 1,2,4-trimethyl-,	10.54	160	
5	001678-81-5	Cyclohexane, 1,2,3-trimethyl-,	10.98	180	
6		unknown hydrocarbon (11.485)	11.48	130	
7		unknown	11.75	110	
8		unknown hydrocarbon (11.916)	11.92	120	
9		unknown hydrocarbon (12.807)	12.81	130	

12/31/11

Form 1

CLIENT SAMPLE NO.

628131A-GV0401

Lab Name: Enalytic, LLC Contract: MACTEC

Lab Code: 11920 Case No.: _____ SAS No.: _____ SDG No.: MT001

Matrix: (soil/water/air) Air Lab Sample ID: E1012003-002A

Sample wt/vol: 5 (g/mL) G Lab File ID: EN4401.D

Level: (low/med) LOW Date Received: 12/2/2010

% Moisture: not dec. Date Analyzed: 12/15/2010

GC Column: Rtx-VMS ID: (mm) Dilution Factor: 1.00

Extract Volume: _____ (µl) See attached dilution for THF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ppbV or ug/m3) ug/m3	Q	
71-55-6	1,1,1-Trichloroethane	1.1	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.4	U	J
79-00-5	1,1,2-Trichloroethane	1.1	U	
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (	1.6	U	
75-34-3	1,1-Dichloroethane	0.82	U	
75-35-4	1,1-Dichloroethene	0.81	U	
120-82-1	1,2,4-Trichlorobenzene	1.5	U	J
95-63-6	1,2,4-Trimethylbenzene	1.0	U	J
106-93-4	1,2-Dibromoethane	1.6	U	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.4	U	
95-50-1	1,2-Dichlorobenzene	1.2	U	J
107-06-2	1,2-Dichloroethane	0.82	U	
78-87-5	1,2-Dichloropropane	0.94	U	
108-67-8	1,3,5-Trimethylbenzene	1.4		J
106-99-0	1,3-Butadiene	0.45	U	
541-73-1	1,3-Dichlorobenzene	1.2	U	J
106-46-7	1,4-Dichlorobenzene	1.2	U	J
123-91-1	1,4-Dioxane	0.73	U	J
78-93-3	2-Butanone (MEK)	57		
591-78-6	2-Hexanone (*)	0.83	U	J
622-96-8	4-Ethyltoluene (*)	1.0	U	J
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.83	U	J
67-64-1	Acetone	180		J
71-43-2	Benzene	0.65	U	
100-44-7	Benzyl chloride	1.1	U	J
75-27-4	Bromodichloromethane	1.4	U	
75-25-2	Bromoform	2.1	U	J
74-83-9	Bromomethane	0.79	U	
75-15-0	Carbon disulfide	0.63	U	
56-23-5	Carbon tetrachloride	1.3	U	
108-90-7	Chlorobenzene	0.94	U	
75-00-3	Chloroethane	0.54	U	
67-66-3	Chloroform	2.1		

3/1/11

Form 1

CLIENT SAMPLE NO.

828131A-GV0401

Lab Name: Enalytic,LLC Contract: MACTEC

Lab Code: 11920 Case No.: _____ SAS No.: _____ SDG No.: MT001

Matrix: (soil/water/air) Air Lab Sample ID: E1012003-002A

Sample wt/vol: 5 (g/mL) G Lab File ID: EN4401.D

Level: (low/med) LOW Date Received: 12/2/2010

% Moisture: not dec. Date Analyzed: 12/15/2010

GC Column: Rtx-VMS ID: (mm) Dilution Factor: 1.00

Extract Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ppbV or ug/m3) ug/m3	Q	
74-87-3	Chloromethane	0.42	U	
156-59-2	cis-1,2-Dichloroethene	0.81	U	
10061-01-5	cis-1,3-Dichloropropene	0.92	U	
110-82-7	Cyclohexane	0.70	U	
124-48-1	Dibromochloromethane	1.7	U	
75-71-8	Dichlorodifluoromethane (Freon 12)	2.3		
100-41-4	Ethyl benzene	3.6		J
87-68-3	Hexachlorobutadiene	2.2	U	J
110-54-3	Hexane	0.72	U	
67-63-0	Isopropanol	~~2.0~~	~~U~~	U
1330-20-7	m,p-Xylene	13		J
1634-04-4	Methyl tert-butyl ether (MTBE)	0.73	U	
75-09-2	Methylene chloride	0.78		J
142-82-5	n-Heptane	0.83	U	
95-47-6	o-Xylene	4.0		J
100-42-5	Styrene	3.9		J
127-18-4	Tetrachloroethene	2.8		J
108-88-3	Toluene	2.7		
156-60-5	trans-1,2-Dichloroethene	0.81	U	
10061-02-6	trans-1,3-Dichloropropene	0.92	U	
79-01-6	Trichloroethene	1.1	U	
75-69-4	Trichlorofluoromethane (Freon 11)	1.1	U	
108-05-4	Vinyl acetate	0.72	U	
75-01-4	Vinyl chloride	0.52	U	

3/11/11

Form 1

CLIENT SAMPLE NO.

828131A-GV0401

Lab Name: Enalytic, LLC Contract: MACTEC

Lab Code: 11920 Case No.: _____ SAS No.: _____ SDG No.: MT001

Matrix: (soil/water/air) Air Lab Sample ID: E1012003-002A

Sample wt/vol: 5 (g/mL) G Lab File ID: EN4409.D

Level: (low/med) LOW Date Received: 12/2/2010

% Moisture: not dec. Date Analyzed: 12/16/2010

GC Column: Rtx-VMS ID: (mm) Dilution Factor: 144.00

Extract Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ppbV or ug/m3) ug/m3	Q
109-99-9	Tetrahydrofuran (*)	1700	

3/1/11

Form 1 TIC

EPA TO-15 ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

828131A-GV0401

Lab Name: Enalytic,LLC Contract: MACTEC

Lab Code: 11920 Case No.: _____ SAS No.: _____ SDG No.: MT001

Matrix: (soil/water/air) Air Lab Sample ID: E1012003-002A

Sample wt/vol: 5 (g/mL) G Lab File ID: EN4401.D

Level: LOW Date Received: 12/2/2010

% Moisture: not dec. Date Analyzed: 12/15/2010

GC Column: Rtx-VMS ID: (mm) Dilution Factor: 1.00

Extract Volume: _____ (µl)

Number TICs found: 1 CONCENTRATION UNITS: ppbV

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q	
1. 000556-67-2	~~Cyclotetrasiloxane, octamethyl~~	~~12.09~~	~~23~~		GCMS artifact

3/1/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-001A

Client Sample ID 828131A-SS0101
Collection Date: 1/18/2011
Tag # 322/3958
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.20	1.4		1.00	7.2
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	3.4		1.00	17
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.20	ND		0.73	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	2.2		0.60	6.7 J ✓
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	1.4		1.00	7.1
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	1.2		0.83	5.1
67-64-1	Acetone	1	03-Feb-11	2.0	95		4.80	230 J ✓
71-43-2	Benzene	1	03-Feb-11	0.20	1.4		0.65	4.7
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	2.0		0.63	6.2
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.20	ND		1.30	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

2/21/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-001A

Client Sample ID 828131A-SS0101
Collection Date: 1/18/2011
Tag # 322/3958
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	1.9		0.70	6.7
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.69		1.00	3.5
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	0.95		0.88	4.2
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	3.8		0.72	14
67-63-0	Isopropanol	1	03-Feb-11	2.0	4.6		5.00	11 J
1330-20-7	m,p-Xylene	1	03-Feb-11	0.20	6.7		0.88	29
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	5.1		0.83	21
95-47-6	o-Xylene	1	03-Feb-11	0.20	2.2		0.88	9.9
100-42-5	Styrene	1	03-Feb-11	0.20	ND		0.87	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	16		0.77	60
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.20	ND		1.10	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.22		1.10	1.3
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	TIC: Butane, 2-methyl-	1	03-Feb-11	0	7.5		0.00	0
	TIC: Cyclohexane, methyl-	1	03-Feb-11	0	8.2		0.00	0
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~22~~		~~0.00~~	~~0~~ GCMS
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~9.7~~		~~0.00~~	~~0~~ artifacts
	TIC: Nonane	1	03-Feb-11	0	8.2		0.00	0
	TIC: Octane	1	03-Feb-11	0	7.0		0.00	0
	TIC: Propane	1	03-Feb-11	0	11		0.00	0
	TIC: Propene, hexafluoro-	1	03-Feb-11	0	49		0.00	0
	TIC: unknown hydrocarbon (4.476)	1	03-Feb-11	0	8.1		0.00	0
	TIC: unknown hydrocarbon (4.614)	1	03-Feb-11	0	13		0.00	0

ppbV

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-002A

Client Sample ID 828131A-SS0101D
Collection Date: 1/18/2011
Tag # 288/2672
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.20	1.4		1.00	7.0
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	3.4		1.00	17
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.20	ND		0.73	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	3.8		0.60	12 J ✓
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	1.5		1.00	7.3
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	0.97		0.83	4.0
67-64-1	Acetone	1	03-Feb-11	2.0	92		4.80	220 J ✓
71-43-2	Benzene	1	03-Feb-11	0.20	1.4		0.65	4.7
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	1.9		0.63	6.0
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.20	ND		1.30	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11 JF 3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-002A

Client Sample ID 828131A-SS0101D
Collection Date: 1/18/2011
Tag # 288/2672
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	1.8		0.70	6.5
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.65		1.00	3.3
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	1.1		0.88	4.8
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	3.8		0.72	14
67-63-0	Isopropanol	1	03-Feb-11	2.0	2.4		5.00	6.1 J
1330-20-7	m,p-Xylene	1	03-Feb-11	0.20	5.9		0.88	26
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	5.2		0.83	21
95-47-6	o-Xylene	1	03-Feb-11	0.20	1.6		0.88	7.3
100-42-5	Styrene	1	03-Feb-11	0.20	ND		0.87	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	17		0.77	65
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.20	ND		1.10	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.22		1.10	1.3
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	TIC: Butane, 2-methyl-	1	03-Feb-11	0	6.9		0.00	0
	TIC: Cyclohexane, methyl-	1	03-Feb-11	0	7.9		0.00	0
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~7.8~~		~~0.00~~	~~0~~ GCMS artifact
	TIC: Nonane	1	03-Feb-11	0	7.8		0.00	0
	TIC: Octane	1	03-Feb-11	0	7.4		0.00	0
	TIC: Propane	1	03-Feb-11	0	12		0.00	0
	TIC: Propene, hexafluoro-	1	03-Feb-11	0	38		0.00	0
	TIC: unknown	1	03-Feb-11	0	4.6		0.00	0
	TIC: unknown hydrocarbon (4.473)	1	03-Feb-11	0	8.2		0.00	0
	TIC: unknown hydrocarbon (4.614)	1	03-Feb-11	0	13		0.00	0

Above

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

2/3/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-003A

Client Sample ID 828131A-IA0101
Collection Date: 1/18/2011
Tag # 307/2716
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	02-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	02-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	02-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	02-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	02-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	02-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	02-Feb-11	0.30	ND		1.50	ND
106-93-4	1,2-Dibromoethane	1	02-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	02-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	02-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	02-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	02-Feb-11	0.20	0.30		1.00	1.5
106-99-0	1,3-Butadiene	1	02-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND J
123-91-1	1,4-Dioxane	1	02-Feb-11	0.40	ND		1.50	ND
78-93-3	2-Butanone (MEK)	1	02-Feb-11	0.20	1.1		0.60	3.2
591-78-6	2-Hexanone (*)	1	02-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	02-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	02-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	02-Feb-11	2.0	7.0		4.80	17 J
71-43-2	Benzene	1	02-Feb-11	0.20	0.48		0.65	1.6
100-44-7	Benzyl chloride	1	02-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	02-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	02-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	02-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	02-Feb-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	02-Feb-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	02-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	02-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	02-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	02-Feb-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By: KLP

Date: 2/4/11 3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-003A

Client Sample ID 828131A-IA0101
Collection Date: 1/18/2011
Tag # 307/2716
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result	
10061-01-5	cis-1,3-Dichloropropene	1	02-Feb-11	0.20	ND		0.92	ND	
110-82-7	Cyclohexane	1	02-Feb-11	0.20	0.41		0.70	1.4	
124-48-1	Dibromochloromethane	1	02-Feb-11	0.20	ND		1.70	ND	
75-71-8	Dichlorodifluoromethane (Freon 12)	1	02-Feb-11	0.20	ND		1.00	ND	
100-41-4	Ethyl benzene	1	02-Feb-11	0.20	0.27		0.88	1.2	
87-68-3	Hexachlorobutadiene	1	02-Feb-11	0.20	ND		2.20	ND	
110-54-3	Hexane	1	02-Feb-11	0.20	0.63		0.72	2.3	J
67-63-0	Isopropanol	1	02-Feb-11	2.0	15		5.00	37	J
1330-20-7	m,p-Xylene	1	02-Feb-11	0.60	0.70		2.60	3.1	J
1634-04-4	Methyl tert-butyl ether (MTBE)	1	02-Feb-11	0.20	ND		0.73	ND	
75-09-2	Methylene chloride	1	02-Feb-11	0.20	0.47		0.71	1.7	
142-82-5	n-Heptane	1	02-Feb-11	0.20	ND		0.83	ND	
95-47-6	o-Xylene	1	02-Feb-11	0.20	ND		0.88	ND	
100-42-5	Styrene	1	02-Feb-11	0.30	0.31		1.30	1.3	
127-18-4	Tetrachloroethene	1	02-Feb-11	0.20	ND		1.40	ND	
109-99-9	Tetrahydrofuran (*)	1	02-Feb-11	0.20	ND		0.60	ND	
108-88-3	Toluene	1	02-Feb-11	0.20	1.6		0.77	6.2	
156-60-5	trans-1,2-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND	
10061-02-6	trans-1,3-Dichloropropene	1	02-Feb-11	0.20	ND		0.92	ND	J
79-01-6	Trichloroethene	1	02-Feb-11	0.040	ND		0.22	ND	
75-69-4	Trichlorofluoromethane (Freon 11)	1	02-Feb-11	0.20	0.35		1.10	2.0	
108-05-4	Vinyl acetate	1	02-Feb-11	0.20	ND		0.72	ND	
75-01-4	Vinyl chloride	1	02-Feb-11	0.20	ND		0.52	ND	
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~02-Feb-11~~	~~0~~	~~7.4~~		~~0.00~~	~~0~~	GCMS artifacts
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~02-Feb-11~~	~~0~~	~~3.7~~		~~0.00~~	~~0~~	
	TIC: Ethane, 1,1-difluoro-	1	02-Feb-11	0	19		0.00	0	
	TIC: Isobutane	1	02-Feb-11	0	28		0.00	0	
	TIC: unknown (14.096)	1	02-Feb-11	0	5.3		0.00	0	
	TIC: unknown (5.505)	1	02-Feb-11	0	36		0.00	0	
	TIC: unknown hydrocarbon (4.273)	1	02-Feb-11	0	11		0.00	0	
	TIC: unknown hydrocarbon (4.611)	1	02-Feb-11	0	25		0.00	0	
	TIC: unknown hydrocarbon (5.058)	1	02-Feb-11	0	3.8		0.00	0	

ppbV

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11

2/3/12/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-004A

Client Sample ID 828131A-AA0101
Collection Date: 1/18/2011
Tag # 333/2658
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	02-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	02-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	02-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	02-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	02-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	02-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	02-Feb-11	0.30	ND		1.50	ND
106-93-4	1,2-Dibromoethane	1	02-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	02-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	02-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	02-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	02-Feb-11	0.20	ND		1.00	ND
106-99-0	1,3-Butadiene	1	02-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND J ✓
123-91-1	1,4-Dioxane	1	02-Feb-11	0.40	ND		1.50	ND
78-93-3	2-Butanone (MEK)	1	02-Feb-11	0.20	0.52		0.60	1.6
591-78-6	2-Hexanone (*)	1	02-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	02-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	02-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	02-Feb-11	2.0	4.7		4.80	11 J ✓
71-43-2	Benzene	1	02-Feb-11	0.20	0.45		0.65	1.5
100-44-7	Benzyl chloride	1	02-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	02-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	02-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	02-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	02-Feb-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	02-Feb-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	02-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	02-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	02-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	02-Feb-11	0.20	0.62		0.42	1.3
156-59-2	cis-1,2-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By: KLP

Date: 2/4/11

JP 3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-004A

Client Sample ID 828131A-AA0101
Collection Date: 1/18/2011
Tag # 333/2658
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result	
10061-01-5	cis-1,3-Dichloropropene	1	02-Feb-11	0.20	ND		0.92	ND	
110-82-7	Cyclohexane	1	02-Feb-11	0.20	ND		0.70	ND	
124-48-1	Dibromochloromethane	1	02-Feb-11	0.20	ND		1.70	ND	
75-71-8	Dichlorodifluoromethane (Freon 12)	1	02-Feb-11	0.20	0.46		1.00	2.3	
100-41-4	Ethyl benzene	1	02-Feb-11	0.20	ND		0.88	ND	
87-68-3	Hexachlorobutadiene	1	02-Feb-11	0.20	ND		2.20	ND	
110-54-3	Hexane	1	02-Feb-11	0.20	ND		0.72	ND	
67-63-0	Isopropanol	1	02-Feb-11	2.0	2.1		5.00	5.2	J ✓
1330-20-7	m,p-Xylene	1	02-Feb-11	0.60	ND		2.60	ND	
1634-04-4	Methyl tert-butyl ether (MTBE)	1	02-Feb-11	0.20	ND		0.73	ND	
75-09-2	Methylene chloride	1	02-Feb-11	0.20	ND		0.71	ND	
142-82-5	n-Heptane	1	02-Feb-11	0.20	ND		0.83	ND	
95-47-6	o-Xylene	1	02-Feb-11	0.20	ND		0.88	ND	
100-42-5	Styrene	1	02-Feb-11	0.30	ND		1.30	ND	
127-18-4	Tetrachloroethene	1	02-Feb-11	0.20	ND		1.40	ND	
109-99-9	Tetrahydrofuran (*)	1	02-Feb-11	0.20	ND		0.60	ND	
108-88-3	Toluene	1	02-Feb-11	0.20	0.57		0.77	2.2	
156-60-5	trans-1,2-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND	
10061-02-6	trans-1,3-Dichloropropene	1	02-Feb-11	0.20	ND		0.92	ND	J ✓
79-01-6	Trichloroethene	1	02-Feb-11	0.040	ND		0.22	ND	
75-69-4	Trichlorofluoromethane (Freon 11)	1	02-Feb-11	0.20	0.23		1.10	1.3	
108-05-4	Vinyl acetate	1	02-Feb-11	0.20	ND		0.72	ND	
75-01-4	Vinyl chloride	1	02-Feb-11	0.20	ND		0.52	ND	
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~02-Feb-11~~	~~0~~	~~13~~		~~0.00~~	~~0~~	GC/MS
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~02-Feb-11~~	~~0~~	~~5.4~~		~~0.00~~	~~0~~	artifacts

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By: KLP

Date: 2/4/11 8/31/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-005A

Client Sample ID 828131A-SS0201
Collection Date: 1/19/2011
Tag # 326/3953
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.20	ND		1.00	ND
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	0.33		1.00	1.6
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.20	ND		0.73	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	3.2		0.60	9.7
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	0.34		1.00	1.7
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	0.30		0.83	1.2
67-64-1	Acetone	5	04-Feb-11	10	140		24.00	330 J
71-43-2	Benzene	1	03-Feb-11	0.20	ND		0.65	ND
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	2.2		0.63	7.0
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.20	ND		1.30	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-005A

Client Sample ID 828131A-SS0201
Collection Date: 1/19/2011
Tag # 326/3953
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.46		1.00	2.3
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	0.53		0.88	2.3
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	0.33		0.72	1.2
67-63-0	Isopropanol	1	03-Feb-11	2.0	5.3		5.00	13 J ✓
1330-20-7	m,p-Xylene	1	03-Feb-11	0.20	2.0		0.88	8.8
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	0.60		0.83	2.5
95-47-6	o-Xylene	1	03-Feb-11	0.20	0.40		0.88	1.8
100-42-5	Styrene	1	03-Feb-11	0.20	0.89		0.87	3.9
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	0.20		1.40	1.4
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	43		0.77	170
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.20	ND		1.10	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.21		1.10	1.2
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	TIC: 1-Propene, 2-methyl-	1	03-Feb-11	0	11		0.00	0
	TIC: Cyclopentane	1	03-Feb-11	0	2.6		0.00	0
	~~TIC: Cycletetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~29~~		~~0.00~~	~~0~~ GC/MS artifacts
	~~TIC: Cyclotrisiloxane, hexamethyl~~	~~1~~	~~03-Feb-11~~	~~0~~	~~12~~		~~0.00~~	~~0~~
	TIC: Octane	1	03-Feb-11	0	2.0		0.00	0
	TIC: unknown	1	03-Feb-11	0	5.9		0.00	0
	TIC: unknown hydrocarbon (10.939)	1	03-Feb-11	0	1.4		0.00	0
	TIC: unknown hydrocarbon (12.897)	1	03-Feb-11	0	3.0		0.00	0
	TIC: unknown hydrocarbon (5.595)	1	03-Feb-11	0	5.6		0.00	0

ppbv

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

2/3/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-006A

Client Sample ID 828131A-IA0201
Collection Date: 1/19/2011
Tag # 298
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	02-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	02-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	02-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	02-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	02-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	02-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	02-Feb-11	0.30	ND		1.50	ND
106-93-4	1,2-Dibromoethane	1	02-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	02-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	02-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	02-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	02-Feb-11	0.20	ND		1.00	ND
106-99-0	1,3-Butadiene	1	02-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND J ✓
123-91-1	1,4-Dioxane	1	02-Feb-11	0.40	ND		1.50	ND
78-93-3	2-Butanone (MEK)	1	02-Feb-11	0.20	ND		0.60	ND
591-78-6	2-Hexanone (*)	1	02-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	02-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	02-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	02-Feb-11	2.0	5.4		4.80	13 J ✓
71-43-2	Benzene	1	02-Feb-11	0.20	0.69		0.65	2.2
100-44-7	Benzyl chloride	1	02-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	02-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	02-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	02-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	02-Feb-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	02-Feb-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	02-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	02-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	02-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	02-Feb-11	0.20	0.56		0.42	1.2
156-59-2	cis-1,2-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11 gr 3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-006A

Client Sample ID 828131A-IA0201
Collection Date: 1/19/2011
Tag # 298
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result	
10061-01-5	cis-1,3-Dichloropropene	1	02-Feb-11	0.20	ND		0.92	ND	
110-82-7	Cyclohexane	1	02-Feb-11	0.20	ND		0.70	ND	
124-48-1	Dibromochloromethane	1	02-Feb-11	0.20	ND		1.70	ND	
75-71-8	Dichlorodifluoromethane (Freon 12)	1	02-Feb-11	0.20	0.47		1.00	2.4	
100-41-4	Ethyl benzene	1	02-Feb-11	0.20	ND		0.88	ND	
87-68-3	Hexachlorobutadiene	1	02-Feb-11	0.20	ND		2.20	ND	
110-54-3	Hexane	1	02-Feb-11	0.20	0.28		0.72	1.0	J
67-63-0	Isopropanol	1	02-Feb-11	2.0	7.2		5.00	18	J
1330-20-7	m,p-Xylene	1	02-Feb-11	0.60	ND		2.60	ND	
1634-04-4	Methyl tert-butyl ether (MTBE)	1	02-Feb-11	0.20	ND		0.73	ND	
75-09-2	Methylene chloride	1	02-Feb-11	0.20	ND		0.71	ND	
142-82-5	n-Heptane	1	02-Feb-11	0.20	ND		0.83	ND	
95-47-6	o-Xylene	1	02-Feb-11	0.20	ND		0.88	ND	
100-42-5	Styrene	1	02-Feb-11	0.30	ND		1.30	ND	
127-18-4	Tetrachloroethene	1	02-Feb-11	0.20	ND		1.40	ND	
109-99-9	Tetrahydrofuran (*)	1	02-Feb-11	0.20	ND		0.60	ND	
108-88-3	Toluene	1	02-Feb-11	0.20	0.62		0.77	2.4	
156-60-5	trans-1,2-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND	
10061-02-6	trans-1,3-Dichloropropene	1	02-Feb-11	0.20	ND		0.92	ND	J
79-01-6	Trichloroethene	1	02-Feb-11	0.040	ND		0.22	ND	
75-69-4	Trichlorofluoromethane (Freon 11)	1	02-Feb-11	0.20	0.22		1.10	1.3	
108-05-4	Vinyl acetate	1	02-Feb-11	0.20	ND		0.72	ND	
75-01-4	Vinyl chloride	1	02-Feb-11	0.20	ND		0.52	ND	
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~02-Feb-11~~	~~0~~	~~19~~		~~0.00~~	~~0~~	GCMS artifact
	~~TIC: Cyclotrisilexane, hexamethyl-~~	~~1~~	~~02-Feb-11~~	~~0~~	~~6.6~~		~~0.00~~	~~0~~	

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11 2/3/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-007A

Client Sample ID 828131A-SS0301
Collection Date: 1/19/2011
Tag # 292/2663
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.20	ND		1.00	ND
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	0.38		1.00	1.9
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.20	ND		0.73	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	3.3		0.60	9.8
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	0.23		1.00	1.1
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	5	04-Feb-11	10	64		24.00	150 J
71-43-2	Benzene	1	03-Feb-11	0.20	0.21		0.65	0.68
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	0.81		0.63	2.6
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.20	ND		1.30	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLD **Date:** 2/4/11

JM 3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-007A

Client Sample ID 828131A-SS0301
Collection Date: 1/19/2011
Tag # 292/2663
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.49		1.00	2.5
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	0.26		0.88	1.1
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	0.46		0.72	1.6
67-63-0	Isopropanol	1	03-Feb-11	2.0	2.8		5.00	6.9 J
1330-20-7	m,p-Xylene	1	03-Feb-11	0.20	1.2		0.88	5.1
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	0.63		0.83	2.6
95-47-6	o-Xylene	1	03-Feb-11	0.20	0.41		0.88	1.8
100-42-5	Styrene	1	03-Feb-11	0.20	ND		0.87	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	13		0.77	50
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.20	ND		1.10	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.23		1.10	1.3
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	TIC: Cyclopropanecarboxamide	1	03-Feb-11	0	1.5		0.00	0
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~8.2~~		~~0.00~~	~~0~~ GCMS
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~5.4~~		~~0.00~~	~~0~~ artifacts
	TIC: unknown hydrocarbon (10.939)	1	03-Feb-11	0	1.4		0.00	0
	TIC: unknown hydrocarbon (4.476)	1	03-Feb-11	0	1.2		0.00	0
	TIC: unknown hydrocarbon (4.617)	1	03-Feb-11	0	4.4		0.00	0

ppbv

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11

gr 3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-008A

Client Sample ID 828131A-IA0301
Collection Date: 1/19/2011
Tag # 263/3954
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	02-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	02-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	02-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	02-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	02-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	02-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	02-Feb-11	0.30	ND		1.50	ND
106-93-4	1,2-Dibromoethane	1	02-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	02-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	02-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	02-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	02-Feb-11	0.20	ND		1.00	ND
106-99-0	1,3-Butadiene	1	02-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND J ✓
123-91-1	1,4-Dioxane	1	02-Feb-11	0.40	ND		1.50	ND
78-93-3	2-Butanone (MEK)	1	02-Feb-11	0.20	1.1		0.60	3.4
591-78-6	2-Hexanone (*)	1	02-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	02-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	02-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	02-Feb-11	2.0	6.7		4.80	16 J ✓
71-43-2	Benzene	1	02-Feb-11	0.20	0.38		0.65	1.2
100-44-7	Benzyl chloride	1	02-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	02-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	02-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	02-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	02-Feb-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	02-Feb-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	02-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	02-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	02-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	02-Feb-11	0.20	0.56		0.42	1.2
156-59-2	cis-1,2-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

gm 3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-008A

Client Sample ID 828131A-IA0301
Collection Date: 1/19/2011
Tag # 263/3954
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result	
10061-01-5	cis-1,3-Dichloropropene	1	02-Feb-11	0.20	ND		0.92	ND	
110-82-7	Cyclohexane	1	02-Feb-11	0.20	ND		0.70	ND	
124-48-1	Dibromochloromethane	1	02-Feb-11	0.20	ND		1.70	ND	
75-71-8	Dichlorodifluoromethane (Freon 12)	1	02-Feb-11	0.20	0.46		1.00	2.3	
100-41-4	Ethyl benzene	1	02-Feb-11	0.20	ND		0.88	ND	
87-68-3	Hexachlorobutadiene	1	02-Feb-11	0.20	ND		2.20	ND	
110-54-3	Hexane	1	02-Feb-11	0.20	ND		0.72	ND	
67-63-0	Isopropanol	1	02-Feb-11	2.0	4.2		5.00	10	J ✓
1330-20-7	m,p-Xylene	1	02-Feb-11	0.60	ND		2.60	ND	
1634-04-4	Methyl tert-butyl ether (MTBE)	1	02-Feb-11	0.20	ND		0.73	ND	
75-09-2	Methylene chloride	1	02-Feb-11	0.20	ND		0.71	ND	
142-82-5	n-Heptane	1	02-Feb-11	0.20	ND		0.83	ND	
95-47-6	o-Xylene	1	02-Feb-11	0.20	ND		0.88	ND	
100-42-5	Styrene	1	02-Feb-11	0.30	ND		1.30	ND	
127-18-4	Tetrachloroethene	1	02-Feb-11	0.20	0.44		1.40	3.0	
109-99-9	Tetrahydrofuran (*)	1	02-Feb-11	0.20	1.8		0.60	5.5	
108-88-3	Toluene	1	02-Feb-11	0.20	0.55		0.77	2.1	
156-60-5	trans-1,2-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND	
10061-02-6	trans-1,3-Dichloropropene	1	02-Feb-11	0.20	ND		0.92	ND	J ✓
79-01-6	Trichloroethene	1	02-Feb-11	0.040	ND		0.22	ND	
75-69-4	Trichlorofluoromethane (Freon 11)	1	02-Feb-11	0.20	0.21		1.10	1.2	
108-05-4	Vinyl acetate	1	02-Feb-11	0.20	ND		0.72	ND	
75-01-4	Vinyl chloride	1	02-Feb-11	0.20	ND		0.52	ND	
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~02-Feb-11~~	~~0~~	~~16~~		~~0.00~~	~~0~~	GCMS
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~02-Feb-11~~	~~0~~	~~7.0~~		~~0.00~~	~~0~~	artifact

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

gr 3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-009A

Client Sample ID 828131A-SS0401
Collection Date: 1/19/2011
Tag # 325/2708
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.20	ND		1.00	ND
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	0.27		1.00	1.3
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.20	ND		0.73	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	0.84		0.60	2.5
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	03-Feb-11	2.0	69		4.80	170 J
71-43-2	Benzene	1	03-Feb-11	0.20	0.37		0.65	1.2
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	0.54		0.63	1.7
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.20	ND		1.30	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11

gr 3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-009A

Client Sample ID 828131A-SS0401
Collection Date: 1/19/2011
Tag # 325/2708
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	0.45		0.70	1.6
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.45		1.00	2.3
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	1.2		0.72	4.1
67-63-0	Isopropanol	1	03-Feb-11	2.0	5.7		5.00	14 J
1330-20-7	m,p-Xylene	1	03-Feb-11	0.20	0.78		0.88	3.4
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	1.1		0.83	4.5
95-47-6	o-Xylene	1	03-Feb-11	0.20	0.26		0.88	1.1
100-42-5	Styrene	1	03-Feb-11	0.20	ND		0.87	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	9.2		0.77	35
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.20	ND		1.10	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.21		1.10	1.2
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	TIC: Butane, 2-methyl-	1	03-Feb-11	0	2.8		0.00	0
	TIC: Cyclopropanecarboxamide	1	03-Feb-11	0	2.6		0.00	0
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~34~~		~~0.00~~	~~0~~ GCMS artifacts
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~29~~		~~0.00~~	~~0~~
	TIC: unknown	1	03-Feb-11	0	3.3		0.00	0
	TIC: unknown hydrocarbon (4.476)	1	03-Feb-11	0	3.5		0.00	0
	TIC: unknown hydrocarbon (4.611)	1	03-Feb-11	0	6.4		0.00	0

ppbv

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11

2/3/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-010A

Client Sample ID 828131A-IA0401
Collection Date: 1/19/2011
Tag # 297/3959
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	02-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	02-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	02-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	02-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	02-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	02-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	02-Feb-11	0.30	ND		1.50	ND
106-93-4	1,2-Dibromoethane	1	02-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	02-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	02-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	02-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	02-Feb-11	0.20	ND		1.00	ND
106-99-0	1,3-Butadiene	1	02-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND J
123-91-1	1,4-Dioxane	1	02-Feb-11	0.40	ND		1.50	ND
78-93-3	2-Butanone (MEK)	1	02-Feb-11	0.20	0.54		0.60	1.6
591-78-6	2-Hexanone (*)	1	02-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	02-Feb-11	0.20	0.21		1.00	1.0
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	02-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	02-Feb-11	2.0	4.4		4.80	11 J
71-43-2	Benzene	1	02-Feb-11	0.20	0.38		0.65	1.2
100-44-7	Benzyl chloride	1	02-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	02-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	02-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	02-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	02-Feb-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	02-Feb-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	02-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	02-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	02-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	02-Feb-11	0.20	0.56		0.42	1.2
156-59-2	cis-1,2-Dichloroethene	1	02-Feb-11	0.20	0.32		0.81	1.3

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11

3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-010A

Client Sample ID 828131A-IA0401
Collection Date: 1/19/2011
Tag # 297/3959
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	02-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	02-Feb-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	02-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	02-Feb-11	0.20	0.43		1.00	2.2
100-41-4	Ethyl benzene	1	02-Feb-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	02-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	02-Feb-11	0.20	ND		0.72	ND
67-63-0	Isopropanol	1	02-Feb-11	2.0	9.1		5.00	23 J ✓
1330-20-7	m,p-Xylene	1	02-Feb-11	0.60	ND		2.60	ND
1634-04-4	Methyl tert-butyl ether (MTBE)	1	02-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	02-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	02-Feb-11	0.20	ND		0.83	ND
95-47-6	o-Xylene	1	02-Feb-11	0.20	ND		0.88	ND
100-42-5	Styrene	1	02-Feb-11	0.30	ND		1.30	ND
127-18-4	Tetrachloroethene	1	02-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	02-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	02-Feb-11	0.20	0.66		0.77	2.5
156-60-5	trans-1,2-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	02-Feb-11	0.20	ND		0.92	ND J ✓
79-01-6	Trichloroethene	1	02-Feb-11	0.040	ND		0.22	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	02-Feb-11	0.20	0.22		1.10	1.3
108-05-4	Vinyl acetate	1	02-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	02-Feb-11	0.20	ND		0.52	ND
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~02-Feb-11~~	~~0~~	~~26~~		~~0.00~~	~~0~~ GC/MS
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~02-Feb-11~~	~~0~~	~~11~~		~~0.00~~	~~0~~ artifact

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11 2/3/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-011A

Client Sample ID 828131A-SS0501
Collection Date: 1/19/2011
Tag # 279/2666
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.20	ND		1.00	ND
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	ND		1.00	ND
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.20	ND		0.73	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	0.91		0.60	2.7
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	03-Feb-11	2.0	100		4.80	240 J
71-43-2	Benzene	1	03-Feb-11	0.20	ND		0.65	ND
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	0.60		0.63	1.9
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.20	ND		1.30	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	1.5		0.99	7.4
74-87-3	Chloromethane	1	03-Feb-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11

2/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-011A

Client Sample ID 828131A-SS0501
Collection Date: 1/19/2011
Tag # 279/2666
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.50		1.00	2.5
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	0.36		0.72	1.3
67-63-0	Isopropanol	1	03-Feb-11	2.0	2.1		5.00	5.2 J
1330-20-7	m,p-Xylene	1	03-Feb-11	0.20	0.72		0.88	3.2
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	ND		0.83	ND
95-47-6	o-Xylene	1	03-Feb-11	0.20	0.29		0.88	1.3
100-42-5	Styrene	1	03-Feb-11	0.20	ND		0.87	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	11		0.77	44
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.20	ND		1.10	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.23		1.10	1.3
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND

NOTES:
TICS: No compounds were detected.

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

2/3/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1I01003-012A

Client Sample ID 828131A-IA0501
Collection Date: 1/19/2011
Tag # 306/2712
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.30	ND		1.50	ND
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	0.25		1.00	1.2
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.40	ND		1.50	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	1.0		0.60	3.1
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	03-Feb-11	2.0	3.7		4.80	8.9 U
71-43-2	Benzene	1	03-Feb-11	0.20	0.34		0.65	1.1
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	0.58		0.42	1.2
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-012A

Client Sample ID 828131A-IA0501
Collection Date: 1/19/2011
Tag # 306/2712
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.48		1.00	2.4
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	0.21		0.72	0.75
67-63-0	Isopropanol	1	03-Feb-11	2.0	2	J	5.00	4 J
1330-20-7	m,p-Xylene	1	03-Feb-11	0.60	ND		2.60	ND
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	ND		0.83	ND
95-47-6	o-Xylene	1	03-Feb-11	0.20	ND		0.88	ND
100-42-5	Styrene	1	03-Feb-11	0.30	ND		1.30	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	0.57		0.77	2.2
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.040	ND		0.22	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.22		1.10	1.3
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~26~~		~~0.00~~	~~0~~ GC/MS
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~14~~		~~0.00~~	~~0~~ artifacts
	TIC: Ethyl alcohol	1	03-Feb-11	0	3.2 ppbV		0.00	0

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11 gr 3/1/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-013A

Client Sample ID 828131A-SS06A01
Collection Date: 1/19/2011
Tag # 245/2659
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.20	0.44		1.00	2.2
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	0.73		1.00	3.6
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.20	ND		0.73	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	0.67		0.60	2.0
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	0.33		1.00	1.6
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	03-Feb-11	2.0	44		4.80	110 J
71-43-2	Benzene	1	03-Feb-11	0.20	0.73		0.65	2.4
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	0.57		0.63	1.8
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.20	ND		1.30	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

3/12/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-013A

Client Sample ID 828131A-SS06A01
Collection Date: 1/19/2011
Tag # 245/2659
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	1.2		0.70	4.0
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.50		1.00	2.5
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	0.23		0.88	1.0
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	1.3		0.72	4.7
67-63-0	Isopropanol	1	03-Feb-11	2.0	ND		5.00	ND
1330-20-7	m,p-Xylene	1	03-Feb-11	0.20	2.2		0.88	9.6
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	1.4		0.83	5.9
95-47-6	o-Xylene	1	03-Feb-11	0.20	0.55		0.88	2.4
100-42-5	Styrene	1	03-Feb-11	0.20	ND		0.87	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	0.25		1.40	1.7
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	6.8		0.77	26
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.20	ND		1.10	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.22		1.10	1.3
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	TIC: Butane, 2-methyl-	1	03-Feb-11	0	3.6		0.00	0
	TIC: Cyclohexane, methyl-	1	03-Feb-11	0	4.2		0.00	0
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~26~~		~~0.00~~	~~0~~ GC/MS artifacts
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~8.5~~		~~0.00~~	~~0~~
	TIC: Octane	1	03-Feb-11	0	2.1		0.00	0
	TIC: Propane	1	03-Feb-11	0	3.2		0.00	0
	TIC: unknown hydrocarbon (4.473)	1	03-Feb-11	0	3.9		0.00	0
	TIC: unknown hydrocarbon (4.617)	1	03-Feb-11	0	4.2		0.00	0
	TIC: unknown hydrocarbon (5.933)	1	03-Feb-11	0	2.3		0.00	0

ppbv

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

2/3/2011

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-014A

Client Sample ID 828131A-IA06A01
Collection Date: 1/19/2011
Tag # 309/2715
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	02-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	02-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	02-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	02-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	02-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	02-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	02-Feb-11	0.30	ND		1.50	ND
106-93-4	1,2-Dibromoethane	1	02-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	02-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	02-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	02-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	02-Feb-11	0.20	ND		1.00	ND
106-99-0	1,3-Butadiene	1	02-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	02-Feb-11	0.20	ND		1.20	ND J ✓
123-91-1	1,4-Dioxane	1	02-Feb-11	0.40	ND		1.50	ND
78-93-3	2-Butanone (MEK)	1	02-Feb-11	0.20	1.8		0.60	5.5
591-78-6	2-Hexanone (*)	1	02-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	02-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	02-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	02-Feb-11	2.0	55		4.80	130 J
71-43-2	Benzene	1	02-Feb-11	0.20	0.34		0.65	1.1 ✓
100-44-7	Benzyl chloride	1	02-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	02-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	02-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	02-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	02-Feb-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	02-Feb-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	02-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	02-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	02-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	02-Feb-11	0.20	0.57		0.42	1.2
156-59-2	cis-1,2-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Deteeted at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLD

Date: 2/4/11

2/3/2011

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-014A

Client Sample ID 828131A-IA06A01
Collection Date: 1/19/2011
Tag # 309/2715
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	02-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	02-Feb-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	02-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	02-Feb-11	0.20	0.49		1.00	2.5
100-41-4	Ethyl benzene	1	02-Feb-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	02-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	02-Feb-11	0.20	ND		0.72	ND
67-63-0	Isopropanol	1	02-Feb-11	2.0	5.5		5.00	14 J ✓
1330-20-7	m,p-Xylene	1	02-Feb-11	0.60	ND		2.60	ND
1634-04-4	Methyl tert-butyl ether (MTBE)	1	02-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	02-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	02-Feb-11	0.20	ND		0.83	ND
95-47-6	o-Xylene	1	02-Feb-11	0.20	0.22		0.88	0.97
100-42-5	Styrene	1	02-Feb-11	0.30	ND		1.30	ND
127-18-4	Tetrachloroethene	1	02-Feb-11	0.20	0.39		1.40	2.7
109-99-9	Tetrahydrofuran (*)	1	02-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	02-Feb-11	0.20	0.53		0.77	2.0
156-60-5	trans-1,2-Dichloroethene	1	02-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	02-Feb-11	0.20	ND		0.92	ND J ✓
79-01-6	Trichloroethene	1	02-Feb-11	0.040	ND		0.22	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	02-Feb-11	0.20	0.23		1.10	1.3
108-05-4	Vinyl acetate	1	02-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	02-Feb-11	0.20	ND		0.52	ND
	~~TIC: Cyclotetrasiloxane, octamethyl~~	~~1~~	~~02-Feb-11~~	~~0~~	~~18~~		~~0.00~~	~~0~~ } GCMS artifacts
	~~TIC: Cyclotrisiloxane, hexamethyl~~	~~1~~	~~02-Feb-11~~	~~0~~	~~6.4~~		~~0.00~~	~~0~~
	~~TIC: Disiloxane, hexamethyl~~	~~1~~	~~02-Feb-11~~	~~0~~	~~14~~		~~0.00~~	~~0~~
	~~TIC: unknown~~	~~1~~	~~02-Feb-11~~	~~0~~	~~3.0~~	~~B~~	~~0.00~~	~~0~~ Blank contaminant

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-015A

Client Sample ID 828131A-SS06B01
Collection Date: 1/19/2011
Tag # 324/2674
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	0.28		1.10	1.6
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.20	1.2		1.00	5.9
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	2.3		1.00	11
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.20	ND		0.73	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	1.2		0.60	3.6
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	1.0		1.00	5.0
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	03-Feb-11	2.0	64		4.80	150 J
71-43-2	Benzene	1	03-Feb-11	0.20	0.99		0.65	3.2
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	0.82		0.63	2.6
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.20	ND		1.30	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	5.1		0.99	25
74-87-3	Chloromethane	1	03-Feb-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11

JR 3/24/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-015A

Client Sample ID 828131A-SS06B01
Collection Date: 1/19/2011
Tag # 324/2674
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	2.4		0.70	8.5
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	1.9		1.00	9.8
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	0.53		0.88	2.3
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	3.3		0.72	12
67-63-0	Isopropanol	1	03-Feb-11	2.0	6.0		5.00	15 J
1330-20-7	m,p-Xylene	1	03-Feb-11	0.20	4.3		0.88	19
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	4.2		0.83	17
95-47-6	o-Xylene	1	03-Feb-11	0.20	1.3		0.88	5.9
100-42-5	Styrene	1	03-Feb-11	0.20	ND		0.87	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	0.28		1.40	1.9
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	9.3		0.77	35
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.20	ND		1.10	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.23		1.10	1.3
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	TIC: Butane	1	03-Feb-11	0	7.1		0.00	0
	TIC: Butane, 2-methyl-	1	03-Feb-11	0	5.5		0.00	0
	TIC: Cyclohexane, methyl-	1	03-Feb-11	0	8.8		0.00	0
	TIC: Cyclohexanol	1	03-Feb-11	0	9.6		0.00	0
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~11~~		~~0.00~~	~~0~~ GC/MS artifact
	TIC: Isobutane	1	03-Feb-11	0	5.2		0.00	0
	TIC: Nonane	1	03-Feb-11	0	8.2		0.00	0
	TIC: Octane	1	03-Feb-11	0	5.6		0.00	0
	TIC: unknown	1	03-Feb-11	0	8.4		0.00	0

ppbv

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

2/3/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-016A

Client Sample ID 828131A-IA06B01
Collection Date: 1/19/2011
Tag # 284/2664
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.30	ND		1.50	ND
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	ND		1.00	ND
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.40	ND		1.50	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	1.9		0.60	5.6
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	03-Feb-11	2.0	70		4.80	170 J
71-43-2	Benzene	1	03-Feb-11	0.20	0.41		0.65	1.3
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.040	0.90		0.26	5.8
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	0.65		0.42	1.4
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

3/24/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-016A

Client Sample ID 828131A-IA06B01
Collection Date: 1/19/2011
Tag # 284/2664
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.52		1.00	2.6
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	0.32		0.72	1.1
67-63-0	Isopropanol	1	03-Feb-11	2.0	7.6		5.00	19 J ✓
1330-20-7	m,p-Xylene	1	03-Feb-11	0.60	ND		2.60	ND
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	0.75		0.83	3.1
95-47-6	o-Xylene	1	03-Feb-11	0.20	0.29		0.88	1.3
100-42-5	Styrene	1	03-Feb-11	0.30	0.87		1.30	3.8
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	0.30		1.40	2.1
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	0.85		0.77	3.3
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.040	ND		0.22	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.25		1.10	1.4
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	TIC: 1R-.alpha.-Pinene	1	03-Feb-11	0	3.0		0.00	0
	TIC: Butane, 2-methyl-	1	03-Feb-11	0	2.2		0.00	0
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~4.8~~		~~0.00~~	~~0~~
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~4.3~~		~~0.00~~	~~0~~ GCMS
	~~TIC: Disiloxane, hexamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~14~~		~~0.00~~	~~0~~ artifacts
	TIC: Hexanal	1	03-Feb-11	0	5.6		0.00	0
	TIC: unknown (11.713)	1	03-Feb-11	0	2.5		0.00	0
	TIC: unknown (5.508)	1	03-Feb-11	0	2.9		0.00	0

ppbV

Qualifiers:

(*)	Certification not offered by NYS for tbis compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KP **Date:** 2/4/11

2/3/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-017A

Client Sample ID 828131A-SS0701
Collection Date: 1/19/2011
Tag # 277/2657
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.20	ND		1.00	ND
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	ND		1.00	ND
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.20	ND		0.73	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	0.91		0.60	2.7
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	03-Feb-11	2.0	74		4.80	180 J
71-43-2	Benzene	1	03-Feb-11	0.20	0.95		0.65	3.1
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	3.2		0.63	10
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.20	ND		1.30	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	2.1		0.42	4.4
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*) Certification not offered by NYS for this compound	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
Q Outlying QC recoveries were associated with this analyte	S Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

gr 3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-017A

Client Sample ID 828131A-SS0701
Collection Date: 1/19/2011
Tag # 277/2657
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	3.4		0.70	12
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.46		1.00	2.3
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	2.2		0.72	7.8
67-63-0	Isopropanol	1	03-Feb-11	2.0	ND		5.00	ND
1330-20-7	m,p-Xylene	1	03-Feb-11	0.20	ND		0.88	ND
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	0.29		0.83	1.2
95-47-6	o-Xylene	1	03-Feb-11	0.20	ND		0.88	ND
100-42-5	Styrene	1	03-Feb-11	0.20	ND		0.87	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	0.60		0.77	2.3
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.20	ND		1.10	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.20		1.10	1.1
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	0.55		0.52	1.4
	TIC: Butane, 2-methyl-	1	03-Feb-11	0	26		0.00	0
	TIC: Cyclopentane	1	03-Feb-11	0	3.2		0.00	0
	TIC: Cyclopentane, methyl-	1	03-Feb-11	0	5.8		0.00	0
	TIC: Isobutane	1	03-Feb-11	0	40		0.00	0
	TIC: Pentane, 2-methyl-	1	03-Feb-11	0	5.9		0.00	0
	TIC: Propane	1	03-Feb-11	0	36		0.00	0
	TIC: unknown	1	03-Feb-11	0	2.7		0.00	0
	TIC: unknown hydrocarbon	1	03-Feb-11	0	1.2		0.00	0

ppbv

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

8/31/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-018A

Client Sample ID 828131A-IA0701
Collection Date: 1/19/2011
Tag # 332/3956
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.30	ND		1.50	ND
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	0.29		0.82	1.2
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	ND		1.00	ND
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.40	ND		1.50	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	0.65		0.60	1.9
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	03-Feb-11	2.0	10		4.80	24 J
71-43-2	Benzene	1	03-Feb-11	0.20	0.43		0.65	1.4
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11

8/31/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-018A

Client Sample ID 828131A-IA0701
Collection Date: 1/19/2011
Tag # 332/3956
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.48		1.00	2.4
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	ND		0.72	ND
67-63-0	Isopropanol	1	03-Feb-11	2.0	4.4		5.00	11 J
1330-20-7	m,p-Xylene	1	03-Feb-11	0.60	ND		2.60	ND
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	ND		0.83	ND
95-47-6	o-Xylene	1	03-Feb-11	0.20	ND		0.88	ND
100-42-5	Styrene	1	03-Feb-11	0.30	ND		1.30	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	0.91		0.77	3.5
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.040	ND		0.22	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.24		1.10	1.4
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	TIC: Butane	1	03-Feb-11	0	5.4		0.00	0
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~17~~		~~0.00~~	~~0~~
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~14~~		~~0.00~~	~~0~~
	TIC: Ethyl alcohol	1	03-Feb-11	0	19		0.00	0
	TIC: Isobutane	1	03-Feb-11	0	200		0.00	0
	TIC: Propane	1	03-Feb-11	0	21		0.00	0

ppbV

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

2/3/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-019A

Client Sample ID 828131A-SS0801
Collection Date: 1/20/2011
Tag # 321/2665
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.20	0.23		1.00	1.1
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	0.49		1.00	2.4
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.20	ND		0.73	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	1.2		0.60	3.6
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	0.24		1.00	1.2
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	03-Feb-11	2.0	52		4.80	120 J
71-43-2	Benzene	1	03-Feb-11	0.20	0.26		0.65	0.84
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	0.58		0.63	1.8
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.20	ND		1.30	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11

gr 3/24/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-019A

Client Sample ID 828131A-SS0801
Collection Date: 1/20/2011
Tag # 321/2665
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	0.34		0.70	1.2
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.45		1.00	2.3
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	0.58		0.72	2.1
67-63-0	Isopropanol	1	03-Feb-11	2.0	5.8		5.00	14 J
1330-20-7	m,p-Xylene	1	03-Feb-11	0.20	0.94		0.88	4.1
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	0.69		0.83	2.9
95-47-6	o-Xylene	1	03-Feb-11	0.20	0.30		0.88	1.3
100-42-5	Styrene	1	03-Feb-11	0.20	ND		0.87	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	4.9		0.77	19
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.20	ND		1.10	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.43		1.10	2.5
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	TIC: Butane, 2-methyl-	1	03-Feb-11	0	1.2		0.00	0
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~52~~		~~0.00~~	~~0~~
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~49~~		~~0.00~~	~~0~~
	TIC: unknown (14.093)	1	03-Feb-11	0	10		0.00	0
	TIC: unknown (6.99)	1	03-Feb-11	0	1.2		0.00	0
	TIC: unknown hydrocarbon (10.935)	1	03-Feb-11	0	1.1		0.00	0
	TIC: unknown hydrocarbon (4.473)	1	03-Feb-11	0	1.8		0.00	0
	TIC: unknown hydrocarbon (4.614)	1	03-Feb-11	0	1.8		0.00	0

ppbV

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-020A

Client Sample ID 828131A-IA0801
Collection Date: 1/20/2011
Tag # 316/2662
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.30	ND		1.50	ND
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	ND		1.00	ND
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.40	ND		1.50	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	2.0		0.60	6.0
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	5	03-Feb-11	10	69		24.00	170 J
71-43-2	Benzene	1	03-Feb-11	0.20	0.79		0.65	2.6
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.040	0.080		0.26	0.51
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	0.76		0.42	1.6
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-020A

Client Sample ID 828131A-IA0801
Collection Date: 1/20/2011
Tag # 316/2662
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.46		1.00	2.3
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	ND		0.72	ND
67-63-0	Isopropanol	5	03-Feb-11	10	260		25.00	660 J
1330-20-7	m,p-Xylene	1	03-Feb-11	0.60	ND		2.60	ND
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	ND		0.83	ND
95-47-6	o-Xylene	1	03-Feb-11	0.20	ND		0.88	ND
100-42-5	Styrene	1	03-Feb-11	0.30	ND		1.30	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	0.76		0.77	2.9
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.040	ND		0.22	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.64		1.10	3.7
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~22~~		~~0.00~~	~~0~~
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~11~~		~~0.00~~	~~0~~
	TIC: Ethyl alcohol	1	03-Feb-11	0	83		0.00	0
	TIC: Isobutane	1	03-Feb-11	0	180		0.00	0
	TIC: Propane	1	03-Feb-11	0	13		0.00	0
	TIC: unknown	1	03-Feb-11	0	34		0.00	0
	TIC: unknown hydrocarbon (13.414)	1	03-Feb-11	0	6.5		0.00	0
	TIC: unknown hydrocarbon (13.627)	1	03-Feb-11	0	8.4		0.00	0
	TIC: unknown hydrocarbon (14.62)	1	03-Feb-11	0	6.7		0.00	0

GC/MS artifacts

ppbv

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11

JM 3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-021A

Client Sample ID 828131A-SS0901
Collection Date: 1/20/2011
Tag # 312/2677
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND J
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.20	0.22		1.00	1.1
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	0.53		1.00	2.6
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.20	ND		0.73	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	1.2		0.60	3.6
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	0.32		1.00	1.6
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	03-Feb-11	2.0	97		4.80	230
71-43-2	Benzene	1	03-Feb-11	0.20	0.52		0.65	1.7
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	1.1		0.63	3.4
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.20	ND		1.30	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	5	04-Feb-11	1.0	180		4.00	720

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-021A

Client Sample ID 828131A-SS0901
Collection Date: 1/20/2011
Tag # 312/2677
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result	
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND	J
110-82-7	Cyclohexane	1	03-Feb-11	0.20	0.49		0.70	1.7	
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND	
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.49		1.00	2.5	
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	0.33		0.88	1.5	
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND	
110-54-3	Hexane	1	03-Feb-11	0.20	0.97		0.72	3.5	
67-63-0	Isopropanol	1	03-Feb-11	2.0	5.9		5.00	15	
1330-20-7	m,p-Xylene	1	03-Feb-11	0.20	1.4		0.88	6.0	
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND	
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND	
142-82-5	n-Heptane	1	03-Feb-11	0.20	1.1		0.83	4.7	
95-47-6	o-Xylene	1	03-Feb-11	0.20	0.36		0.88	1.6	
100-42-5	Styrene	1	03-Feb-11	0.20	0.20		0.87	0.87	
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	94		1.40	650	
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND	
108-88-3	Toluene	1	03-Feb-11	0.20	12		0.77	46	
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	1.7		0.81	6.9	
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND	
79-01-6	Trichloroethene	5	04-Feb-11	1.0	73		5.50	400	
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.23		1.10	1.3	J
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND	
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	0.70		0.52	1.8	
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~18~~		~~0.00~~	~~0~~	Siloxane artifact
	TIC: Propane	1	03-Feb-11	0	2.8		0.00	0	
	TIC: unknown	1	03-Feb-11	0	3.7		0.00	0	
	TIC: unknown hydrocarbon	1	03-Feb-11	0	3.2		0.00	0	

ppbV

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-022A

Client Sample ID 828131A-IA0901
Collection Date: 1/20/2011
Tag # 240/2620
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.30	ND		1.50	ND
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	ND		1.00	ND
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.40	ND		1.50	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	0.38		0.60	1.1
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	03-Feb-11	2.0	4.6		4.80	11 U
71-43-2	Benzene	1	03-Feb-11	0.20	0.26		0.65	0.84
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	0.64		0.42	1.3
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	0.41		0.81	1.7

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

JF 3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-022A

Client Sample ID 828131A-IA0901
Collection Date: 1/20/2011
Tag # 240/2620
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.49		1.00	2.5
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	ND		0.72	ND
67-63-0	Isopropanol	1	03-Feb-11	2.0	26		5.00	65 J ✓
1330-20-7	m,p-Xylene	1	03-Feb-11	0.60	ND		2.60	ND
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	ND		0.83	ND
95-47-6	o-Xylene	1	03-Feb-11	0.20	ND		0.88	ND
100-42-5	Styrene	1	03-Feb-11	0.30	ND		1.30	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	0.51		0.77	2.0
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.040	0.17		0.22	0.93
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	ND		1.10	ND
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~14~~		~~0.00~~	~~0~~ GC/MS artifacts
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~7.2~~		~~0.00~~	~~0~~
	TIC: Ethyl alcohol	1	03-Feb-11	0	7.3		0.00	0
	TIC: unknown hydrocarbon	1	03-Feb-11	0	4.5		0.00	0

ppbV

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

2/3/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-023A

Client Sample ID 828131A-SS1001
Collection Date: 1/20/2011
Tag # 328/2709
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.20	0.32		1.00	1.6
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	0.67		1.00	3.3
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.20	ND		0.73	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	4.3		0.60	13
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	0.70		1.00	3.5
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	5	03-Feb-11	10	67		24.00	160 J
71-43-2	Benzene	1	03-Feb-11	0.20	1.8		0.65	5.7
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	11		0.63	36
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.20	ND		1.30	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

2/3/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-023A

Client Sample ID 828131A-SS1001
Collection Date: 1/20/2011
Tag # 328/2709
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	2.4		0.70	8.6
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.49		1.00	2.5
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	1.7		0.88	7.4
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	3.8		0.72	13
67-63-0	Isopropanol	1	03-Feb-11	2.0	3.4		5.00	8.4 J
1330-20-7	m,p-Xylene	1	03-Feb-11	0.20	5.5		0.88	24
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	4.8		0.83	20
95-47-6	o-Xylene	1	03-Feb-11	0.20	1.3		0.88	5.7
100-42-5	Styrene	1	03-Feb-11	0.20	2.0		0.87	8.9
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	0.55		1.40	3.8
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	5	03-Feb-11	1.0	94		3.80	360
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.20	ND		1.10	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.22		1.10	1.3
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	TIC: 1-Pentene	1	03-Feb-11	0	8.4		0.00	0
	TIC: Cyclohexane, methyl-	1	03-Feb-11	0	9.4		0.00	0
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~29~~		~~0.00~~	~~0~~ GC/MS
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~33~~		~~0.00~~	~~0~~ artifact
	TIC: Decane, 2,2,8-trimethyl-	1	03-Feb-11	0	24		0.00	0
	TIC: unknown hydrocarbon (13.447)	1	03-Feb-11	0	47		0.00	0
	TIC: unknown hydrocarbon (13.63)	1	03-Feb-11	0	11		0.00	0
	TIC: unknown hydrocarbon (4.614)	1	03-Feb-11	0	15		0.00	0
	TIC: unknown hydrocarbon (5.598)	1	03-Feb-11	0	7.8		0.00	0

ppbv

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

JR 3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-024A

Client Sample ID 828131A-IA1001
Collection Date: 1/20/2011
Tag # 295/2710
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.49		1.00	2.5
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	0.24		0.72	0.86
67-63-0	Isopropanol	1	03-Feb-11	2.0	14		5.00	35 J
1330-20-7	m,p-Xylene	1	03-Feb-11	0.60	ND		2.60	ND
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	0.35		0.71	1.2
142-82-5	n-Heptane	1	03-Feb-11	0.20	0.21		0.83	0.87
95-47-6	o-Xylene	1	03-Feb-11	0.20	ND		0.88	ND
100-42-5	Styrene	1	03-Feb-11	0.30	ND		1.30	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	0.69		0.77	2.6
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.040	ND		0.22	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.24		1.10	1.4
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~28~~		~~0.00~~	~~0~~ GC/MS
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~14~~		~~0.00~~	~~0~~ artifacts
	TIC: Ethyl alcohol	1	03-Feb-11	0	67		0.00	0
	TIC: unknown	1	03-Feb-11	0	9.3		0.00	0

ppbv ✓

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

2/3/2011

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

0 per COC.

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-025A

Client Sample ID 828131A-AA6301
Collection Date: 1/20/2011
Tag # 320
Matrix AIR

JF 3/2/11

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.30	ND		1.50	ND
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	ND		1.00	ND
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.40	ND		1.50	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	1.2		0.60	3.5
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	03-Feb-11	2.0	5.1		4.80	12 U
71-43-2	Benzene	1	03-Feb-11	0.20	ND		0.65	ND
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	0.57		0.42	1.2
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLD **Date:** 2/4/11

JF 3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

0 per COC

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-025A

Client Sample ID 828131A-AA6301
Collection Date: 1/20/2011
Tag # 320
Matrix AIR

gr 3/2/11

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.49		1.00	2.5
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	ND		0.72	ND
67-63-0	Isopropanol	1	03-Feb-11	2.0	4.4		5.00	11 J
1330-20-7	m,p-Xylene	1	03-Feb-11	0.60	ND		2.60	ND
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	ND		0.83	ND
95-47-6	o-Xylene	1	03-Feb-11	0.20	ND		0.88	ND
100-42-5	Styrene	1	03-Feb-11	0.30	ND		1.30	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	0.52		0.60	1.6
108-88-3	Toluene	1	03-Feb-11	0.20	0.21		0.77	0.80
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.040	ND		0.22	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.23		1.10	1.3
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~1.5~~		~~0.00~~	~~0~~ GC/MS
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~3.1~~		~~0.00~~	~~0~~ artifacts
	TIC: unknown hydrocarbon	1	03-Feb-11	0	2.6		0.00	0

ppbV

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/4/11

gr 3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-026A

Client Sample ID 828131A-AA0201
Collection Date: 1/19/2011
Tag # 329
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.30	ND		1.50	ND
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	ND		1.00	ND
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.40	ND		1.50	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	0.52		0.60	1.6
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	03-Feb-11	2.0	7.2		4.80	17 J
71-43-2	Benzene	1	03-Feb-11	0.20	0.33		0.65	1.1
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	0.61		0.42	1.3
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

3/2/11

Enalytic,LLC

Analytical Report

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-026A

Client Sample ID 828131A-AA0201
Collection Date: 1/19/2011
Tag # 329
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.49		1.00	2.5
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	ND		0.72	ND
67-63-0	Isopropanol	1	03-Feb-11	2.0	3.4		5.00	8.4 J
1330-20-7	m,p-Xylene	1	03-Feb-11	0.60	ND		2.60	ND
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	ND		0.83	ND
95-47-6	o-Xylene	1	03-Feb-11	0.20	ND		0.88	ND
100-42-5	Styrene	1	03-Feb-11	0.30	ND		1.30	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	03-Feb-11	0.20	0.41		0.77	1.6
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.040	ND		0.22	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	ND		1.10	ND
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	~~TIC: Cyclotetrasiloxane, octamethyl~~	~~1~~	~~03-Feb-11~~	~~0~~	~~76~~		~~0.00~~	~~0~~ GC(MS)
	~~TIC: Cycletrisiloxane, hexamethyl~~	~~1~~	~~03-Feb-11~~	~~0~~	~~36~~		~~0.00~~	~~0~~ artifacts
	TIC: unknown	1	03-Feb-11	0	10		~~0.00~~	~~0~~

ppbV

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 2/4/11

JR 3/2/11

Enalytic,LLC

Reissued from 1 for

Analytical Report

Date 04-Feb-11 AA0301; sample ID

CLIENT MACTEC Engineering and Consulting, I

Locatio Off-Site Carriage Cleaners

Project: 3612102168

Lab ID E1101003-025A

Client Sample ID 828131A-AA0301 corrected

Collection Date: 1/20/2011

Tag # 320

Matrix AIR

JR 3/2/11

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	03-Feb-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	03-Feb-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	03-Feb-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	03-Feb-11	0.20	ND		1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	03-Feb-11	0.30	ND		1.50	ND
106-93-4	1,2-Dibromoethane	1	03-Feb-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	03-Feb-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	03-Feb-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	03-Feb-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	03-Feb-11	0.20	ND		1.00	ND
106-99-0	1,3-Butadiene	1	03-Feb-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	03-Feb-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	03-Feb-11	0.40	ND		1.50	ND
78-93-3	2-Butanone (MEK)	1	03-Feb-11	0.20	1.2		0.60	3.5
591-78-6	2-Hexanone (*)	1	03-Feb-11	0.20	ND		0.83	ND
622-96-8	4-Ethyltoluene (*)	1	03-Feb-11	0.20	ND		1.00	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	03-Feb-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	03-Feb-11	2.0	5.1		4.80	12 U
71-43-2	Benzene	1	03-Feb-11	0.20	ND		0.65	ND
100-44-7	Benzyl chloride	1	03-Feb-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	03-Feb-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	03-Feb-11	0.20	ND		2.10	ND
74-83-9	Bromomethane	1	03-Feb-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	03-Feb-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	03-Feb-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	03-Feb-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	03-Feb-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	03-Feb-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	03-Feb-11	0.20	0.57		0.42	1.2
156-59-2	cis-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/23/11 JR 3/2/11

Enalytic,LLC

Analytical Report

Revised Form 1 for AA 0301; sample ID corrected

Date *04-Feb-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1101003-025A

Client Sample ID 828131A-AA0301
Collection Date: 1/20/2011 JN 3/2/11
Tag # 320
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	03-Feb-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	03-Feb-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	03-Feb-11	0.20	0.49		1.00	2.5
100-41-4	Ethyl benzene	1	03-Feb-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	03-Feb-11	0.20	ND		2.20	ND
110-54-3	Hexane	1	03-Feb-11	0.20	ND		0.72	ND
67-63-0	Isopropanol	1	03-Feb-11	2.0	4.4		5.00	11 J
1330-20-7	m,p-Xylene	1	03-Feb-11	0.60	ND		2.60	ND
1634-04-4	Methyl tert-butyl ether (MTBE)	1	03-Feb-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	03-Feb-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	03-Feb-11	0.20	ND		0.83	ND
95-47-6	o-Xylene	1	03-Feb-11	0.20	ND		0.88	ND
100-42-5	Styrene	1	03-Feb-11	0.30	ND		1.30	ND
127-18-4	Tetrachloroethene	1	03-Feb-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	03-Feb-11	0.20	0.52		0.60	1.6
108-88-3	Toluene	1	03-Feb-11	0.20	0.21		0.77	0.80
156-60-5	trans-1,2-Dichloroethene	1	03-Feb-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	03-Feb-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	03-Feb-11	0.040	ND		0.22	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	03-Feb-11	0.20	0.23		1.10	1.3
108-05-4	Vinyl acetate	1	03-Feb-11	0.20	ND		0.72	ND
75-01-4	Vinyl chloride	1	03-Feb-11	0.20	ND		0.52	ND
	~~Surr: Bromofluorobenzene~~	~~1~~	~~03-Feb-11~~	~~65-135~~	~~94.1~~		~~0.00~~	~~0~~ surrogate
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~15~~		~~0.00~~	~~0~~ GC/MS
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~03-Feb-11~~	~~0~~	~~3.1~~		~~0.00~~	~~0~~ artifacts
	TIC: unknown hydrocarbon	1	03-Feb-11	0	2.6		0.00	0

ppbV

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 2/23/11

JN 3/2/11

Air Toxics LTD.
Laboratory Services Since 1989

Reissued results
3/22/11

Client Sample ID: 828131A-IA11A01

Lab ID#: 1102123R1-01A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**10021108sim**	**Date of Collection: 1/20/11 1:59:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/11/11 01:13 PM**	
		Date of Extraction: 2/11/11	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)	
1,1,1-Trichloroethane	0.10	0.080	Not Detected	Not Detected	
1,2-Dichloroethane	0.10	0.064	Not Detected	Not Detected	
1,4-Dichlorobenzene	0.10	0.097	Not Detected	Not Detected	J
2-Butanone (Methyl Ethyl Ketone)	0.10	0.063	0.65	0.41	
2-Propanol	0.20	0.19	3.9	3.7	
4-Methyl-2-pentanone	0.20	0.15	0.20	0.15	
Acetone	0.20	0.13	5.4	3.5	
Benzene	0.20	0.12	1.2	0.75	
Carbon Tetrachloride	0.10	0.074	0.55	0.41	
Chlorobenzene	0.10	0.073	Not Detected	Not Detected	
Chloroform	0.10	0.066	0.30	0.20	
Cyclohexane	0.10	0.092	0.29	0.27	
Ethanol	1.0	0.48	36	17	J
Ethyl Acetate	0.40	0.25	0.69	0.44	
Ethyl Benzene	0.10	0.073	0.22	0.16	
Heptane	0.10	0.085	0.75	0.64	
Hexane	0.10	0.075	0.66	0.50	
Methyl tert-butyl ether	0.10	0.076	Not Detected	Not Detected	
Naphthalene	0.10	0.20	Not Detected	~~Not Detected~~	R
Propylbenzene	0.10	0.087	Not Detected	Not Detected	
Styrene	0.10	0.081	0.16	0.13	J
Toluene	0.10	0.067	1.4	0.94	
Tetrachloroethene	0.10	0.084	Not Detected	Not Detected	
Trichloroethene	0.10	0.072	Not Detected	Not Detected	
m,p-Xylene	0.10	0.071	0.56	0.39	
o-Xylene	0.10	0.076	0.26	0.20	

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130

3/22/11

Air Toxics LTD.
Laboratory Services Since 1989

Reissued results 3/22/11

Client Sample ID: 828131A-IA1IB01

Lab ID#: 1102123R1-02A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**10021109sim**	**Date of Collection: 1/20/11 2:23:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/11/11 01:35 PM**	
		Date of Extraction: 2/11/11	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)	
1,1,1-Trichloroethane	0.10	0.080	Not Detected	Not Detected	
1,2-Dichloroethane	0.10	0.064	Not Detected	Not Detected	
1,4-Dichlorobenzene	0.10	0.097	Not Detected	Not Detected	J
2-Butanone (Methyl Ethyl Ketone)	0.10	0.063	0.83	0.52	
2-Propanol	0.20	0.19	18	17	
4-Methyl-2-pentanone	0.20	0.15	0.22	0.16	
Acetone	0.20	0.13	12	7.9	
Benzene	0.20	0.12	1.4	0.89	
Carbon Tetrachloride	0.10	0.074	0.66	0.48	
Chlorobenzene	0.10	0.073	Not Detected	Not Detected	
Chloroform	0.10	0.066	0.36	0.24	
Cyclohexane	0.10	0.092	0.48	0.44	
Ethanol	1.0	0.49	130	64	J
Ethyl Acetate	0.40	0.25	0.89	0.56	
Ethyl Benzene	0.10	0.073	0.30	0.22	
Heptane	0.10	0.085	2.2	1.9	
Hexane	0.10	0.075	0.71	0.53	
Methyl tert-butyl ether	0.10	0.076	Not Detected	Not Detected	
Naphthalene	0.10	0.20	Not Detected	~~Not Detected~~	R
Propylbenzene	0.10	0.087	0.11	0.095	
Styrene	0.10	0.081	0.37	0.30	J
Toluene	0.10	0.067	2.1	1.4	
Tetrachloroethene	0.10	0.084	Not Detected	Not Detected	
Trichloroethene	0.10	0.072	0.11	0.082	
m,p-Xylene	0.10	0.071	0.83	0.59	
o-Xylene	0.10	0.076	0.38	0.29	

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130

DN 3/22/11

DATA USABILITY SUMMARY REPORT
MARCH 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

1.0 INTRODUCTION

Air samples were collected at the Off-Site Carriage Cleaners Site (Site) in Penfield, New York, in March 2011 and submitted for off-site laboratory analysis. Samples were analyzed by Enalytic, LLC, located in East Syracuse, New York. Results were reported in the following Sample Delivery Group (SDG): E1103006.

A listing of samples included in this Data Usability Summary Report is presented in Table 1. A summary of the analytical results is presented in Table 2. A summary of sample results qualified during this review is presented in Table 3 (Summary of Validation Actions). Tentatively Identified Compounds (TICs) that were reported in samples are presented in Table 4. Samples were analyzed by the following method:

- Volatile organic compounds (VOCs) by USEPA Method TO-15

Deliverables for the off-site laboratory analyses included a Category B deliverable as defined in the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocols (NYSDEC, 2005).

A project chemist review was completed based on NYSDEC Division of Environmental Remediation guidance for Data Usability Summary Reports (NYSDEC, 2010). USEPA Region 2 QC limits were used during the data evaluation unless noted otherwise. The project chemist review included evaluations of sample collection, data package completeness, holding times, QC data (blanks, instrument calibrations, duplicates, surrogate recovery, and spike recovery), internal standard response, data transcription, electronic data reporting, calculations, and data qualification. The following laboratory or data validation qualifiers are used in the final data presentation.

U = target analyte is not detected at the reported detection limit
J = concentration is estimated
UJ = target analyte is not detected at the reported detection limit and is estimated

Results are interpreted to be usable as reported by the laboratory unless discussed in the following sections.

2.0 VOCS – METHOD TO-15

Blanks

Acetone (1.2 µg/m3) was reported in the method blank. An action level was calculated at ten times the blank concentration and then compared to sample results. Low level detections of acetone in samples 828131A-AA1202 and 828131A-AA1402 were below the action level and were qualified as non-detected (U). Qualified results are summarized in Table 3 with validation reason code BL1.

Initial Calibration

In the initial calibration associated with all samples (analyzed 03/28/2011) the percent relative standard deviations (RSDs) between relative response factors (RRFs) for a subset of target analytes were above the Region 2 control limit of 30:

Analyte	%RSD	Qualifier
1,2-Dichlorobenzene	34	UJ
1,3-Dichlorobenzene	32	UJ
1,4-Dichlorobenzene	30.4	J/UJ
Bromoform	30.3	UJ
Hexachlorobutadiene	49	UJ
Tetrachloroethene	45	J/UJ
Trichloroethene	39	J/UJ

Positive and non-detect results for the above listed analytes were qualified as estimated (J/UJ) in all samples. Qualified results are summarized in Table 3 with validation reason code ICVRSD.

Continuing Calibration

In the continuing calibration low concentration standard (run at the quantitation limit and called the CRQL standard) percent recoveries for a subset of target analytes were outside the laboratory control limits of 65-135. The following analytes were qualified:

Analyte	%R	Qualifier
1,1,1-Trichloroethane	140	J
1,3,5-Trimethylbenzene	140	J
1,4-Dichlorobenzene	160	J
4-Ethyltoluene	150	J
Benzene	140	J
Benzyl chloride	140	J
cis-1,2-Dichloroethene	190	J
Ethyl benzene	140	J
Isopropanol	260	J
Methylene chloride	140	J
n-Heptane	160	J
o-Xylene	160	J
Tetrachloroethene	220	J

Positive detections that were less than two times the reporting limit for the above analytes in one or more of the samples were qualified as estimated (J) and may be biased high. Qualified results are summarized in Table 3 with validation reason code QLS-H.

In the continuing calibration standard associated with all samples percent differences between the initial calibration average RRFs and continuing calibration RRFs for a subset of target analytes were outside the Region 2 control limit of 30. The following analytes were qualified:

Analyte	%D	Qualifier
1,1,2,2-Tetrachloroethane	35	UJ

1,2,4-Trimethylbenzene	37	J/UJ
1,3,5-Trimethylbenzene	39	J/UJ
1,4-Dioxane	33	UJ
2-Butanone	34	J/UJ
2-Hexanone	35	UJ
4-Ethyltoluene	35	J/UJ
4-Methyl-2-pentanone	37	J/UJ
Benzyl chloride	35	J/UJ
Hexachlorobutadiene	37	UJ
Vinyl acetate	36	UJ

Positive and non-detect results for the above listed analytes were qualified as estimated (J/UJ) in all samples. Qualified results are summarized in Table 3 with validation reason code CCV%D.

Laboratory Control Samples (LCS)

In the LCS associated with all samples percent recoveries for a subset of target analytes were below the Region 2 control limits of 70-130:

Analyte	%R	Qualifier
1,2,4-Trichlorobenzene	62	UJ
1,2,4-Trimethylbenzene	69	J/UJ
1,2-Dichlorobenzene	66	UJ
1,3,5-Trimethylbenzene	69	J/UJ
1,3-Dichlorobenzene	66	UJ
1,4-Dichlorobenzene	66	J/UJ
Hexachlorobutadiene	55	UJ

Positive and non-detect results for the above target analytes were qualified as estimated (J/UJ) in all samples. Qualified results are summarized in Table 3 with validation reason code LCS-L.

Internal Standards

The response for internal standard 1,4-difluorobenzene in sample 828131A-SS1302 was below control limits. The following target analytes are associated with this internal standard for quantitation:

- 1,2-Dichloropropane
- Bromodichloromethane
- 1,4-Dioxane
- cis-1,3-Dichloropropene
- Toluene
- 4-Methyl-2-pentanone
- trans-1,3-Dichloropropene
- 1,1,2-Trichloroethane
- Dibromochloromethane
- 1,2-Dibromoethane
- 2-Hexanone
- Ethylbenzene

Positive and non-detect results for the above analytes were qualified as estimated (J/UJ) in sample 828131A-SS1302. Qualified results are summarized in Table 3 with validation reason code IS-L.

Tentatively Identified Compounds

Tentatively identified compounds (TICs) were reported by the laboratory. TICs being reported as final results in samples are presented in Table 4. If a sample is not listed, no TICs were reported in the sample, or the TICs were removed as blank contaminants or artifacts of the GC/MS instrument system.

Data Reporting

The electronic data deliverable (EDD) contained two sets of results for sample 828131A-SS1402. Reported results were compared to the Form 1 and associated raw data to determine the appropriate set of results to select for final reporting.

A positive detection of 1,2,4-trimethylbenzene (1.0 J µg/m^3) was reported on the Form 1 for sample 828131A-SS1402, while this compound was reported non-detected in the EDD. In addition, incorrect reporting limits for 1,2,4-trimethylbenzene were reported on the Form 1 for sample 828131A-SS1402. Raw data were reviewed to determine that the positive detection of 1.0 J µg/m^3 (reporting limit 1.5 µg/m^3) was the correct result to report for 1,2,4-trimethylbenzene in sample 828131A-SS1402. The Form 1 and EDD were manually corrected during validation.

Reference:

New York State Depar tment of Environ mental Conservation (NYSDEC), 2005. "Analytical Ser vices Protocols"; July 2005.

New York State Department of Environmental Conservation (NYSDEC), 2010. "Technical Guidance for Site Investigation and Remediation-Appendix 2B"; DER-10; Division of Environmental Remediation; May 2010.

USEPA Region 2, 2006. "Validating Volatile Organic Analysis of Ambient Air in Canister by Method TO-15"; SOP # HW-31, Revision 4, Hazardous Waste Support Branch; October 2006.

Data Validator: Julie Ricardi
Date: 05/05/2011

Reviewed by Chris Ricardi, NRCC-EAC
Quality Assurance Officer

Date: 5/6/11

TABLE 1
SUMMARY OF SAMPLES AND ANALYTICAL METHODS
DATA USABILITY SUMMARY REPORT
MARCH 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

						Class	VOC
						Analysis Method	EPA TO-15
						Fraction	T
SDG	**Media**	**Location**	**Lab ID**	**Sample ID**	**Sample Date**	**QC Code**	
E1103006	AIR	AA-12	Enalytic	828131A-AA1202	3/16/2011	FS	X
E1103006	AIR	AA-14	Enalytic	828131A-AA1402	3/24/2011	FS	X
E1103006	AIR	IA-12	Enalytic	828131A-IA1202	3/16/2011	FS	X
E1103006	AIR	IA-13	Enalytic	828131A-IA1302	3/16/2011	FS	X
E1103006	AIR	IA-14	Enalytic	828131A-IA1402	3/24/2011	FS	X
E1103006	SV	SS-12	Enalytic	828131A-SS1202	3/16/2011	FS	X
E1103006	SV	SS-13	Enalytic	828131A-SS1302	3/16/2011	FS	X
E1103006	SV	SS-14	Enalytic	828131A-SS1402	3/24/2011	FS	X

FOOTNOTES:
QC CODE
FS = field sample
Media
SV = soil vapor

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
MARCH 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Location	AA-12		AA-14		IA-12		IA-13	
		Sample Date	3/16/2011		3/24/2011		3/16/2011		3/16/2011	
		Sample ID	828131A-AA1202		828131A-AA1402		828131A-IA1202		828131A-IA1302	
		Qc Code	FS		FS		FS		FS	
Analysis	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
EPA TO-15	Tetrachloroethene	ug/m3	1.5	J	1.4	UJ	6.2	J	29	J
EPA TO-15	Trichloroethene	ug/m3	1.1	J	0.22	UJ	7.9	J	42	J
EPA TO-15	1,1,1-Trichloroethane	ug/m3	1.1	U	1.1	U	1.6	J	1.1	U
EPA TO-15	1,1,2,2-Tetrachloroethane	ug/m3	1.4	UJ	1.4	UJ	1.4	UJ	1.4	UJ
EPA TO-15	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	1.6	U	1.6	U	1.6	U	1.6	
EPA TO-15	1,1,2-Trichloroethane	ug/m3	1.1	U	1.1	U	1.1	U	1.1	U
EPA TO-15	1,1-Dichloroethane	ug/m3	0.82	U	0.82	U	0.82	U	0.82	U
EPA TO-15	1,1-Dichloroethene	ug/m3	0.81	U	0.81	U	0.81	U	0.81	U
EPA TO-15	1,2,4-Trichlorobenzene	ug/m3	1.5	UJ	1.5	UJ	1.5	UJ	1.5	UJ
EPA TO-15	1,2,4-Trimethylbenzene	ug/m3	1.5	UJ	1.5	UJ	1.5	UJ	1.5	UJ
EPA TO-15	1,2-Dibromoethane	ug/m3	1.6	U	1.6	U	1.6	U	1.6	U
EPA TO-15	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ug/m3	1.4	U	1.4	U	1.4	U	1.4	U
EPA TO-15	1,2-Dichlorobenzene	ug/m3	1.2	UJ	1.2	UJ	1.2	UJ	1.2	UJ
EPA TO-15	1,2-Dichloroethane	ug/m3	0.82	U	0.82	U	0.82	U	0.82	U
EPA TO-15	1,2-Dichloropropane	ug/m3	0.94	U	0.94	U	0.94	U	0.94	U
EPA TO-15	1,3,5-Trimethylbenzene	ug/m3	1	UJ	1	UJ	1	UJ	1.3	J
EPA TO-15	1,3-Butadiene	ug/m3	0.45	U	0.45	U	0.45	U	0.45	U
EPA TO-15	1,3-Dichlorobenzene	ug/m3	1.2	UJ	1.2	UJ	1.2	UJ	1.2	UJ
EPA TO-15	1,4-Dichlorobenzene	ug/m3	1.2	UJ	1.2	UJ	3.3	J	170	J
EPA TO-15	1,4-Dioxane	ug/m3	1.5	UJ	1.5	UJ	1.5	UJ	1.5	UJ
EPA TO-15	2-Butanone	ug/m3	1.8	J	0.6	UJ	2.6	J	3.4	J
EPA TO-15	2-Hexanone	ug/m3	0.83	UJ	0.83	UJ	0.83	UJ	0.83	UJ
EPA TO-15	2-Propanol	ug/m3	2	J	1	J	13		32	
EPA TO-15	4-Ethyltoluene	ug/m3	1	UJ	1	UJ	1	UJ	1.1	J
EPA TO-15	4-Methyl-2-pentanone	ug/m3	0.83	UJ	0.83	UJ	0.83	UJ	0.96	J
EPA TO-15	Acetone	ug/m3	9.7	U	8.7	U	27		22	
EPA TO-15	Benzene	ug/m3	0.88		0.65	J	1		1.2	
EPA TO-15	Benzyl chloride	ug/m3	1.1	UJ	1.1	UJ	1.1	UJ	1.1	J
EPA TO-15	Bromodichloromethane	ug/m3	1.4	U	1.4	U	1.4	U	1.4	U
EPA TO-15	Bromoform	ug/m3	2.1	UJ	2.1	UJ	2.1	UJ	2.1	UJ
EPA TO-15	Bromomethane	ug/m3	0.79	U	0.79	U	0.79	U	0.79	U
EPA TO-15	Carbon disulfide	ug/m3	0.63	U	0.63	U	0.63	U	0.63	U
EPA TO-15	Carbon tetrachloride	ug/m3	0.26	U	0.26	U	0.26	U	1.3	
EPA TO-15	Chlorobenzene	ug/m3	0.94	U	0.94	U	0.94	U	0.94	U
EPA TO-15	Chlorodibromomethane	ug/m3	1.7	U	1.7	U	1.7	U	1.7	U
EPA TO-15	Chloroethane	ug/m3	0.54	U	0.54	U	0.54	U	0.54	U
EPA TO-15	Chloroform	ug/m3	0.99	U	0.99	U	0.99	U	0.99	U
EPA TO-15	Chloromethane	ug/m3	1.1		1.2		1.2		1.2	
EPA TO-15	Cis-1,2-Dichloroethene	ug/m3	0.85	J	0.81	U	12		43	
EPA TO-15	cis-1,3-Dichloropropene	ug/m3	0.92	U	0.92	U	0.92	U	0.92	U
EPA TO-15	Cyclohexane	ug/m3	0.7	U	0.7	U	0.7	U	0.7	U
EPA TO-15	Dichlorodifluoromethane	ug/m3	2.5		2.7		2.5		2.7	
EPA TO-15	Ethyl benzene	ug/m3	0.88	U	0.88	U	1.9		1.4	J
EPA TO-15	Heptane	ug/m3	0.83	U	0.83	U	2.2		1.7	J
EPA TO-15	Hexachlorobutadiene	ug/m3	2.2	UJ	2.2	UJ	2.2	UJ	2.2	UJ
EPA TO-15	Hexane	ug/m3	0.72	U	0.72	U	0.72	U	0.72	U
EPA TO-15	Methyl Tertbutyl Ether	ug/m3	0.73	U	0.73	U	0.73	U	0.73	U
EPA TO-15	Methylene chloride	ug/m3	0.71	U	0.71	U	0.71	U	1	J
EPA TO-15	Styrene	ug/m3	1.3	U	1.3	U	1.3	U	1.3	
EPA TO-15	Tetrahydrofuran	ug/m3	0.6	U	0.6	U	0.6	U	0.69	
EPA TO-15	Toluene	ug/m3	1.3		2.6		15		6.7	
EPA TO-15	trans-1,2-Dichloroethene	ug/m3	0.81	U	0.81	U	0.81	U	0.81	U
EPA TO-15	trans-1,3-Dichloropropene	ug/m3	0.92	U	0.92	U	0.92	U	0.92	U
EPA TO-15	Trichlorofluoromethane	ug/m3	1.6		1.5		1.5		2	
EPA TO-15	Vinyl acetate	ug/m3	0.72	UJ	0.72	UJ	0.72	UJ	0.72	UJ
EPA TO-15	Vinyl chloride	ug/m3	0.52	U	0.52	U	0.86		2.1	
EPA TO-15	Xylene, m/p	ug/m3	2.6	U	2.6	U	4.6		2.7	
EPA TO-15	Xylene, o	ug/m3	0.88	U	0.88	U	1.5	J	1.1	J

Notes:
ug/m3 = microgram per cubic meter
Qualifiers-
U = not detected at the reporting limit
J = estimated concentration
QC Code-
FS = Field Sample

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
MARCH 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Location	IA-14		SS-12		SS-13		SS-14	
		Sample Date	3/24/2011		3/16/2011		3/16/2011		3/24/2011	
		Sample ID	828131A-IA1402		828131A-SS1202		828131A-SS1302		828131A-SS1402	
		Qc Code	FS		FS		FS		FS	
Analysis	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
EPA TO-15	Tetrachloroethene	ug/m3	1.4	UJ	610	J	21000	J	16	J
EPA TO-15	Trichloroethene	ug/m3	0.22	UJ	3000	J	28000	J	17	J
EPA TO-15	1,1,1-Trichloroethane	ug/m3	3.4		1.1	U	1.1	U	2.7	
EPA TO-15	1,1,2,2-Tetrachloroethane	ug/m3	1.4	UJ	1.4	UJ	1.4	UJ	1.4	UJ
EPA TO-15	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	1.6	U	1.6	U	1.6	U	1.6	U
EPA TO-15	1,1,2-Trichloroethane	ug/m3	1.1	U	1.1	U	1.1	UJ	1.1	U
EPA TO-15	1,1-Dichloroethane	ug/m3	0.82	U	0.82	U	0.82	U	0.82	U
EPA TO-15	1,1-Dichloroethene	ug/m3	0.81	U	30		130		0.81	U
EPA TO-15	1,2,4-Trichlorobenzene	ug/m3	1.5	UJ	1.5	UJ	1.5	UJ	1.5	UJ
EPA TO-15	1,2,4-Trimethylbenzene	ug/m3	1.5	UJ	2.3	J	2.1	J	1	J
EPA TO-15	1,2-Dibromoethane	ug/m3	1.6	U	1.6	U	1.6	UJ	1.6	U
EPA TO-15	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ug/m3	1.4	U	1.4	U	1.4	U	1.4	U
EPA TO-15	1,2-Dichlorobenzene	ug/m3	1.2	UJ	1.2	UJ	1.2	UJ	1.2	UJ
EPA TO-15	1,2-Dichloroethane	ug/m3	0.82	U	0.82	U	0.82	U	0.82	U
EPA TO-15	1,2-Dichloropropane	ug/m3	0.94	U	0.94	U	0.94	UJ	0.94	U
EPA TO-15	1,3,5-Trimethylbenzene	ug/m3	1.1	J	5.8	J	4.7	J	2	J
EPA TO-15	1,3-Butadiene	ug/m3	0.45	U	0.45	U	0.45	U	0.45	U
EPA TO-15	1,3-Dichlorobenzene	ug/m3	1.2	UJ	1.2	UJ	1.2	UJ	1.2	UJ
EPA TO-15	1,4-Dichlorobenzene	ug/m3	2.1	J	1.2	UJ	5.4	J	2.6	J
EPA TO-15	1,4-Dioxane	ug/m3	1.5	UJ	0.73	UJ	0.73	UJ	1.5	UJ
EPA TO-15	2-Butanone	ug/m3	0.6	UJ	2.1	J	3.8	J	4.2	J
EPA TO-15	2-Hexanone	ug/m3	0.83	UJ	0.83	UJ	0.83	UJ	0.83	UJ
EPA TO-15	2-Propanol	ug/m3	12		5.8	J	5	U	23	
EPA TO-15	4-Ethyltoluene	ug/m3	1	UJ	2.1	J	2.4	J	1.5	J
EPA TO-15	4-Methyl-2-pentanone	ug/m3	0.83	UJ	0.83	UJ	0.83	UJ	0.83	UJ
EPA TO-15	Acetone	ug/m3	16		16		18		16	
EPA TO-15	Benzene	ug/m3	0.94		1.6		3.6		1.1	
EPA TO-15	Benzyl chloride	ug/m3	1.1	UJ	1.1	UJ	1.1	UJ	1.1	UJ
EPA TO-15	Bromodichloromethane	ug/m3	1.4	U	1.4	U	1.4	UJ	1.4	U
EPA TO-15	Bromoform	ug/m3	2.1	UJ	2.1	UJ	2.1	UJ	2.1	UJ
EPA TO-15	Bromomethane	ug/m3	0.79	U	0.79	U	0.79	U	0.79	U
EPA TO-15	Carbon disulfide	ug/m3	0.63	U	1.9		5		1.4	
EPA TO-15	Carbon tetrachloride	ug/m3	0.26	U	1.3	U	1.3	U	0.26	U
EPA TO-15	Chlorobenzene	ug/m3	0.94	U	0.94	U	1.3		0.94	U
EPA TO-15	Chlorodibromomethane	ug/m3	1.7	U	1.7	U	1.7	UJ	1.7	U
EPA TO-15	Chloroethane	ug/m3	0.54	U	0.54	U	0.54	U	0.54	U
EPA TO-15	Chloroform	ug/m3	0.99	U	0.99	U	0.99	U	0.99	U
EPA TO-15	Chloromethane	ug/m3	0.42	U	0.42	U	0.42	U	0.42	U
EPA TO-15	Cis-1,2-Dichloroethene	ug/m3	0.81	U	8800		22000		17	
EPA TO-15	cis-1,3-Dichloropropene	ug/m3	0.92	U	0.92	U	0.92	UJ	0.92	U
EPA TO-15	Cyclohexane	ug/m3	8.7		1.5		5.9		1.2	
EPA TO-15	Dichlorodifluoromethane	ug/m3	1	U	3.8		10		46	
EPA TO-15	Ethyl benzene	ug/m3	0.88	U	1.4	J	4.1	J	0.88	U
EPA TO-15	Heptane	ug/m3	3.2		4.1		14		2.6	
EPA TO-15	Hexachlorobutadiene	ug/m3	2.2	UJ	2.2	UJ	2.2	UJ	2.2	UJ
EPA TO-15	Hexane	ug/m3	5.7		3		11		2.2	
EPA TO-15	Methyl Tertbutyl Ether	ug/m3	0.73	U	0.73	U	0.73	U	0.73	U
EPA TO-15	Methylene chloride	ug/m3	0.99	J	0.71	U	0.71	U	0.71	U
EPA TO-15	Styrene	ug/m3	1.3	U	0.87	U	1.3		1.3	U
EPA TO-15	Tetrahydrofuran	ug/m3	0.6	U	0.6	U	0.6	U	0.6	U
EPA TO-15	Toluene	ug/m3	61		6.9		35	J	5.4	
EPA TO-15	trans-1,2-Dichloroethene	ug/m3	0.81	U	110		260		0.81	U
EPA TO-15	trans-1,3-Dichloropropene	ug/m3	0.92	U	0.92	U	0.92	UJ	0.92	U
EPA TO-15	Trichlorofluoromethane	ug/m3	1.7		1.4		1.6		1.5	
EPA TO-15	Vinyl acetate	ug/m3	0.72	UJ	0.72	UJ	0.72	UJ	0.72	UJ
EPA TO-15	Vinyl chloride	ug/m3	0.52	U	410		2000		1.9	
EPA TO-15	Xylene, m/p	ug/m3	2.6	U	5.6		11		3.7	
EPA TO-15	Xylene, o	ug/m3	0.88	J	2		3.5		1.2	J

Notes:
ug/m3 = microgram per cubic meter
Qualifiers-
U = not detected at the reporting limit
J = estimated concentration
QC Code-
FS = Field Sample

TABLE 3
SUMMARY OF DATA VALIDATION ACTIONS
DATA USABILITY SUMMARY REPORT
MARCH 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

SDG	Lab Sample Id	Analysis Method	Field Sample ID	Paramater Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Result Units	Lab Id
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	Acetone	9.7		9.7	U	BL1	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	Acetone	8.7		8.7	U	BL1	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	1,1,2,2-Tetrachloroethane	1.4	U	1.4	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	1,1,2,2-Tetrachloroethane	1.4	U	1.4	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	1,1,2,2-Tetrachloroethane	1.4	U	1.4	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	1,1,2,2-Tetrachloroethane	1.4	U	1.4	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	1,1,2,2-Tetrachloroethane	1.4	U	1.4	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	1,1,2,2-Tetrachloroethane	1.4	U	1.4	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	1,1,2,2-Tetrachloroethane	1.4	U	1.4	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	1,1,2,2-Tetrachloroethane	1.4	U	1.4	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	1,4-Dioxane	1.5	U	1.5	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	1,4-Dioxane	1.5	U	1.5	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	1,4-Dioxane	1.5	U	1.5	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	1,4-Dioxane	1.5	U	1.5	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	1,4-Dioxane	1.5	U	1.5	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	1,4-Dioxane	0.73	U	0.73	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	1,4-Dioxane	1.5	U	1.5	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	2-Butanone	1.8		1.8	J	CCV%D	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	2-Butanone	0.6	U	0.6	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	2-Butanone	2.6		2.6	J	CCV%D	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	2-Butanone	3.4		3.4	J	CCV%D	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	2-Butanone	0.6	U	0.6	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	2-Butanone	2.1		2.1	J	CCV%D	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	2-Butanone	3.8		3.8	J	CCV%D	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	2-Butanone	4.2		4.2	J	CCV%D	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	2-Hexanone	0.83	U	0.83	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	2-Hexanone	0.83	U	0.83	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	2-Hexanone	0.83	U	0.83	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	2-Hexanone	0.83	U	0.83	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	2-Hexanone	0.83	U	0.83	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	2-Hexanone	0.83	U	0.83	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	2-Hexanone	0.83	U	0.83	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	4-Ethyltoluene	1	U	1	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	4-Ethyltoluene	1	U	1	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	4-Ethyltoluene	1	U	1	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	4-Ethyltoluene	1	U	1	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	4-Ethyltoluene	2.1		2.1	J	CCV%D	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	4-Ethyltoluene	2.4		2.4	J	CCV%D	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	4-Methyl-2-pentanone	0.83	U	0.83	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	4-Methyl-2-pentanone	0.83	U	0.83	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	4-Methyl-2-pentanone	0.83	U	0.83	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	4-Methyl-2-pentanone	0.96		0.96	J	CCV%D	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	4-Methyl-2-pentanone	0.83	U	0.83	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	4-Methyl-2-pentanone	0.83	U	0.83	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	4-Methyl-2-pentanone	0.83	U	0.83	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	Benzyl chloride	1.1	U	1.1	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	Benzyl chloride	1.1	U	1.1	UJ	CCV%D	ug/m3	Enalytic

TABLE 3
SUMMARY OF DATA VALIDATION ACTIONS
DATA USABILITY SUMMARY REPORT
MARCH 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

SDG	Lab Sample Id	Analysis Method	Field Sample ID	Paramater Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Result Units	Lab Id
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	Benzyl chloride	1.1	U	1.1	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	Benzyl chloride	1.1	U	1.1	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	Benzyl chloride	1.1	U	1.1	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	Benzyl chloride	1.1	U	1.1	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	Benzyl chloride	1.1	U	1.1	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	Vinyl acetate	0.72	U	0.72	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	Vinyl acetate	0.72	U	0.72	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	Vinyl acetate	0.72	U	0.72	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	Vinyl acetate	0.72	U	0.72	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	Vinyl acetate	0.72	U	0.72	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	Vinyl acetate	0.72	U	0.72	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	Vinyl acetate	0.72	U	0.72	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	Vinyl acetate	0.72	U	0.72	UJ	CCV%D	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	1,4-Dioxane	0.73	U	0.73	UJ	CCV%D, IS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	2-Hexanone	0.83	U	0.83	UJ	CCV%D, IS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	4-Methyl-2-pentanone	0.83	U	0.83	UJ	CCV%D, IS-L	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	1,2,4-Trimethylbenzene	1.5	U	1.5	UJ	CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	1,2,4-Trimethylbenzene	1.5	U	1.5	UJ	CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	1,2,4-Trimethylbenzene	1.5	U	1.5	UJ	CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	1,2,4-Trimethylbenzene	1.5	U	1.5	UJ	CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	1,2,4-Trimethylbenzene	1.5	U	1.5	UJ	CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	1,2,4-Trimethylbenzene	2.3		2.3	J	CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	1,2,4-Trimethylbenzene	2.1		2.1	J	CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	1,2,4-Trimethylbenzene	1.5	U	1	J	CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	1,3,5-Trimethylbenzene	1	U	1	UJ	CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	1,3,5-Trimethylbenzene	1	U	1	UJ	CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	1,3,5-Trimethylbenzene	1	U	1	UJ	CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	1,3,5-Trimethylbenzene	5.8		5.8	J	CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	1,3,5-Trimethylbenzene	4.7		4.7	J	CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	4-Ethyltoluene	1.1		1.1	J	CCV%D, QLS-H	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	4-Ethyltoluene	1.5		1.5	J	CCV%D, QLS-H	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	Benzyl chloride	1.1		1.1	J	CCV%D, QLS-H	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	1,3,5-Trimethylbenzene	1.3		1.3	J	CCV%D,QLS-H, LCS-L	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	1,3,5-Trimethylbenzene	1.1		1.1	J	CCV%D,QLS-H, LCS-L	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	1,3,5-Trimethylbenzene	2		2	J	CCV%D,QLS-H, LCS-L	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	Bromoform	2.1	U	2.1	UJ	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	Bromoform	2.1	U	2.1	UJ	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	Bromoform	2.1	U	2.1	UJ	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	Bromoform	2.1	U	2.1	UJ	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	Bromoform	2.1	U	2.1	UJ	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	Bromoform	2.1	U	2.1	UJ	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	Bromoform	2.1	U	2.1	UJ	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	Bromoform	2.1	U	2.1	UJ	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	Tetrachloroethene	1.4	U	1.4	UJ	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	Tetrachloroethene	6.2		6.2	J	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	Tetrachloroethene	29		29	J	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	Tetrachloroethene	1.4	U	1.4	UJ	ICVRSD	ug/m3	Enalytic

TABLE 3
SUMMARY OF DATA VALIDATION ACTIONS
DATA USABILITY SUMMARY REPORT
MARCH 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

SDG	Lab Sample Id	Analysis Method	Field Sample ID	Paramater Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Result Units	Lab Id
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	Tetrachloroethene	610		610	J	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	Tetrachloroethene	21000		21,000	J	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	Tetrachloroethene	16		16	J	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	Trichloroethene	1.1		1.1	J	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	Trichloroethene	0.22	U	0.22	UJ	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	Trichloroethene	7.9		7.9	J	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	Trichloroethene	42		42	J	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	Trichloroethene	0.22	U	0.22	UJ	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	Trichloroethene	3000		3,000	J	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	Trichloroethene	28000		28,000	J	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	Trichloroethene	17		17	J	ICVRSD	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	Hexachlorobutadiene	2.2	U	2.2	UJ	ICVRSD, CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	Hexachlorobutadiene	2.2	U	2.2	UJ	ICVRSD, CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	Hexachlorobutadiene	2.2	U	2.2	UJ	ICVRSD, CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	Hexachlorobutadiene	2.2	U	2.2	UJ	ICVRSD, CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	Hexachlorobutadiene	2.2	U	2.2	UJ	ICVRSD, CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	Hexachlorobutadiene	2.2	U	2.2	UJ	ICVRSD, CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	Hexachlorobutadiene	2.2	U	2.2	UJ	ICVRSD, CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	Hexachlorobutadiene	2.2	U	2.2	UJ	ICVRSD, CCV%D, LCS-L	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	1,2-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	1,2-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	1,2-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	1,2-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	1,2-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	1,2-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	1,2-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	1,2-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	1,3-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	1,3-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	1,3-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	1,3-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	1,3-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	1,3-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	1,3-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	1,3-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	1,4-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	1,4-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	1,4-Dichlorobenzene	3.3		3.3	J	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	1,4-Dichlorobenzene	170		170	J	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	1,4-Dichlorobenzene	1.2	U	1.2	UJ	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	1,4-Dichlorobenzene	5.4		5.4	J	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	1,4-Dichlorobenzene	2.6		2.6	J	ICVRSD, LCS-L	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	Tetrachloroethene	1.5		1.5	J	ICVRSD, QLS-H	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	1,4-Dichlorobenzene	2.1		2.1	J	ICVRSD, QLS-H, LCS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	1,1,2-Trichloroethane	1.1	U	1.1	UJ	IS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	1,2-Dibromoethane	1.6	U	1.6	UJ	IS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	1,2-Dichloropropane	0.94	U	0.94	UJ	IS-L	ug/m3	Enalytic

TABLE 3
SUMMARY OF DATA VALIDATION ACTIONS
DATA USABILITY SUMMARY REPORT
MARCH 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

SDG	Lab Sample Id	Analysis Method	Field Sample ID	Paramater Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Result Units	Lab Id
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	Bromodichloromethane	1.4	U	1.4	UJ	IS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	Chlorodibromomethane	1.7	U	1.7	UJ	IS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	cis-1,3-Dichloropropene	0.92	U	0.92	UJ	IS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	Ethyl benzene	4.1		4.1	J	IS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	Toluene	35		35	J	IS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	trans-1,3-Dichloropropene	0.92	U	0.92	UJ	IS-L	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	1,2,4-Trichlorobenzene	1.5	U	1.5	UJ	LCS-L	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	1,2,4-Trichlorobenzene	1.5	U	1.5	UJ	LCS-L	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	1,2,4-Trichlorobenzene	1.5	U	1.5	UJ	LCS-L	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	1,2,4-Trichlorobenzene	1.5	U	1.5	UJ	LCS-L	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	1,2,4-Trichlorobenzene	1.5	U	1.5	UJ	LCS-L	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	1,2,4-Trichlorobenzene	1.5	U	1.5	UJ	LCS-L	ug/m3	Enalytic
E1103006	E1103006-001A	EPA TO-15	828131A-SS1302	1,2,4-Trichlorobenzene	1.5	U	1.5	UJ	LCS-L	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	1,2,4-Trichlorobenzene	1.5	U	1.5	UJ	LCS-L	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	1,1,1-Trichloroethane	1.6		1.6	J	QLS-H	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	2-Propanol	2	J	2	J	QLS-H	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	2-Propanol	1	J	1	J	QLS-H	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	2-Propanol	5.8		5.8	J	QLS-H	ug/m3	Enalytic
E1103006	E1103006-008A	EPA TO-15	828131A-AA1402	Benzene	0.65		0.65	J	QLS-H	ug/m3	Enalytic
E1103006	E1103006-005A	EPA TO-15	828131A-AA1202	cis-1,2-Dichloroethene	0.85		0.85	J	QLS-H	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	Ethyl benzene	1.4		1.4	J	QLS-H	ug/m3	Enalytic
E1103006	E1103006-003A	EPA TO-15	828131A-SS1202	Ethyl benzene	1.4		1.4	J	QLS-H	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	Heptane	1.7		1.7	J	QLS-H	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	Methylene chloride	1		1	J	QLS-H	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	Methylene chloride	0.99		0.99	J	QLS-H	ug/m3	Enalytic
E1103006	E1103006-004A	EPA TO-15	828131A-IA1202	Xylene, o	1.5		1.5	J	QLS-H	ug/m3	Enalytic
E1103006	E1103006-002A	EPA TO-15	828131A-IA1302	Xylene, o	1.1		1.1	J	QLS-H	ug/m3	Enalytic
E1103006	E1103006-007A	EPA TO-15	828131A-IA1402	Xylene, o	0.88		0.88	J	QLS-H	ug/m3	Enalytic
E1103006	E1103006-006A	EPA TO-15	828131A-SS1402	Xylene, o	1.2		1.2	J	QLS-H	ug/m3	Enalytic

Notes:

Validation Qualifiers-

J = estimated concentration

U = not detected

Validation Reason Codes-

BL1 = method blank contamination

ICVRSD = initial calibration relative standard deviation exceeds control limit

CCV%D = continuing calibration percent difference exceeds control limit

QLS-H = quantitation limit standard recovery above control limits

LCS-L = laboratory control sample recovery below control limits

IS-L = internal standard recovery below control limits

TABLE 4
SUMMARY OF TENTATIVELY IDENTIFIED COMPOUNDS
DATA USABILITY SUMMARY REPORT
MARCH 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

SDG	Sample ID	Lab Sample ID	CAS Number	Compound	Final Result (ppbv)	Qualifier	Analysis Date
E1103006	828131A-IA1302	E1103006-002A		Ethyl alcohol	2.5	JN	03/29/2011
E1103006	828131A-IA1302	E1103006-002A	66-25-1	Hexanal	1.8	JN	03/29/2011
E1103006	828131A-IA1302	E1103006-002A		unknown	1.5	JN	03/29/2011
E1103006	828131A-IA1202	E1103006-004A		Ethyl alcohol	3.4	JN	03/29/2011
E1103006	828131A-SS1402	E1103006-006A		Butane, 2-methyl-	1.4	JN	03/29/2011
E1103006	828131A-SS1402	E1103006-006A		Ethane, 2-chloro-1,1,1,2-tetrafluo	17	JN	03/29/2011
E1103006	828131A-SS1402	E1103006-006A		Propane	5.8	JN	03/29/2011
E1103006	828131A-SS1402	E1103006-006A		unknown	11	JN	03/29/2011
E1103006	828131A-IA1402	E1103006-007A		Difluorochloromethane	60	JN	03/29/2011
E1103006	828131A-IA1402	E1103006-007A		Hexane, 2-methyl-	2.7	JN	03/29/2011
E1103006	828131A-IA1402	E1103006-007A		Propane	130	JN	03/29/2011
E1103006	828131A-IA1402	E1103006-007A		unknown (4.537)	8.7	JN	03/29/2011
E1103006	828131A-IA1402	E1103006-007A		unknown (5.505)	16	JN	03/29/2011
E1103006	828131A-IA1402	E1103006-007A		unknown hydrocarbon (4.473)	7.1	JN	03/29/2011
E1103006	828131A-IA1402	E1103006-007A		unknown hydrocarbon (4.611)	1.8	JN	03/29/2011
E1103006	828131A-AA1402	E1103006-008A		unknown	2.4	JN	03/29/2011

NOTES:

Qualifiers

JN = estimated value with presumptive evidence that the compound is present in the sample

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1103006-001A

Client Sample ID 828131A-SS1302
Collection Date: 3/16/2011
Tag # 313/3953
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	29-Mar-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	29-Mar-11	0.20	ND		1.40	ND J
79-00-5	1,1,2-Trichloroethane	1	29-Mar-11	0.20	ND		1.10	ND J
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	29-Mar-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	29-Mar-11	0.20	31		0.81	130
120-82-1	1,2,4-Trichlorobenzene	1	29-Mar-11	0.20	ND		1.50	ND J
95-63-6	1,2,4-Trimethylbenzene	1	29-Mar-11	0.20	0.42		1.00	2.1 J
106-93-4	1,2-Dibromoethane	1	29-Mar-11	0.20	ND		1.60	ND J
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	29-Mar-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
107-06-2	1,2-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	29-Mar-11	0.20	ND		0.94	ND J
108-67-8	1,3,5-Trimethylbenzene	1	29-Mar-11	0.20	0.95		1.00	4.7 J
106-99-0	1,3-Butadiene	1	29-Mar-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
106-46-7	1,4-Dichlorobenzene	1	29-Mar-11	0.20	0.89		1.20	5.4 J
123-91-1	1,4-Dioxane	1	29-Mar-11	0.20	ND		0.73	ND J
78-93-3	2-Butanone (MEK)	1	29-Mar-11	0.20	1.3		0.60	3.8 J
591-78-6	2-Hexanone (*)	1	29-Mar-11	0.20	ND		0.83	ND J
622-96-8	4-Ethyltoluene (*)	1	29-Mar-11	0.20	0.49		1.00	2.4 J
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	29-Mar-11	0.20	ND		0.83	ND J
67-64-1	Acetone	1	29-Mar-11	2.0	7.4		4.80	18
71-43-2	Benzene	1	29-Mar-11	0.20	1.1		0.65	3.6
100-44-7	Benzyl chloride	1	29-Mar-11	0.20	ND		1.10	ND J
75-27-4	Bromodichloromethane	1	29-Mar-11	0.20	ND		1.40	ND J
75-25-2	Bromoform	1	29-Mar-11	0.20	ND		2.10	ND J
74-83-9	Bromomethane	1	29-Mar-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	29-Mar-11	0.20	1.6		0.63	5.0
56-23-5	Carbon tetrachloride	1	29-Mar-11	0.20	ND		1.30	ND
108-90-7	Chlorobenzene	1	29-Mar-11	0.20	0.28		0.94	1.3
75-00-3	Chloroethane	1	29-Mar-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	29-Mar-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	29-Mar-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	170	29-Mar-11	34	5600		140.00	22000

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 3/30/11

JN 5/3/11

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1103006-001A

Client Sample ID 828131A-SS1302
Collection Date: 3/16/2011
Tag # 313/3953
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND J
110-82-7	Cyclohexane	1	29-Mar-11	0.20	1.7		0.70	5.9
124-48-1	Dibromochloromethane	1	29-Mar-11	0.20	ND		1.70	ND J
75-71-8	Dichlorodifluoromethane (Freon 12)	1	29-Mar-11	0.20	2.0		1.00	10
100-41-4	Ethyl benzene	1	29-Mar-11	0.20	0.94		0.88	4.1 J
87-68-3	Hexachlorobutadiene	1	29-Mar-11	0.20	ND		2.20	ND J
110-54-3	Hexane	1	29-Mar-11	0.20	2.9		0.72	11
67-63-0	Isopropanol	1	29-Mar-11	2.0	ND		5.00	ND
1330-20-7	m,p-Xylene	1	29-Mar-11	0.20	2.6		0.88	11
1634-04-4	Methyl tert-butyl ether (MTBE)	1	29-Mar-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	29-Mar-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	29-Mar-11	0.20	3.3		0.83	14
95-47-6	o-Xylene	1	29-Mar-11	0.20	0.80		0.88	3.5
100-42-5	Styrene	1	29-Mar-11	0.20	0.30		0.87	1.3
127-18-4	Tetrachloroethene	170	29-Mar-11	34	3100		230.00	21000 J
109-99-9	Tetrahydrofuran (*)	1	29-Mar-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	29-Mar-11	0.20	9.2		0.77	35 J
156-60-5	trans-1,2-Dichloroethene	1	29-Mar-11	0.20	66		0.81	260
10061-02-6	trans-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND J
79-01-6	Trichloroethene	170	29-Mar-11	34	5200		190.00	28000 J
75-69-4	Trichlorofluoromethane (Freon 11)	1	29-Mar-11	0.20	0.28		1.10	1.6
108-05-4	Vinyl acetate	1	29-Mar-11	0.20	ND		0.72	ND J
75-01-4	Vinyl chloride	170	29-Mar-11	34	780		88.00	2000
	Surr: Bromofluorobenzene	1	29-Mar-11	65-136	103		0.00	0
	Surr: Bromofluorobenzene	170	29-Mar-11	65-136	101		0.00	0
	TIC: Cyclotetrasiloxane, octamethyl-	1	29-Mar-11	0	10		0.00	0

5/3/11
GCMS artifact

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 3/30/11

5/3/11

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID B1103006-002A

Client Sample ID 828131A-IA1302
Collection Date: 3/16/2011
Tag # 292/3955
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	29-Mar-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	29-Mar-11	0.20	ND		1.40	ND J
79-00-5	1,1,2-Trichloroethane	1	29-Mar-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	29-Mar-11	0.20	0.20		1.60	1.6
75-34-3	1,1-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	29-Mar-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	29-Mar-11	0.20	ND		1.50	ND J
95-63-6	1,2,4-Trimethylbenzene	1	29-Mar-11	0.30	ND		1.50	ND J
106-93-4	1,2-Dibromoethane	1	29-Mar-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	29-Mar-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
107-06-2	1,2-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	29-Mar-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	29-Mar-11	0.20	0.27		1.00	1.3 J
106-99-0	1,3-Butadiene	1	29-Mar-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
106-46-7	1,4-Dichlorobenzene	1	29-Mar-11	0.20	27		1.20	170 J
123-91-1	1,4-Dioxane	1	29-Mar-11	0.40	ND		1.50	ND J
78-93-3	2-Butanone (MEK)	1	29-Mar-11	0.20	1.1		0.60	3.4 J
591-78-6	2-Hexanone (*)	1	29-Mar-11	0.20	ND		0.83	ND J
622-96-8	4-Ethyltoluene (*)	1	29-Mar-11	0.20	0.23		1.00	1.1 J
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	29-Mar-11	0.20	0.23		0.83	0.96 J
67-64-1	Acetone	1	29-Mar-11	2.0	9.2		4.80	22
71-43-2	Benzene	1	29-Mar-11	0.20	0.38		0.65	1.2 J
100-44-7	Benzyl chloride	1	29-Mar-11	0.20	0.20		1.10	1.1 J
75-27-4	Bromodichloromethane	1	29-Mar-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	29-Mar-11	0.20	ND		2.10	ND J
74-83-9	Bromomethane	1	29-Mar-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	29-Mar-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	29-Mar-11	0.040	0.20		0.26	1.3
108-90-7	Chlorobenzene	1	29-Mar-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	29-Mar-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	29-Mar-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	29-Mar-11	0.20	0.59		0.42	1.2
156-59-2	cis-1,2-Dichloroethene	1	29-Mar-11	0.20	11		0.81	43

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KJP

Date: 3/30/11

3/31/11

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1103006-002A

Client Sample ID 828131A-IA1302
Collection Date: 3/16/2011
Tag # 292/3955
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	29-Mar-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	29-Mar-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	29-Mar-11	0.20	0.54		1.00	2.7
100-41-4	Ethyl benzene	1	29-Mar-11	0.20	0.32		0.88	1.4 J
87-68-3	Hexachlorobutadiene	1	29-Mar-11	0.20	ND		2.20	ND J
110-54-3	Hexane	1	29-Mar-11	0.20	ND		0.72	ND
67-63-0	Isopropanol	1	29-Mar-11	2.0	13		5.00	32
1330-20-7	m,p-Xylene	1	29-Mar-11	0.60	0.61		2.60	2.7
1634-04-4	Methyl tert-butyl ether (MTBE)	1	29-Mar-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	29-Mar-11	0.20	0.29		0.71	1.0 J
142-82-5	n-Heptane	1	29-Mar-11	0.20	0.42		0.83	1.7 J
95-47-6	o-Xylene	1	29-Mar-11	0.20	0.25		0.88	1.1 J
100-42-5	Styrene	1	29-Mar-11	0.30	0.30		1.30	1.3
127-18-4	Tetrachloroethene	1	29-Mar-11	0.20	4.2		1.40	29 J
109-99-9	Tetrahydrofuran (*)	1	29-Mar-11	0.20	0.23		0.60	0.69
108-88-3	Toluene	1	29-Mar-11	0.20	1.8		0.77	6.7
156-60-5	trans-1,2-Dichloroethene	1	29-Mar-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	29-Mar-11	0.040	7.6		0.22	42 J
75-69-4	Trichlorofluoromethane (Freon 11)	1	29-Mar-11	0.20	0.35		1.10	2.0
108-05-4	Vinyl acetate	1	29-Mar-11	0.20	ND		0.72	ND J
75-01-4	Vinyl chloride	1	29-Mar-11	0.20	0.80		0.52	2.1
	Surr: Bromofluorobenzene	1	29-Mar-11	66-135	95.9		0.00	0
	TIC: Cyclotetrasiloxane, octamethyl-	1	29-Mar-11	0	10		0.00	0 GC/MS
	TIC: Cyclotrisiloxane, hexamethyl-	1	29-Mar-11	0	2.8		0.00	0 artifacts
	TIC: Ethyl alcohol	1	29-Mar-11	0	2.5		0.00	0
	TIC: Hexanal	1	29-Mar-11	0	1.8		0.00	0
	TIC: unknown	1	29-Mar-11	0	1.6		0.00	0

dr 5/13/11

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 3/30/11

dr 5/13/11

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1103006-003A

Client Sample ID 828131A-SS1202
Collection Date: 3/16/2011
Tag # 316/2665
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result	
71-55-6	1,1,1-Trichloroethane	1	29-Mar-11	0.20	ND		1.10	ND	
79-34-5	1,1,2,2-Tetrachloroethane	1	29-Mar-11	0.20	ND		1.40	ND	J
79-00-5	1,1,2-Trichloroethane	1	29-Mar-11	0.20	ND		1.10	ND	
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	29-Mar-11	0.20	ND		1.60	ND	
75-34-3	1,1-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND	
75-35-4	1,1-Dichloroethene	1	29-Mar-11	0.20	7.4		0.81	30	
120-82-1	1,2,4-Trichlorobenzene	1	29-Mar-11	0.20	ND		1.50	ND	J
95-63-6	1,2,4-Trimethylbenzene	1	29-Mar-11	0.20	0.47		1.00	2.3	J
106-93-4	1,2-Dibromoethane	1	29-Mar-11	0.20	ND		1.60	ND	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	29-Mar-11	0.20	ND		1.40	ND	
95-50-1	1,2-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND	J
107-06-2	1,2-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND	
78-87-5	1,2-Dichloropropane	1	29-Mar-11	0.20	ND		0.94	ND	
108-67-8	1,3,5-Trimethylbenzene	1	29-Mar-11	0.20	1.2		1.00	5.8	J
106-99-0	1,3-Butadiene	1	29-Mar-11	0.20	ND		0.46	ND	
541-73-1	1,3-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND	J
106-46-7	1,4-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND	J
123-91-1	1,4-Dioxane	1	29-Mar-11	0.20	ND		0.73	ND	J
78-93-3	2-Butanone (MEK)	1	29-Mar-11	0.20	0.70		0.60	2.1	J
591-78-6	2-Hexanone (*)	1	29-Mar-11	0.20	ND		0.83	ND	J
622-96-8	4-Ethyltoluene (*)	1	29-Mar-11	0.20	0.43		1.00	2.1	J
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	29-Mar-11	0.20	ND		0.83	ND	J
67-64-1	Acetone	1	29-Mar-11	2.0	6.5		4.80	16	
71-43-2	Benzene	1	29-Mar-11	0.20	0.50		0.65	1.6	
100-44-7	Benzyl chloride	1	29-Mar-11	0.20	ND		1.10	ND	J
75-27-4	Bromodichloromethane	1	29-Mar-11	0.20	ND		1.40	ND	
75-25-2	Bromoform	1	29-Mar-11	0.20	ND		2.10	ND	J
74-83-9	Bromomethane	1	29-Mar-11	0.20	ND		0.78	ND	
75-15-0	Carbon disulfide	1	29-Mar-11	0.20	0.60		0.63	1.9	
56-23-5	Carbon tetrachloride	1	29-Mar-11	0.20	ND		1.30	ND	
108-90-7	Chlorobenzene	1	29-Mar-11	0.20	ND		0.94	ND	
75-00-3	Chloroethane	1	29-Mar-11	0.20	ND		0.54	ND	
67-66-3	Chloroform	1	29-Mar-11	0.20	ND		0.99	ND	
74-87-3	Chloromethane	1	29-Mar-11	0.20	ND		0.42	ND	
156-59-2	cis-1,2-Dichloroethene	171	29-Mar-11	34	2200		140.00	8800	

Qualifiers:

(*) Certification not offered by NYS for this compound	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
Q Outlying QC recoveries were associated with this analyte	S Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 3/30/11

5/3/11

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I

Locatio Off-Site Carriage Cleaners

Project: 3612102168

Lab ID E1103006-003A

Client Sample ID 828131A-SS1202

Collection Date: 3/16/2011

Tag # 316/2665

Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	29-Mar-11	0.20	0.43		0.70	1.5
124-48-1	Dibromochloromethane	1	29-Mar-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	29-Mar-11	0.20	0.75		1.00	3.8
100-41-4	Ethyl benzene	1	29-Mar-11	0.20	0.31		0.88	1.4 J
87-68-3	Hexachlorobutadiene	1	29-Mar-11	0.20	ND		2.20	ND J
110-54-3	Hexane	1	29-Mar-11	0.20	0.83		0.72	3.0
67-63-0	Isopropanol	1	29-Mar-11	2.0	2.3		5.00	5.8
1330-20-7	m,p-Xylene	1	29-Mar-11	0.20	1.3		0.88	5.6
1634-04-4	Methyl tert-butyl ether (MTBE)	1	29-Mar-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	29-Mar-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	29-Mar-11	0.20	0.99		0.83	4.1
95-47-6	o-Xylene	1	29-Mar-11	0.20	0.45		0.88	2.0
100-42-5	Styrene	1	29-Mar-11	0.20	ND		0.87	ND
127-18-4	Tetrachloroethene	1	29-Mar-11	0.20	89		1.40	620 J
109-99-9	Tetrahydrofuran (*)	1	29-Mar-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	29-Mar-11	0.20	1.8		0.77	6.9
156-60-5	trans-1,2-Dichloroethene	1	29-Mar-11	0.20	28		0.81	110
10061-02-6	trans-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	171	29-Mar-11	34	550		190.00	3000 J
75-69-4	Trichlorofluoromethane (Freon 11)	1	29-Mar-11	0.20	0.25		1.10	1.4
108-05-4	Vinyl acetate	1	29-Mar-11	0.20	ND		0.72	ND J
75-01-4	Vinyl chloride	171	29-Mar-11	34	160		88.00	410
	Surr: Bromofluorobenzene	1	29-Mar-11	65-135	102		0.00	0
	Surr: Bromofluorobenzene	171	29-Mar-11	65-135	103		0.00	0
	~~TIC: Cyclotetrasiloxane, octamethyl~~	~~1~~	~~29-Mar-11~~	~~0~~	~~58~~		~~0.00~~	~~0~~ GC/MS artifact

JP 5/3/11

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 3/30/11

JP 5/3/11

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1103006-004A

Client Sample ID 828131A-IA1202
Collection Date: 3/16/2011
Tag # 287/2716
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	29-Mar-11	0.20	0.29		1.10	1.6 J
79-34-5	1,1,2,2-Tetrachloroethane	1	29-Mar-11	0.20	ND		1.40	ND J
79-00-5	1,1,2-Trichloroethane	1	29-Mar-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	29-Mar-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	29-Mar-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	29-Mar-11	0.20	ND		1.50	ND J
95-63-6	1,2,4-Trimethylbenzene	1	29-Mar-11	0.30	ND		1.50	ND J
106-93-4	1,2-Dibromoethane	1	29-Mar-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	29-Mar-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
107-06-2	1,2-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	29-Mar-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	29-Mar-11	0.20	ND		1.00	ND J
106-99-0	1,3-Butadiene	1	29-Mar-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
106-46-7	1,4-Dichlorobenzene	1	29-Mar-11	0.20	0.54		1.20	3.3 J
123-91-1	1,4-Dioxane	1	29-Mar-11	0.40	ND		1.50	ND J
78-93-3	2-Butanone (MEK)	1	29-Mar-11	0.20	0.87		0.60	2.6 J
591-78-6	2-Hexanone (*)	1	29-Mar-11	0.20	ND		0.83	ND J
622-96-8	4-Ethyltoluene (*)	1	29-Mar-11	0.20	ND		1.00	ND J
108-10-1	4-Methyl-2-Pentenone (MIBK)	1	29-Mar-11	0.20	ND		0.83	ND J
67-64-1	Acetone	1	29-Mar-11	2.0	11		4.80	27
71-43-2	Benzene	1	29-Mar-11	0.20	0.32		0.65	1.0 J
100-44-7	Benzyl chloride	1	29-Mar-11	0.20	ND		1.10	ND J
75-27-4	Bromodichloromethane	1	29-Mar-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	29-Mar-11	0.20	ND		2.10	ND J
74-83-9	Bromomethane	1	29-Mar-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	29-Mar-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	29-Mar-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	29-Mar-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	29-Mar-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	29-Mar-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	29-Mar-11	0.20	0.55		0.42	1.2
156-59-2	cis-1,2-Dichloroethene	1	29-Mar-11	0.20	3.0		0.81	12

Qualifiers:

- (*) Certification not offered by NYS for this compound
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Q Outlying QC recoveries were associated with this analyte
- S Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 3/30/11

3-5/31/11

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1103006-004A

Client Sample ID 828131A-IA1202
Collection Date: 3/16/2011
Tag # 287/2716
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result	
10061-01-5	cis-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND	
110-82-7	Cyclohexane	1	29-Mar-11	0.20	ND		0.70	ND	
124-48-1	Dibromochloromethane	1	29-Mar-11	0.20	ND		1.70	ND	
75-71-8	Dichlorodifluoromethane (Freon 12)	1	29-Mar-11	0.20	0.49		1.00	2.5	
100-41-4	Ethyl benzene	1	29-Mar-11	0.20	0.42		0.88	1.9	
87-68-3	Hexachlorobutadiene	1	29-Mar-11	0.20	ND		2.20	ND	J
110-54-3	Hexane	1	29-Mar-11	0.20	ND		0.72	ND	
67-63-0	Isopropanol	1	29-Mar-11	2.0	5.1		5.00	13	
1330-20-7	m,p-Xylene	1	29-Mar-11	0.60	1.0		2.60	4.6	
1634-04-4	Methyl tert-butyl ether (MTBE)	1	29-Mar-11	0.20	ND		0.73	ND	
75-09-2	Methylene chloride	1	29-Mar-11	0.20	ND		0.71	ND	
142-82-5	n-Heptane	1	29-Mar-11	0.20	0.53		0.83	2.2	
95-47-6	o-Xylene	1	29-Mar-11	0.20	0.35		0.88	1.5	J
100-42-5	Styrene	1	29-Mar-11	0.30	ND		1.30	ND	
127-18-4	Tetrachloroethene	1	29-Mar-11	0.20	0.90		1.40	6.2	J
109-99-9	Tetrahydrofuran (*)	1	29-Mar-11	0.20	ND		0.60	ND	
108-88-3	Toluene	1	29-Mar-11	0.20	4.0		0.77	15	
156-60-5	trans-1,2-Dichloroethene	1	29-Mar-11	0.20	ND		0.81	ND	
10061-02-6	trans-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND	
79-01-6	Trichloroethene	1	29-Mar-11	0.040	1.4		0.22	7.9	J
75-69-4	Trichlorofluoromethane (Freon 11)	1	29-Mar-11	0.20	0.26		1.10	1.5	
108-05-4	Vinyl acetate	1	29-Mar-11	0.20	ND		0.72	ND	J
75-01-4	Vinyl chloride	1	29-Mar-11	0.20	0.33		0.52	0.86	
	Surr: Bromofluorobenzene	1	29-Mar-11	66-135	93.2		0.00	0	
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~29-Mar-11~~	~~0~~	~~12~~		~~0.00~~	~~0~~	GC/MS
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~29-Mar-11~~	~~0~~	~~5.4~~		~~0.00~~	~~0~~	or hfet
	TIC: Ethyl alcohol	1	29-Mar-11	0	3.4		0.00	0	

or 5/31/11

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 3/30/11

or 5/31/11

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1103006-005A

Client Sample ID 828131A-AA1202
Collection Date: 3/16/2011
Tag # 299/2709
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	29-Mar-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	29-Mar-11	0.20	ND		1.40	ND J
79-00-5	1,1,2-Trichloroethane	1	29-Mar-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	29-Mar-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	29-Mar-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	29-Mar-11	0.20	ND		1.50	ND J
95-63-6	1,2,4-Trimethylbenzene	1	29-Mar-11	0.30	ND		1.50	ND J
106-93-4	1,2-Dibromoethane	1	29-Mar-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	29-Mar-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
107-06-2	1,2-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	29-Mar-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	29-Mar-11	0.20	ND		1.00	ND J
106-99-0	1,3-Butadiene	1	29-Mar-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
106-46-7	1,4-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
123-91-1	1,4-Dioxane	1	29-Mar-11	0.40	ND		1.50	ND J
78-93-3	2-Butanone (MEK)	1	29-Mar-11	0.20	0.60		0.60	1.8 J
591-78-6	2-Hexanone (*)	1	29-Mar-11	0.20	ND		0.83	ND J
622-96-8	4-Ethyltoluene (*)	1	29-Mar-11	0.20	ND		1.00	ND J
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	29-Mar-11	0.20	ND		0.83	ND J
67-64-1	Acetone	1	29-Mar-11	2.0	4.0		4.80	9.7 U
71-43-2	Benzene	1	29-Mar-11	0.20	0.27		0.65	0.88 J
100-44-7	Benzyl chloride	1	29-Mar-11	0.20	ND		1.10	ND J
75-27-4	Bromodichloromethane	1	29-Mar-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	29-Mar-11	0.20	ND		2.10	ND J
74-83-9	Bromomethane	1	29-Mar-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	29-Mar-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	29-Mar-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	29-Mar-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	29-Mar-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	29-Mar-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	29-Mar-11	0.20	0.53		0.42	1.1
156-59-2	cis-1,2-Dichloroethene	1	29-Mar-11	0.20	0.21		0.81	0.85 J

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 3/30/11

3/31/11

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1103006-005A

Client Sample ID 828131A-AA1202
Collection Date: 3/16/2011
Tag # 299/2709
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	29-Mar-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	29-Mar-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	29-Mar-11	0.20	0.50		1.00	2.5
100-41-4	Ethyl benzene	1	29-Mar-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	29-Mar-11	0.20	ND		2.20	ND J
110-54-3	Hexane	1	29-Mar-11	0.20	ND		0.72	ND
67-63-0	Isopropanol	1	29-Mar-11	2.0	0.8	J	5.00	2 J
1330-20-7	m,p-Xylene	1	29-Mar-11	0.60	ND		2.60	ND
1634-04-4	Methyl tert-butyl ether (MTBE)	1	29-Mar-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	29-Mar-11	0.20	ND		0.71	ND
142-82-5	n-Heptene	1	29-Mar-11	0.20	ND		0.83	ND
95-47-6	o-Xylene	1	29-Mar-11	0.20	ND		0.88	ND
100-42-5	Styrene	1	29-Mar-11	0.30	ND		1.30	ND
127-18-4	Tetrachloroethene	1	29-Mar-11	0.20	0.22		1.40	1.5 J
109-99-9	Tetrahydrofuran (*)	1	29-Mar-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	29-Mar-11	0.20	0.35		0.77	1.3
156-60-5	trans-1,2-Dichloroethene	1	29-Mar-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	29-Mar-11	0.040	0.20		0.22	1.1 J
75-69-4	Trichlorofluoromethane (Freon 11)	1	29-Mar-11	0.20	0.28		1.10	1.6
108-05-4	Vinyl acetate	1	29-Mar-11	0.20	ND		0.72	ND J
75-01-4	Vinyl chloride	1	29-Mar-11	0.20	ND		0.52	ND
	Surr: Bromofluorobenzene	1	29-Mar-11	65-135	98.8		0.00	0
	TIC: Cyclotetrasiloxane, octamethyl-	1	29-Mar-11	0	23		0.00	0 GCMS artifact
	TIC: Cyclotrisiloxane, hexamethyl-	1	29-Mar-11	0	9.2		0.00	0

JM 5/3/11

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 3/30/11

JM 5/3/11

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1103006-006A

Client Sample ID 828131A-SS1402
Collection Date: 3/24/2011
Tag # 261-2715
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	29-Mar-11	0.20	0.48		1.10	2.7
79-34-5	1,1,2,2-Tetrachloroethane	1	29-Mar-11	0.20	ND		1.40	ND J
79-00-5	1,1,2-Trichloroethane	1	29-Mar-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethene (Freon 11:	1	29-Mar-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	29-Mar-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	29-Mar-11	0.20	ND		1.60	ND J
95-63-6	1,2,4-Trimethylbenzene	1	29-Mar-11	0.20 .3	0.21		1.59 1.00	1.0 J
106-93-4	1,2-Dibromoethane	1	29-Mar-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	29-Mar-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
107-06-2	1,2-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	29-Mar-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	29-Mar-11	0.20	0.41		1.00	2.0 J
106-99-0	1,3-Butadiene	1	29-Mar-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
106-46-7	1,4-Dichlorobenzene	1	29-Mar-11	0.20	0.42		1.20	2.6 J
123-91-1	1,4-Dioxane	1	29-Mar-11	0.20	ND		0.73	ND J
78-93-3	2-Butanone (MEK)	1	29-Mar-11	0.20	1.4		0.60	4.2 J
591-78-6	2-Hexanone (*)	1	29-Mar-11	0.20	ND		0.83	ND J
622-96-8	4-Ethyltoluene (*)	1	29-Mar-11	0.20	0.31		1.00	1.5 J
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	29-Mar-11	0.20	ND		0.83	ND J
67-64-1	Acetone	1	29-Mar-11	2.0	6.5		4.80	16
71-43-2	Benzene	1	29-Mar-11	0.20	0.33		0.65	1.1 J
100-44-7	Benzyl chloride	1	29-Mar-11	0.20	ND		1.10	ND J
76-27-4	Bromodichloromethane	1	29-Mar-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	29-Mar-11	0.20	ND		2.10	ND J
74-83-9	Bromomethane	1	29-Mar-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	29-Mar-11	0.20	0.44		0.63	1.4
56-23-5	Carbon tetrachloride	1	29-Mar-11	0.20	ND		1.30	ND
108-90-7	Chlorobenzene	1	29-Mar-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	29-Mar-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	29-Mar-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	29-Mar-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	1	29-Mar-11	0.20	4.3		0.81	17

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 3/30/11

3/31/11

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1103006-006A

Client Sample ID 828131A-SS1402
Collection Date: 3/24/2011
Tag # 261-2715
Matrix AIR

TO-15(SG+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	29-Mar-11	0.20	0.35		0.70	1.2
124-48-1	Dibromochloromethane	1	29-Mar-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	29-Mar-11	0.20	9.2		1.00	46
100-41-4	Ethyl benzene	1	29-Mar-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	29-Mar-11	0.20	ND		2.20	ND J
110-54-3	Hexane	1	29-Mar-11	0.20	0.62		0.72	2.2
67-63-0	Isopropanol	1	29-Mar-11	2.0	9.0		5.00	23 ✓
1330-20-7	m,p-Xylene	1	29-Mar-11	0.20	0.83		0.88	3.7
1634-04-4	Methyl tert-butyl ether (MTBE)	1	29-Mar-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	29-Mar-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	29-Mar-11	0.20	0.63		0.83	2.6
95-47-6	o-Xylene	1	29-Mar-11	0.20	0.28		0.88	1.2 J
100-42-5	Styrene	1	29-Mar-11	0.20	ND		0.87	ND
127-18-4	Tetrachloroethene	1	29-Mar-11	0.20	2.3		1.40	16 J ✓
109-99-9	Tetrahydrofuran (*)	1	29-Mar-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	29-Mar-11	0.20	1.4		0.77	5.4
156-60-5	trans-1,2-Dichloroethene	1	29-Mar-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	29-Mar-11	0.20	3.2		1.10	17 J ✓
75-69-4	Trichlorofluoromethane (Freon 11)	1	29-Mar-11	0.20	0.27		1.10	1.5
108-05-4	Vinyl acetate	1	29-Mar-11	0.20	ND		0.72	ND J
75-01-4	Vinyl chloride	1	29-Mar-11	0.20	0.74		0.52	1.9
	Surr: Bromofluorobenzene	1	29-Mar-11	65-135	97.8		0.00	0
	TIC: Butane, 2-methyl-	1	29-Mar-11	0	1.4		0.00	0
	TIC: Cyclotetrasiloxane, octamethyl-	1	29-Mar-11	0	36		0.00	0 GC/MS
	TIC: Cyclotrisiloxane, hexamethyl-	1	29-Mar-11	0	9.5		0.00	0 artifacts
	TIC: Ethane, 2-chloro-1,1,1,2-tetrafluo	1	29-Mar-11	0	17		0.00	0
	TIC: Propane	1	29-Mar-11	0	5.8		0.00	0
	TIC: tert-Butyldimethylsilanol	1	29-Mar-11	0	2.4		0.00	0
	TIC: unknown	1	29-Mar-11	0	11		0.00	0

gr 5/3/11

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 3/30/11

gr 5/3/11

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1103006-007A

Client Sample ID 828131A-IA1402
Collection Date: 3/24/2011
Tag # 338/2677
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	29-Mar-11	0.20	0.61		1.10	3.4
79-34-5	1,1,2,2-Tetrachloroethane	1	29-Mar-11	0.20	ND		1.40	ND J
79-00-5	1,1,2-Trichloroethane	1	29-Mar-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	29-Mar-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	29-Mar-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	29-Mar-11	0.20	ND		1.50	ND J
95-63-6	1,2,4-Trimethylbenzene	1	29-Mar-11	0.30	ND		1.50	ND J
106-93-4	1,2-Dibromoethane	1	29-Mar-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	29-Mar-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
107-06-2	1,2-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	29-Mar-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	29-Mar-11	0.20	0.22		1.00	1.1 J
106-99-0	1,3-Butadiene	1	29-Mar-11	0.20	ND		0.46	ND
541-73-1	1,3-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
106-46-7	1,4-Dichlorobenzene	1	29-Mar-11	0.20	0.34		1.20	2.1 J
123-91-1	1,4-Dioxane	1	29-Mar-11	0.40	ND		1.50	ND J
78-93-3	2-Butanone (MEK)	1	29-Mar-11	0.20	ND		0.60	ND J
591-78-6	2-Hexanone (*)	1	29-Mar-11	0.20	ND		0.83	ND J
622-96-8	4-Ethyltoluene (*)	1	29-Mar-11	0.20	ND		1.00	ND J
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	29-Mar-11	0.20	ND		0.83	ND J
67-64-1	Acetone	1	29-Mar-11	2.0	6.6		4.80	16
71-43-2	Benzene	1	29-Mar-11	0.20	0.29		0.65	0.94 J
100-44-7	Benzyl chloride	1	29-Mar-11	0.20	ND		1.10	ND J
75-27-4	Bromodichloromethane	1	29-Mar-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	29-Mar-11	0.20	ND		2.10	ND J
74-83-9	Bromomethane	1	29-Mar-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	29-Mar-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	29-Mar-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	29-Mar-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	29-Mar-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	29-Mar-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	29-Mar-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	1	29-Mar-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certifioation not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 3/30/11

JR 5/3/11

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1103006-007A

Client Sample ID 828131A-IA1402
Collection Date: 3/24/2011
Tag # 338/2677
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	29-Mar-11	0.20	2.5		0.70	8.7
124-48-1	Dibromochloromethane	1	29-Mar-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	29-Mar-11	0.20	ND		1.00	ND
100-41-4	Ethyl benzene	1	29-Mar-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	29-Mar-11	0.20	ND		2.20	ND J
110-54-3	Hexane	1	29-Mar-11	0.20	1.6		0.72	5.7
67-63-0	Isopropanol	1	29-Mar-11	2.0	4.9		5.00	12
1330-20-7	m,p-Xylene	1	29-Mar-11	0.60	ND		2.60	ND
1634-04-4	Methyl tert-butyl ether (MTBE)	1	29-Mar-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	29-Mar-11	0.20	0.28		0.71	0.99 J
142-82-5	n-Heptane	1	29-Mar-11	0.20	0.77		0.83	3.2
95-47-6	o-Xylene	1	29-Mar-11	0.20	0.20		0.88	0.88 J
100-42-5	Styrene	1	29-Mar-11	0.30	ND		1.30	ND
127-18-4	Tetrachloroethene	1	29-Mar-11	0.20	ND		1.40	ND J
109-99-9	Tetrahydrofuran (*)	1	29-Mar-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	29-Mar-11	0.20	16		0.77	61
156-60-5	trans-1,2-Dichloroethene	1	29-Mar-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	29-Mar-11	0.040	ND		0.22	ND J
75-69-4	Trichlorofluoromethane (Freon 11)	1	29-Mar-11	0.20	0.29		1.10	1.7
108-05-4	Vinyl acetate	1	29-Mar-11	0.20	ND		0.72	ND J
75-01-4	Vinyl chloride	1	29-Mar-11	0.20	ND		0.52	ND
	Surr: Bromofluorobenzene	1	29-Mar-11	65-135	97.7		0.00	0
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~29-Mar-11~~	~~0~~	~~22~~		~~0.00~~	~~0~~ GCMS
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~29-Mar-11~~	~~0~~	~~8.7~~		~~0.00~~	~~0~~ artifacts
	TIC: Difluorochloromethane	1	29-Mar-11	0	60		0.00	0
	TIC: Hexane, 2-methyl-	1	29-Mar-11	0	2.7		0.00	0 JF 5/3/11
	TIC: Propane	1	29-Mar-11	0	130		0.00	0
	TIC: unknown (4.537)	1	29-Mar-11	0	8.7		0.00	0
	TIC: unknown (5.505)	1	29-Mar-11	0	16		0.00	0
	TIC: unknown hydrocarbon (4.473)	1	29-Mar-11	0	7.1		0.00	0
	TIC: unknown hydrocarbon (4.611)	1	29-Mar-11	0	1.8		0.00	0

Qualifiers:

(*) Certification not offered by NYS for this compound	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
Q Outlying QC recoveries were associated with this analyte	S Spike Recovery outside accepted recovery limits

Approved By KJP

Date: 3/30/11

JF 5/3/11

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1103006-008A

Client Sample ID 828131A-AA1402
Collection Date: 3/24/2011
Tag # 262/2659
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	29-Mar-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	29-Mar-11	0.20	ND		1.40	ND J
79-00-5	1,1,2-Trichloroethane	1	29-Mar-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	29-Mar-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	29-Mar-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	29-Mar-11	0.20	ND		1.50	ND J
95-63-6	1,2,4-Trimethylbenzene	1	29-Mar-11	0.30	ND		1.50	ND J
106-93-4	1,2-Dibromoethane	1	29-Mar-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	29-Mar-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
107-06-2	1,2-Dichloroethane	1	29-Mar-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	29-Mar-11	0.20	ND		0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	29-Mar-11	0.20	ND		1.00	ND J
106-99-0	1,3-Butadiene	1	29-Mar-11	0.20	ND		0.45	ND
541-73-1	1,3-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
106-46-7	1,4-Dichlorobenzene	1	29-Mar-11	0.20	ND		1.20	ND J
123-91-1	1,4-Dioxane	1	29-Mar-11	0.40	ND		1.50	ND J
78-93-3	2-Butanone (MEK)	1	29-Mar-11	0.20	ND		0.60	ND J
591-78-6	2-Hexanone (*)	1	29-Mar-11	0.20	ND		0.83	ND J
622-96-8	4-Ethyltoluene (*)	1	29-Mar-11	0.20	ND		1.00	ND J
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	29-Mar-11	0.20	ND		0.83	ND J
67-64-1	Acetone	1	29-Mar-11	2.0	3.6		4.80	8.7 U
71-43-2	Benzene	1	29-Mar-11	0.20	0.20		0.65	0.65 J
100-44-7	Benzyl chloride	1	29-Mar-11	0.20	ND		1.10	ND J
75-27-4	Bromodichloromethane	1	29-Mar-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	29-Mar-11	0.20	ND		2.10	ND J
74-83-9	Bromomethane	1	29-Mar-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	29-Mar-11	0.20	ND		0.63	ND
56-23-5	Carbon tetrachloride	1	29-Mar-11	0.040	ND		0.26	ND
108-90-7	Chlorobenzene	1	29-Mar-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	29-Mar-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	29-Mar-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	29-Mar-11	0.20	0.65		0.42	1.2
156-59-2	cis-1,2-Dichloroethene	1	29-Mar-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 3/30/11

3/31/11

Enalytic,LLC

Analytical Report

Date *30-Mar-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1103006-008A

Client Sample ID 828131A-AA1402
Collection Date: 3/24/2011
Tag # 262/2659
Matrix AIR

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	29-Mar-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	29-Mar-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	29-Mar-11	0.20	0.53		1.00	2.7
100-41-4	Ethyl benzene	1	29-Mar-11	0.20	ND		0.88	ND
87-68-3	Hexachlorobutadiene	1	29-Mar-11	0.20	ND		2.20	ND J
110-54-3	Hexane	1	29-Mar-11	0.20	ND		0.72	ND
67-63-0	Isopropanol	1	29-Mar-11	2.0	0.4	J	5.00	1 J
1330-20-7	m,p-Xylene	1	29-Mar-11	0.60	ND		2.60	ND
1634-04-4	Methyl tert-butyl ether (MTBE)	1	29-Mar-11	0.20	ND		0.73	ND
75-09-2	Methylene chloride	1	29-Mar-11	0.20	ND		0.71	ND
142-82-5	n-Heptane	1	29-Mar-11	0.20	ND		0.83	ND
95-47-6	o-Xylene	1	29-Mar-11	0.20	ND		0.88	ND
100-42-5	Styrene	1	29-Mar-11	0.30	ND		1.30	ND
127-18-4	Tetrachloroethene	1	29-Mar-11	0.20	ND		1.40	ND J
109-99-9	Tetrahydrofuran (*)	1	29-Mar-11	0.20	ND		0.60	ND
108-88-3	Toluene	1	29-Mar-11	0.20	0.68		0.77	2.6
156-60-5	trans-1,2-Dichloroethene	1	29-Mar-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	29-Mar-11	0.20	ND		0.92	ND
79-01-6	Trichloroethene	1	29-Mar-11	0.040	ND		0.22	ND J
75-69-4	Trichlorofluoromethane (Freon 11)	1	29-Mar-11	0.20	0.27		1.10	1.5
108-05-4	Vinyl acetate	1	29-Mar-11	0.20	ND		0.72	ND J
75-01-4	Vinyl chloride	1	29-Mar-11	0.20	ND		0.52	ND
	Surr: Bromofluorobenzene	1	29-Mar-11	65-135	93.2		0.00	0
	TIC: unknown	1	29-Mar-11	0	2.4		0.00	0

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 3/30/11

5/3/11

DATA USABILITY SUMMARY REPORT
APRIL 2011 SUMP WATER SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

1.0 INTRODUCTION

Sump water samples were collected at the Off-Site Carriage Cleaners Site (Site) in Penfield, New York, in April 2011 and submitted for volatile organic compound (VOC) analysis by USEPA Method 8260B. Samples were analyzed by Chemtech, located in Mountainside, New Jersey. Results were reported in Sample Delivery Group (SDG) C2041.

A listing of samples included in this Data Usability Summary Report is presented in Table 1. A summary of the analytical results is presented in Table 2. A summary of sample results qualified during this review is presented in Table 3 (Summary of Validation Actions).

Deliverables for the off-site laboratory analyses included a Category B deliverable as defined in the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocols (NYSDEC, 2005).

A project chemist review was completed based on NYSDEC Division of Environmental Remediation guidance for Data Usability Summary Reports (NYSDEC, 2010). USEPA Region 2 quality control (QC) limits were used during the data evaluation unless noted otherwise. The project chemist review included evaluations of sample collection, data package completeness, holding times, QC data (blanks, instrument calibrations, duplicates, surrogate recovery, and spike recovery), data transcription, electronic data reporting, calculations, and data qualification. The following laboratory or data validation qualifiers are used in the final data presentation.

U = target analyte is not detected at the reported detection limit
J = concentration is estimated
UJ = target analyte is not detected at the reported detection limit and is estimated
E = analyte concentration exceeds the calibrated range of the instrument
D = analyte concentration is the result of a diluted sample analysis

Results are interpreted to be usable as reported by the laboratory unless discussed in the following sections.

2.0 VOCS – METHOD 8260B

Initially, a single sump sample was collected for analysis. During validation, it was determined that sample vials were filled from separated sources draining into the collection sump. One vial was filled from each of the drains. Field sample identification was adjusted to account for different sample collection locations.

Initial Calibration

SDG C2041

In the initial calibration, the relative percent standard deviation for 1,2-dibromo-3-chloropropane (29) exceeded the QC limit of 20. The result for 1,2-dibromo-3-chloropropane was not detected in the associated samples and the reporting limits were qualified estimated (UJ).

Continuing Calibration

In the continuing calibration associated with a subset of samples, the percent difference for bromomethane (-24), chloroethane (-24), acetone (-32), and methyl acetate (-21) exceeded the QC limit of 20. The associated sample result for bromomethane, chloroethane, acetone, and methyl acetate was not detected and the reporting limits were qualified estimated (UJ).

In the continuing calibration associated with a subset of samples, the percent difference for dichlorodifluoromethane (-23) and 1,2-dibromo-3-chloropropane (24) exceeded the QC limit of 20. The associated sample result for dichlorodifluoromethane and 1,2-dibromo-3-chloropropane was not detected and the reporting limits were qualified estimated (UJ).

Laboratory Control Samples (LCS)

For a subset of samples, the LCS percent recovery of dichlorodifluoromethane (60) was below the minimum QC limit of 70. Dichlorodifluoromethane was not detected in the associated sample and the sample result was qualified estimated at the reporting limit (UJ).

Reference:

New York State Department of Environmental Conservation (NYSDEC), 2005. "Analytical Services Protocols"; July 2005.

New York State Department of Environmental Conservation (NYSDEC), 2010. "Technical Guidance for Site Investigation and Remediation-Appendix 2B"; DER-10; Division of Environmental Remediation; May 2010.

USEPA Region 2, 2006. "Validating Volatile Organic Analysis of Ambient Air in Canister by Method TO-15"; SOP # HW-31, Revision 4, Hazardous Waste Support Branch; October 2006.

Data Validator: Michael Washburn

Date: 6/30/11

Reviewed by Chris Ricardi, NRCC-EAC
Quality Assurance Officer

Date: 6/30/11

TABLE 1
SUMMARY OF SAMPLES
DATA USABILITY SUMMARY REPORT
APRIL 2011 SUMP SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

						Class	VOC
						Analysis Method	SW8260B
						Fraction	T
SDG	**Media**	**Location**	**Lab ID**	**Sample ID**	**Sample Date**	**QC Code**	
C2041	NA-L	SW-15A	Chemtech	828131A-SW1501A	4/27/2011	FS	49
C2041	NA-L	SW-15B	Chemtech	828131A-SW1501B	4/27/2011	FS	49
C2041	BW	QC	Chemtech	TRIPBLANK	4/26/2011	FS	49

Notes:
QC CODE
FS = field sample
Media
NA-L = Not Available
BW = Blank Water

Prepared by / Date: KJC 05/26/11
Checked by / Date: MJW 06/29/11

TABLE 2
DATA USABILITY SUMMARY REPORT
APRIL 2011 SUMP SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

	Location	SW-15A		SW-15B	
	Sample Date	4/27/2011		4/27/2011	
	Sample ID	828131A-SW1501A		828131A-SW1501B	
	Qc Code	FS		FS	
Parameter	Units	Result	Qualifier	Result	Qualifier
1,1,1-Trichloroethane	µg/L	1	U	5	U
1,1,2,2-Tetrachloroethane	µg/L	1	U	5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	µg/L	1	U	5	U
1,1,2-Trichloroethane	µg/L	1	U	5	U
1,1-Dichloroethane	µg/L	1	U	5	U
1,1-Dichloroethene	µg/L	1	U	5	U
1,2,4-Trichlorobenzene	µg/L	1	U	5	U
1,2-Dibromo-3-chloropropane	µg/L	1	UJ	5	UJ
1,2-Dibromoethane	µg/L	1	U	5	U
1,2-Dichlorobenzene	µg/L	1	U	5	U
1,2-Dichloroethane	µg/L	1	U	5	U
1,2-Dichloropropane	µg/L	1	U	5	U
1,3-Dichlorobenzene	µg/L	1	U	5	U
1,4-Dichlorobenzene	µg/L	1	U	5	U
2-Butanone	µg/L	5	U	25	U
2-Hexanone	µg/L	5	U	25	U
4-Methyl-2-pentanone	µg/L	5	U	25	U
Acetic acid, methyl ester	µg/L	1	UJ	5	U
Acetone	µg/L	5	UJ	25	U
Benzene	µg/L	1	U	5	U
Bromodichloromethane	µg/L	1	U	5	U
Bromoform	µg/L	1	U	5	U
Bromomethane	µg/L	1	UJ	5	U
Carbon disulfide	µg/L	1	U	5	U
Carbon tetrachloride	µg/L	1	U	5	U
Chlorobenzene	µg/L	1	U	5	U
Chlorodibromomethane	µg/L	1	U	5	U
Chloroethane	µg/L	1	UJ	5	U
Chloroform	µg/L	1	U	5	U
Chloromethane	µg/L	1	U	5	U
Cis-1,2-Dichloroethene	µg/L	170	EJ	17	D
cis-1,3-Dichloropropene	µg/L	1	U	5	U
Cyclohexane	µg/L	1	U	5	U
Dichlorodifluoromethane	µg/L	1	U	5	UJ
Ethyl benzene	µg/L	1	U	5	U
Isopropylbenzene	µg/L	1	U	5	U
Methyl cyclohexane	µg/L	1	U	5	U
Methyl Tertbutyl Ether	µg/L	1	U	5	U
Methylene chloride	µg/L	1	U	5	U
Styrene	µg/L	1	U	5	U
Tetrachloroethene	µg/L	5.6		5	U
Toluene	µg/L	1	U	5	U
trans-1,2-Dichloroethene	µg/L	4.6		5	U
trans-1,3-Dichloropropene	µg/L	1	U	5	U
Trichloroethene	µg/L	37		5	U
Trichlorofluoromethane	µg/L	1	U	5	U
Vinyl chloride	µg/L	41		17	D
Xylene, o	µg/L	1	U	5	U
Xylenes (m&p)	µg/L	2	U	10	U

Notes:
Qualifier: U = not detected, J = estimated result
D = result from a dilution analysis, E = analyte concentration exceeds the calibrated range of the instrument
QC Code: FS = Field Sample
ug/L = microgram per liter

TABLE 3
SUMMARY OF DATA VALIDATION ACTIONS
DATA USABILITY SUMMARY REPORT
APRIL 2011 SUMP WATER SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

SDG	Lab Sample Id	Analysis Method	Field Sample ID	Analyte Name	Lab Resul	Lab Qual	Validated Result	Validation Qualifier	Val Reason Code	Result Units	Lab Id
C2041	C2041-01	SW8260B	828131A-SW1501A	1,2-Dibromo-3-chloropropane	1	U	1	UJ	ICVRSD	µg/L	Chemtech
C2041	C2041-01	SW8260B	828131A-SW1501A	Acetic acid, methyl ester	1	U	1	UJ	CCV%D	µg/L	Chemtech
C2041	C2041-01	SW8260B	828131A-SW1501A	Acetone	5	U	5	UJ	CCV%D	µg/L	Chemtech
C2041	C2041-01	SW8260B	828131A-SW1501A	Bromomethane	1	U	1	UJ	CCV%D	µg/L	Chemtech
C2041	C2041-01	SW8260B	828131A-SW1501A	Chloroethane	1	U	1	UJ	CCV%D	µg/L	Chemtech
C2041	C2041-01	SW8260B	828131A-SW1501A	Cis-1,2-Dichloroethene	170	E	170	EJ	E	µg/L	Chemtech
C2041	C2041-01DL	SW8260B	828131A-SW1501B	1,2-Dibromo-3-chloropropane	5	U	5	UJ	ICVRSD, CCV%D, LCS-L	µg/L	Chemtech
C2041	C2041-01DL	SW8260B	828131A-SW1501B	Dichlorodifluoromethane	5	U	5	UJ	CCV%D, LCS-L	µg/L	Chemtech

Notes:

Validation Qualifiers:

U = not detected, value is the detection limit

J = value is estimated

E = exceeds the calibrated range of the instrument

Validation Reason Codes:

LCS-L = LCS recovery low

E = result exceeds calibration range

CCV%D = Continuing calibration percent difference exceeds the goal

ICVRSD = Initial calibration relative percent standard deviatoim exceeds the limit

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	04/27/11
Project:	Carriage Cleantown	Date Received:	04/29/11
Client Sample ID:	828131A-SW1501A	SDG No.:	C2041
Lab Sample ID:	C2041-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034685.D	1		05/06/11	VG050611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	1	U	0.2	1	ug/L
74-87-3	Chloromethane	1	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	41		0.34	1	ug/L
74-83-9	Bromomethane	1	UJ	0.2	1	ug/L
75-00-3	Chloroethane	1	UJ	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	1	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1	U	0.47	1	ug/L
67-64-1	Acetone	5	UJ	0.5	5	ug/L
75-15-0	Carbon Disulfide	1	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	1	U	0.35	1	ug/L
79-20-9	Methyl Acetate	1	UJ	0.2	1	ug/L
75-09-2	Methylene Chloride	1	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	4.6		0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1	U	0.36	1	ug/L
110-82-7	Cyclohexane	1	U	0.2	1	ug/L
78-93-3	2-Butanone	5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	1	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	170	EJ	0.35	1	ug/L
67-66-3	Chloroform	1	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	1	U	0.2	1	ug/L
71-43-2	Benzene	1	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	1	U	0.48	1	ug/L
79-01-6	Trichloroethene	37		0.28	1	ug/L
78-87-5	1,2-Dichloropropane	1	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	1	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	5	U	2.1	5	ug/L
108-88-3	Toluene	1	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	1	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	1	U	0.31	1	ug/L

MSW 6/24/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	04/27/11
Project:	Carriage Cleantown	Date Received:	04/29/11
Client Sample ID:	828131A-SW1501A	SDG No.:	C2041
Lab Sample ID:	C2041-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034685.D	1		05/06/11	VG050611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	1	U	0.38	1	ug/L
591-78-6	2-Hexanone	5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	1	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	1	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	5.6		0.27	1	ug/L
108-90-7	Chlorobenzene	1	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	1	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	2	U	0.95	2	ug/L
95-47-6	o-Xylene	1	U	0.43	1	ug/L
100-42-5	Styrene	1	U	0.36	1	ug/L
75-25-2	Bromoform	1	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	1	UJ	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55		66 - 150	110%	SPK: 50
1868-53-7	Dibromofluoromethane	51.8		76 - 130	104%	SPK: 50
2037-26-5	Toluene-d8	45.3		78 - 121	91%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.1		70 - 131	104%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	467503	3.89			
540-36-3	1,4-Difluorobenzene	857548	4.68			
3114-55-4	Chlorobenzene-d5	707823	9.65			
3855-82-1	1,4-Dichlorobenzene-d4	253960	13.36			

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	04/27/11
Project:	Carriage Cleantown	Date Received:	04/29/11
Client Sample ID:	828131A-SW1501DL B	SDG No.:	C2041
Lab Sample ID:	C2041-01DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034737.D	5		05/10/11	vg051011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	UJ	1	5	ug/L
74-87-3	Chloromethane	5	U	1	5	ug/L
75-01-4	Vinyl Chloride	17	D	1.7	5	ug/L
74-83-9	Bromomethane	5	U	1	5	ug/L
75-00-3	Chloroethane	5	U	1	5	ug/L
75-69-4	Trichlorofluoromethane	5	U	1.8	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	2.2	5	ug/L
75-35-4	1,1-Dichloroethene	5	U	2.4	5	ug/L
67-64-1	Acetone	25	U	2.5	25	ug/L
75-15-0	Carbon Disulfide	5	U	1	5	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	1.8	5	ug/L
79-20-9	Methyl Acetate	5	U	1	5	ug/L
75-09-2	Methylene Chloride	5	U	2	5	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	2	5	ug/L
75-34-3	1,1-Dichloroethane	5	U	1.8	5	ug/L
110-82-7	Cyclohexane	5	U	1	5	ug/L
78-93-3	2-Butanone	25	U	6.6	25	ug/L
56-23-5	Carbon Tetrachloride	5	U	1	5	ug/L
156-59-2	cis-1,2-Dichloroethene	17	D STET	1.8	5	ug/L
67-66-3	Chloroform	5	U	1.7	5	ug/L
71-55-6	1,1,1-Trichloroethane	5	U	2	5	ug/L
108-87-2	Methylcyclohexane	5	U	1	5	ug/L
71-43-2	Benzene	5	U	1.6	5	ug/L
107-06-2	1,2-Dichloroethane	5	U	2.4	5	ug/L
79-01-6	Trichloroethene	5	U	1.4	5	ug/L
78-87-5	1,2-Dichloropropane	5	U	2.3	5	ug/L
75-27-4	Bromodichloromethane	5	U	1.8	5	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	10	25	ug/L
108-88-3	Toluene	5	U	1.8	5	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	1.4	5	ug/L
10061-01-5	cis-1,3-Dichloropropene	5	U	1.6	5	ug/L

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6/24/11

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Report of Analysis

Client:	MACTEC Inc.	Date Collected:	04/27/11
Project:	Carriage Cleantown	Date Received:	04/29/11
Client Sample ID:	828131A-SW150LDL B	SDG No.:	C2041
Lab Sample ID:	C2041-01DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034737.D	5		05/10/11	vg051011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	5	U	1.9	5	ug/L
591-78-6	2-Hexanone	25	U	9.7	25	ug/L
124-48-1	Dibromochloromethane	5	U	1	5	ug/L
106-93-4	1,2-Dibromoethane	5	U	2	5	ug/L
127-18-4	Tetrachloroethene	5	U	1.4	5	ug/L
108-90-7	Chlorobenzene	5	U	2.4	5	ug/L
100-41-4	Ethyl Benzene	5	U	1	5	ug/L
179601-23-1	m/p-Xylenes	10	U	4.8	10	ug/L
95-47-6	o-Xylene	5	U	2.2	5	ug/L
100-42-5	Styrene	5	U	1.8	5	ug/L
75-25-2	Bromoform	5	U	2.4	5	ug/L
98-82-8	Isopropylbenzene	5	U	2.2	5	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	1.6	5	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	2.2	5	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	1.6	5	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	2.2	5	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	UJ	2.3	5	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	1	5	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	51.1		66 - 150	102%	SPK: 50
1868-53-7	Dibromofluoromethane	46.6		76 - 130	93%	SPK: 50
2037-26-5	Toluene-d8	44.2		78 - 121	88%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.3		70 - 131	93%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	540849	3.87			
540-36-3	1,4-Difluorobenzene	1013910	4.68			
3114-55-4	Chlorobenzene-d5	816719	9.64			
3855-82-1	1,4-Dichlorobenzene-d4	299422	13.35			

MJW 6/24/11

DATA USABILITY SUMMARY REPORT
APRIL 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

1.0 INTRODUCTION

Air samples were collected at the Off-Site Carriage Cleaners Site (Site) in Penfield, New York, in April 2011 and submitted for TO-15 analysis. Samples were analyzed by Enalytic, LLC, located in East Syracuse, New York. Results were reported in Sample Delivery Group (SDG): E1105001.

A listing of samples included in this Data Usability Summary Report is presented in Table 1. A summary of the analytical results is presented in Table 2. A summary of sample results qualified during this review is presented in Table 3 (Summary of Validation Actions). Tentatively Identified Compounds (TICs) are presented in Table 4. Samples were analyzed for Volatile organic compounds (VOCs) by USEPA Method TO-15.

Deliverables for the off-site laboratory analyses included a Category B deliverable as defined in the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocols (NYSDEC, 2005).

A project chemist review was completed based on NYSDEC Division of Environmental Remediation guidance for Data Usability Summary Reports (NYSDEC, 2010). USEPA Region 2 QC limits were used during the data evaluation unless noted otherwise. The project chemist review included evaluations of sample collection, data package completeness, holding times, QC data (blanks, instrument calibrations, duplicates, surrogate recovery, and spike recovery), data transcription, electronic data reporting, calculations, and data qualification. The following laboratory or data validation qualifiers are used in the final data presentation.

U = target analyte is not detected at the reported detection limit
J = concentration is estimated
UJ = target analyte is not detected at the reported detection limit and is estimated

Results are interpreted to be usable as reported by the laboratory unless discussed in the following sections.

2.0 VOCS – METHOD TO-15

Initial Calibration

SDG E1105001

The relative percent standard deviation between the response factors was above the Region 2 control limit of 30 for methylene chloride (35) in the initial calibration analyzed on April 27, 2011. The results for methylene chloride were qualified estimated (J) in samples 828131A-IA1303 and 828131A-IA1503.

Continuing Calibration

SDG E1105001

The percent difference (%D) between the initial calibration average RRF and the continuing calibration RRF was above the Region 2 control limit of 30 for bromoform (-50). Bromoform was not detected in the associated samples and the reporting limits were qualified estimated (UJ).

Quantitation Limit Check Standard (CRQL)

SDG E1105001

The CRQL check standard associated with both samples in SDG E1102001 had percent recoveries above the upper laboratory control limit of 135 for the following analytes:

Analyte	% Recovery
2-butanone (MEK)	150
Acetone	800
Cis-1,2-dichloroethene	440
Isopropanol	1100
Methylene chloride	140
Tetrachloroethene	170
Trichloroethene	170

Professional judgment was used to qualify only detections less than 2X the 0.2 ppbv CRQL spike concentration. Methylene chloride was qualified estimated (J) at 0.95 $\mu g/m^3$ (0.27 ppbv) in sample 828131A-IA-IA1503.

Laboratory Control Samples (LCS)

SDG E1105001

In the LCS associated with both samples, the following analytes had a percent recovery that was below the Region 2 control limit of 70:

Analyte	% Recovery
1,2,4-Trichlorobenzene	69
1,2-Dichloropropane	69
1,3-Butadiene	66
1,4-Dioxane	67
2-Butanone (MEK)	61
2-Hexanone	60
4-Methyl-2-pentanone (MIBK)	62
Acetone	64
Carbon disulfide	68
Hexachlorobutadiene	68
Methyl tert-butyl ether (MTBE)	69
Methylene chloride	60
n-Heptane	69
Tetrahydrofuran	65

Analyte	% Recovery
Trans-1,3-dichloropropene	69
Vinyl acetate	62
Vinyl chloride	69

The results for these compounds were qualified estimated (J/UJ) in samples 828131A-IA1303 and 828131A-IA1503.

Tentatively Identified Compounds

Tentatively identified compounds (TICs) were reported by the laboratory in SDG E1105001. TICs being reported as final results in samples are presented in Table 4. If a sample is not listed, no TICs were reported in the sample, or the TICs were removed as blank contaminants or artifacts of the GC/MS instrument system.

Reference:

New York State Department of Environmental Conservation (NYSDEC), 2005. "Analytical Services Protocols"; July 2005.

New York State Department of Environmental Conservation (NYSDEC), 2010. "Technical Guidance for Site Investigation and Remediation-Appendix 2B"; DER-10; Division of Environmental Remediation; May 2010.

USEPA Region 2, 2006. "Validating Volatile Organic Analysis of Ambient Air in Canister by Method TO-15"; SOP # HW-31, Revision 4, Hazardous Waste Support Branch; October 2006.

Data Validator: Mike Washburn

Date: 6/27/11

Reviewed by Tige Cunningham, NRCC-EAC

Date: 6/29/11

TABLE 1
SUMMARY OF SAMPLES
DATA USABILITY SUMMARY REPORT
APRIL 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

Location	Sample Date	Sample ID	Qc Code	Class Method Fraction Media	VOC EPA TO-15 T
IA-13	4/28/2011	828131A-IA1303	FS	AIR	X
IA-15	4/28/2011	828131A-IA1503	FS	AIR	X

Notes
QC CODE
FS = field sample

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
APRIL 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Location	IA-13		IA-15	
		Sample Date	4/28/2011		4/28/2011	
		Sample ID	828131A-IA1303		828131A-IA1503	
		Qc Code	FS		FS	
Analysis	Parameter	Units	Result	Qualifier	Result	Qualifier
EPA TO-15	1,1,1-Trichloroethane	UG/M3	1.1	U	1.1	U
EPA TO-15	1,1,2,2-Tetrachloroethane	UG/M3	1.4	U	1.4	U
EPA TO-15	1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/M3	1.6	U	1.6	U
EPA TO-15	1,1,2-Trichloroethane	UG/M3	1.1	U	1.1	U
EPA TO-15	1,1-Dichloroethane	UG/M3	0.82	U	0.82	U
EPA TO-15	1,1-Dichloroethene	UG/M3	0.81	U	0.81	U
EPA TO-15	1,2,4-Trichlorobenzene	UG/M3	1.5	UJ	1.5	UJ
EPA TO-15	1,2,4-Trimethylbenzene	UG/M3	5.3		1.5	U
EPA TO-15	1,2-Dibromoethane	UG/M3	1.6	U	1.6	U
EPA TO-15	1,2-Dichloro-1,1,2,2-tetrafluoroethane	UG/M3	1.4	U	1.4	U
EPA TO-15	1,2-Dichlorobenzene	UG/M3	1.2	U	1.2	U
EPA TO-15	1,2-Dichloroethane	UG/M3	0.82	U	1.1	
EPA TO-15	1,2-Dichloropropane	UG/M3	0.94	UJ	0.94	UJ
EPA TO-15	1,3,5-Trimethylbenzene	UG/M3	25		1.6	
EPA TO-15	1,3-Butadiene	UG/M3	0.45	UJ	0.45	UJ
EPA TO-15	1,3-Dichlorobenzene	UG/M3	1.2	U	1.2	U
EPA TO-15	1,4-Dichlorobenzene	UG/M3	1.2	U	1.2	U
EPA TO-15	1,4-Dioxane	UG/M3	1.5	UJ	1.5	UJ
EPA TO-15	2-Butanone	UG/M3	5.6	J	2.8	J
EPA TO-15	2-Hexanone	UG/M3	0.83	UJ	0.83	UJ
EPA TO-15	2-Propanol	UG/M3	5	U	8.8	
EPA TO-15	4-Ethyltoluene	UG/M3	24		1.3	
EPA TO-15	4-Methyl-2-pentanone	UG/M3	0.83	UJ	0.83	UJ
EPA TO-15	Acetone	UG/M3	41	J	27	J
EPA TO-15	Benzene	UG/M3	29		1.2	
EPA TO-15	Benzyl chloride	UG/M3	1.1	U	1.1	U
EPA TO-15	Bromodichloromethane	UG/M3	1.4	U	1.4	U
EPA TO-15	Bromoform	UG/M3	2.1	UJ	2.1	UJ
EPA TO-15	Bromomethane	UG/M3	0.79	U	0.79	U
EPA TO-15	Carbon disulfide	UG/M3	0.63	UJ	0.63	UJ
EPA TO-15	Carbon tetrachloride	UG/M3	0.77		0.83	
EPA TO-15	Chlorobenzene	UG/M3	0.94	U	0.94	U
EPA TO-15	Chlorodibromomethane	UG/M3	1.7	U	1.7	U
EPA TO-15	Chloroethane	UG/M3	0.54	U	0.54	U
EPA TO-15	Chloroform	UG/M3	0.99	U	0.99	U
EPA TO-15	Chloromethane	UG/M3	0.42	U	1.6	
EPA TO-15	Cis-1,2-Dichloroethene	UG/M3	0.81	U	17	
EPA TO-15	cis-1,3-Dichloropropene	UG/M3	0.92	U	0.92	U
EPA TO-15	Cyclohexane	UG/M3	0.7	U	0.7	U
EPA TO-15	Dichlorodifluoromethane	UG/M3	2.6		2.5	
EPA TO-15	Ethyl benzene	UG/M3	25		1.2	
EPA TO-15	Heptane	UG/M3	0.83	UJ	0.83	UJ
EPA TO-15	Hexachlorobutadiene	UG/M3	2.2	UJ	2.2	UJ
EPA TO-15	Hexane	UG/M3	23		0.72	U
EPA TO-15	Methyl Tertbutyl Ether	UG/M3	0.73	UJ	0.73	UJ
EPA TO-15	Methylene chloride	UG/M3	2.5	J	0.95	J
EPA TO-15	Styrene	UG/M3	1.3	U	1.3	U
EPA TO-15	Tetrachloroethene	UG/M3	1.4	U	5.8	
EPA TO-15	Tetrahydrofuran	UG/M3	1	J	0.6	UJ
EPA TO-15	Toluene	UG/M3	130		7	

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
APRIL 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

		Location	IA-13		IA-15	
		Sample Date	4/28/2011		4/28/2011	
		Sample ID	828131A-IA1303		828131A-IA1503	
		Qc Code	FS		FS	
Analysis	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier
EPA TO-15	trans-1,2-Dichloroethene	UG/M3	0.81	U	0.81	U
EPA TO-15	trans-1,3-Dichloropropene	UG/M3	0.92	UJ	0.92	UJ
EPA TO-15	Trichloroethene	UG/M3	0.22	U	20	
EPA TO-15	Trichlorofluoromethane	UG/M3	1.5		1.4	
EPA TO-15	Vinyl acetate	UG/M3	0.72	UJ	0.72	UJ
EPA TO-15	Vinyl chloride	UG/M3	0.52	UJ	8.5	J
EPA TO-15	Xylene, m/p	UG/M3	87		3.2	
EPA TO-15	Xylene, o	UG/M3	31		1.2	

Notes:
UG/M3 = microgram per cubic meter
Qualifiers-
U = not detected at the reporting limit
J = estimated concentration
QC Code-
FS = Field Sample

TABLE 3
SUMMARY OF DATA VALIDATION ACTIONS
DATA USABILITY SUMMARY REPORT
APRIL 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

SDG	Lab Sample Id	Analysis Method	Field Sample ID	Analyte Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifie	Val Reason Code	Result Units	Lab Id
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	1,2,4-Trichlorobenzene	1.5	U	1.5	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	1,2-Dichloropropane	0.94	U	0.94	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	1,3-Butadiene	0.45	U	0.45	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	1,4-Dioxane	1.5	U	1.5	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	2-Butanone	5.6	Q	5.6	J	LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	2-Hexanone	0.83	U	0.83	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	4-Methyl-2-pentanone	0.83	U	0.83	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	Acetone	41		41	J	LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	Bromoform	2.1	UQ	2.1	UJ	CCV%D	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	Carbon disulfide	0.63	U	0.63	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	Heptane	0.83	U	0.83	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	Hexachlorobutadiene	2.2	U	2.2	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	Methyl Tertbutyl Ether	0.73	U	0.73	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	Methylene chloride	2.5		2.5	J	ICVRSD, LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	Tetrahydrofuran	1		1	J	LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	trans-1,3-Dichloropropene	0.92	U	0.92	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	Vinyl acetate	0.72	U	0.72	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-001A	EPA TO-15	828131A-IA1303	Vinyl chloride	0.52	U	0.52	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	1,2,4-Trichlorobenzene	1.5	U	1.5	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	1,2-Dichloropropane	0.94	U	0.94	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	1,3-Butadiene	0.45	U	0.45	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	1,4-Dioxane	1.5	U	1.5	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	2-Butanone	2.8	Q	2.8	J	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	2-Hexanone	0.83	U	0.83	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	4-Methyl-2-pentanone	0.83	U	0.83	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	Acetone	27		27	J	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	Bromoform	2.1	UQ	2.1	UJ	CCV%D	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	Carbon disulfide	0.63	U	0.63	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	Heptane	0.83	U	0.83	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	Hexachlorobutadiene	2.2	U	2.2	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	Methyl Tertbutyl Ether	0.73	U	0.73	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	Methylene chloride	0.95		0.95	J	ICVRSD, QLS-H, LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	Tetrahydrofuran	0.6	U	0.6	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	trans-1,3-Dichloropropene	0.92	U	0.92	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	Vinyl acetate	0.72	U	0.72	UJ	LCS-L	UG/M3	Enalytic
MT004	E1105001-002A	EPA TO-15	828131A-IA1503	Vinyl chloride	8.5		8.5	J	LCS-L	UG/M3	Enalytic

Notes:

Validation Qualifiers-

J = estimated concentration

U = not detected

Validation Reason Codes-

LCS-L = LCS percent recovery is low

QLS-H = Quantitation recovery limit percent recovery is high

CCV%D = Continuing calibration percent difference exceeds the limit

ICVRSD = Initial calibration relative percent difference exceeds the limit

TABLE 4
SUMMARY OF TENTATIVELY IDENTIFIED COMPOUNDS
DATA USABILITY SUMMARY REPORT
APRIL 2011 AIR SAMPLING PROGRAM
OFF-SITE CARRIAGE CLEANERS SITE
PENFIELD, NEW YORK

SDG	Sample ID	Lab Sample ID	Analytical Method	Compound	Final Result (ppbv)	Qualifier	Analysis Date
MT004	828131A-IA1303	E1105001-001A	EPA TO-15	Butane	42	JN	5/11/2011
MT004	828131A-IA1303	E1105001-001A	EPA TO-15	Butane, 2-methyl-	33	JN	5/11/2011
MT004	828131A-IA1303	E1105001-001A	EPA TO-15	Hexane, 2-methyl-	5.4	JN	5/11/2011
MT004	828131A-IA1303	E1105001-001A	EPA TO-15	Isobutane	18	JN	5/11/2011
MT004	828131A-IA1303	E1105001-001A	EPA TO-15	Pentane, 2-methyl-	12	JN	5/11/2011
MT004	828131A-IA1303	E1105001-001A	EPA TO-15	unknown	15	JN	5/11/2011
MT004	828131A-IA1303	E1105001-001A	EPA TO-15	unknown hydrocarbon	17	JN	5/11/2011
MT004	828131A-IA1503	E1105001-002A	EPA TO-15	1-Butanol	30	JN	5/11/2011
MT004	828131A-IA1503	E1105001-002A	EPA TO-15	Ethyl alcohol	9.3	JN	5/11/2011
MT004	828131A-IA1503	E1105001-002A	EPA TO-15	unknown hydrocarbon (12.89)	26	JN	5/11/2011
MT004	828131A-IA1503	E1105001-002A	EPA TO-15	unknown hydrocarbon (13.035)	8.4	JN	5/11/2011
MT004	828131A-IA1503	E1105001-002A	EPA TO-15	unknown hydrocarbon (13.305)	4.2	JN	5/11/2011
MT004	828131A-IA1503	E1105001-002A	EPA TO-15	unknown hydrocarbon (13.411)	22	JN	5/11/2011
MT004	828131A-IA1503	E1105001-002A	EPA TO-15	unknown hydrocarbon (13.624)	24	JN	5/11/2011

Notes:

Qualifiers

JN = estimated value with presumptive evidence that the compound is present in the sample

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Analytical Report

Date *16-May-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1105001-001A

Client Sample ID 828131A-IA1303
Collection Date: 4/28/2011
Tag # 321/2662
Matrix INDOOR AMBIENT

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	11-May-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	11-May-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	11-May-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	11-May-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	11-May-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	11-May-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	11-May-11	0.20	ND	UJ	1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	11-May-11	0.30	1.1		1.50	5.3
106-93-4	1,2-Dibromoethane	1	11-May-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	11-May-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	11-May-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	11-May-11	0.20	ND		0.82	ND
78-87-5	1,2-Dichloropropane	1	11-May-11	0.20	ND	UJ	0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	11-May-11	0.20	5.0		1.00	25
106-99-0	1,3-Butadiene	1	11-May-11	0.20	ND	UJ	0.45	ND
541-73-1	1,3-Dichlorobenzene	1	11-May-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	11-May-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	11-May-11	0.40	ND	UJ	1.50	ND
78-93-3	2-Butanone (MEK)	1	11-May-11	0.20	1.9	J Q	0.60	5.6
591-78-6	2-Hexanone (*)	1	11-May-11	0.20	ND	UJ	0.83	ND
622-96-8	4-Ethyltoluene (*)	1	11-May-11	0.20	4.8		1.00	24
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	11-May-11	0.20	ND	UJ	0.83	ND
67-64-1	Acetone	1	11-May-11	2.0	17	J	4.80	41
71-43-2	Benzene	1	11-May-11	0.20	9.0		0.65	29
100-44-7	Benzyl chloride	1	11-May-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	11-May-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	11-May-11	0.20	ND	UJ Q	2.10	ND
74-83-9	Bromomethane	1	11-May-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	11-May-11	0.20	ND	UJ	0.63	ND
56-23-5	Carbon tetrachloride	1	11-May-11	0.040	0.12		0.26	0.77
108-90-7	Chlorobenzene	1	11-May-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	11-May-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	11-May-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	11-May-11	0.20	ND		0.42	ND
156-59-2	cis-1,2-Dichloroethene	1	11-May-11	0.20	ND		0.81	ND

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP

Date: 5/16/11

MJW 6/22/2011

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Analytical Report

Date *16-May-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1105001-001A

Client Sample ID 828131A-IA1303
Collection Date: 4/28/2011
Tag # 321/2662
Matrix INDOOR AMBIENT

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	11-May-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	11-May-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	11-May-11	0.20	ND		1.70	ND
76-71-8	Dichlorodifluoromethane (Freon 12)	1	11-May-11	0.20	0.61		1.00	2.6
100-41-4	Ethyl benzene	1	11-May-11	0.20	5.7		0.88	25
87-68-3	Hexachlorobutadiene	1	11-May-11	0.20	ND	UJ	2.20	ND
110-54-3	Hexane	1	11-May-11	0.20	6.4		0.72	23
67-63-0	Isopropanol	1	11-May-11	2.0	ND		5.00	ND
1330-20-7	m,p-Xylene	1	11-May-11	0.60	20		2.60	87
1634-04-4	Methyl tert-butyl ether (MTBE)	1	11-May-11	0.20	ND	UJ	0.73	ND
75-09-2	Methylene chloride	1	11-May-11	0.20	0.71	J	0.71	2.5
142-82-5	n-Heptane	1	11-May-11	0.20	ND	UJ	0.83	ND
95-47-6	o-Xylene	1	11-May-11	0.20	7.1		0.88	31
100-42-5	Styrene	1	11-May-11	0.30	ND		1.30	ND
127-18-4	Tetrachloroethene	1	11-May-11	0.20	ND		1.40	ND
109-99-9	Tetrahydrofuran (*)	1	11-May-11	0.20	0.35	J	0.60	1.0
108-88-3	Toluene	1	11-May-11	0.20	33		0.77	130
156-60-5	trans-1,2-Dichloroethene	1	11-May-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	11-May-11	0.20	ND	UJ	0.92	ND
79-01-6	Trichloroethene	1	11-May-11	0.040	ND		0.22	ND
75-69-4	Trichlorofluoromethane (Freon 11)	1	11-May-11	0.20	0.26		1.10	1.5
108-05-4	Vinyl acetate	1	11-May-11	0.20	ND	UJ	0.72	ND
75-01-4	Vinyl chloride	1	11-May-11	0.20	ND	UJ	0.52	ND
	Surr: Bromofluorobenzene	1	11-May-11	65-135	112		0.00	0
	TIC: Butane	1	11-May-11	0	42		0.00	0
	TIC: Butane, 2-methyl-	1	11-May-11	0	33		0.00	0
	~~TIC: Cyclopentane, methyl-~~	1	11-May-11	0	4.2		0.00	0 (TC)
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	1	11-May-11	0	12		0.00	0 (TC)
	TIC: Hexane, 2-methyl-	1	11-May-11	0	5.4		0.00	0
	TIC: Isobutane	1	11-May-11	0	18		0.00	0
	TIC: Pentane, 2-methyl-	1	11-May-11	0	12		0.00	0
	TIC: unknown	1	11-May-11	0	15		0.00	0
	TIC: unknown hydrocarbon	1	11-May-11	0	17		0.00	0

Qualifiers:

(*) Certification not offered by NYS for this compound	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
Q Outlying QC recoveries were associated with this analyte	S Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 5/16/11

MW 6/22/2011

Enalytic,LLC

Analytical Report

Date *16-May-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1105001-002A

Client Sample ID 828131A-IA1503
Collection Date: 4/28/2011
Tag # 261/2659
Matrix INDOOR AMBIENT

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
71-55-6	1,1,1-Trichloroethane	1	11-May-11	0.20	ND		1.10	ND
79-34-5	1,1,2,2-Tetrachloroethane	1	11-May-11	0.20	ND		1.40	ND
79-00-5	1,1,2-Trichloroethane	1	11-May-11	0.20	ND		1.10	ND
76-13-1	1,1,2-Trifluoro-1,2,2-Trichloroethane (Freon 11:	1	11-May-11	0.20	ND		1.60	ND
75-34-3	1,1-Dichloroethane	1	11-May-11	0.20	ND		0.82	ND
75-35-4	1,1-Dichloroethene	1	11-May-11	0.20	ND		0.81	ND
120-82-1	1,2,4-Trichlorobenzene	1	11-May-11	0.20	ND	UJ	1.50	ND
95-63-6	1,2,4-Trimethylbenzene	1	11-May-11	0.30	ND		1.50	ND
106-93-4	1,2-Dibromoethane	1	11-May-11	0.20	ND		1.60	ND
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-1	1	11-May-11	0.20	ND		1.40	ND
95-50-1	1,2-Dichlorobenzene	1	11-May-11	0.20	ND		1.20	ND
107-06-2	1,2-Dichloroethane	1	11-May-11	0.20	0.26		0.82	1.1
78-87-5	1,2-Dichloropropane	1	11-May-11	0.20	ND	UJ	0.94	ND
108-67-8	1,3,5-Trimethylbenzene	1	11-May-11	0.20	0.33		1.00	1.6
106-99-0	1,3-Butadiene	1	11-May-11	0.20	ND	UJ	0.45	ND
541-73-1	1,3-Dichlorobenzene	1	11-May-11	0.20	ND		1.20	ND
106-46-7	1,4-Dichlorobenzene	1	11-May-11	0.20	ND		1.20	ND
123-91-1	1,4-Dioxane	1	11-May-11	0.40	ND	UJ	1.50	ND
78-93-3	2-Butanone (MEK)	1	11-May-11	0.20	0.93	J	0.60	2.8
591-78-6	2-Hexanone (*)	1	11-May-11	0.20	ND	UJ	0.83	ND
622-96-8	4-Ethyltoluene (*)	1	11-May-11	0.20	0.27		1.00	1.3
108-10-1	4-Methyl-2-Pentanone (MIBK)	1	11-May-11	0.20	ND		0.83	ND
67-64-1	Acetone	1	11-May-11	2.0	11	J	4.80	26
71-43-2	Benzene	1	11-May-11	0.20	0.36		0.65	1.2
100-44-7	Benzyl chloride	1	11-May-11	0.20	ND		1.10	ND
75-27-4	Bromodichloromethane	1	11-May-11	0.20	ND		1.40	ND
75-25-2	Bromoform	1	11-May-11	0.20	ND	J UJ	2.10	ND
74-83-9	Bromomethane	1	11-May-11	0.20	ND		0.79	ND
75-15-0	Carbon disulfide	1	11-May-11	0.20	ND	UJ	0.63	ND
56-23-5	Carbon tetrachloride	1	11-May-11	0.040	0.13		0.26	0.83
108-90-7	Chlorobenzene	1	11-May-11	0.20	ND		0.94	ND
75-00-3	Chloroethane	1	11-May-11	0.20	ND		0.54	ND
67-66-3	Chloroform	1	11-May-11	0.20	ND		0.99	ND
74-87-3	Chloromethane	1	11-May-11	0.20	0.78		0.42	1.6
156-59-2	cis-1,2-Dichloroethene	1	11-May-11	0.20	4.1	TC 6/20/11	0.81	17

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 5/16/11

MJW 6/22/2011

Enalytic,LLC

Analytical Report

Date *16-May-11*

CLIENT MACTEC Engineering and Consulting, I
Locatio Off-Site Carriage Cleaners
Project: 3612102168
Lab ID E1105001-002A

Client Sample ID 828131A-IA1503
Collection Date: 4/28/2011
Tag # 261/2659
Matrix INDOOR AMBIENT

TO-15 (VI+TICS)

CAS#	Target Compound List	Dilution Factor	Date Analyzed	ppbV PQL	ppbV Result	Data Qualifiers	ug/m3 PQL	ug/m3 Result
10061-01-5	cis-1,3-Dichloropropene	1	11-May-11	0.20	ND		0.92	ND
110-82-7	Cyclohexane	1	11-May-11	0.20	ND		0.70	ND
124-48-1	Dibromochloromethane	1	11-May-11	0.20	ND		1.70	ND
75-71-8	Dichlorodifluoromethane (Freon 12)	1	11-May-11	0.20	0.49		1.00	2.5
100-41-4	Ethyl benzene	1	11-May-11	0.20	0.28		0.88	1.2
87-68-3	Hexachlorobutadiene	1	11-May-11	0.20	ND	UJ	2.20	ND
110-54-3	Hexane	1	11-May-11	0.20	ND		0.72	ND
67-63-0	Isopropanol	1	11-May-11	2.0	3.5		5.00	8.8
1330-20-7	m,p-Xylene	1	11-May-11	0.60	0.72		2.60	3.2
1634-04-4	Methyl tert-butyl ether (MTBE)	1	11-May-11	0.20	ND	UJ	0.73	ND
75-09-2	Methylene chloride	1	11-May-11	0.20	0.27	J	0.71	0.95
142-82-5	n-Heptane	1	11-May-11	0.20	ND	UJ	0.83	ND
95-47-6	o-Xylene	1	11-May-11	0.20	0.28		0.88	1.2
100-42-5	Styrene	1	11-May-11	0.30	ND		1.30	ND
127-18-4	Tetrachloroethene	1	11-May-11	0.20	0.84	X (C)	1.40	5.8
109-99-9	Tetrahydrofuran (*)	1	11-May-11	0.20	ND	UJ	0.60	ND
108-88-3	Toluene	1	11-May-11	0.20	1.8		0.77	7.0
156-60-5	trans-1,2-Dichloroethene	1	11-May-11	0.20	ND		0.81	ND
10061-02-6	trans-1,3-Dichloropropene	1	11-May-11	0.20	ND	UJ	0.92	ND
79-01-6	Trichloroethene	1	11-May-11	0.040	3.7	X (TC)	0.22	20
75-69-4	Trichlorofluoromethane (Freon 11)	1	11-May-11	0.20	0.25		1.10	1.4
108-05-4	Vinyl acetate	1	11-May-11	0.20	ND	UJ	0.72	ND
75-01-4	Vinyl chloride	1	11-May-11	0.20	3.3	J	0.52	8.5
	Surr: Bromofluorobenzene	1	11-May-11	65-135	117		0.00	0
	TIC: 1-Butanol	1	11-May-11	0	30		0.00	0
	~~TIC: Cyclotetrasiloxane, octamethyl-~~	~~1~~	~~11-May-11~~	~~0~~	~~22~~		~~0.00~~	~~0~~ (TC)
	~~TIC: Cyclotrisiloxane, hexamethyl-~~	~~1~~	~~11-May-11~~	~~0~~	~~12~~	~~B~~	~~0.00~~	~~0~~ (TC)
	TIC: Ethyl alcohol	1	11-May-11	0	9.3		0.00	0
	TIC: unknown hydrocarbon (12.89)	1	11-May-11	0	26		0.00	0
	TIC: unknown hydrocarbon (13.035)	1	11-May-11	0	8.4		0.00	0
	TIC: unknown hydrocarbon (13.305)	1	11-May-11	0	4.2		0.00	0
	TIC: unknown hydrocarbon (13.411)	1	11-May-11	0	22		0.00	0
	TIC: unknown hydrocarbon (13.624)	1	11-May-11	0	24		0.00	0

Qualifiers:

(*)	Certification not offered by NYS for this compound	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this analyte	S	Spike Recovery outside accepted recovery limits

Approved By KLP **Date:** 5/16/11

MJW 6/22/2011

APPENDIX G

MONITORED NATURAL ATTENUATION SCREENING PROTOCOL FORMS

Natural Attenuation Screening Protocol

The following is taken from the USEPA protocol (USEPA, 1998). The results of this scoring process have no regulatory significance.

Interpretation	Score
Inadequate evidence for anaerobic biodegradation* of chlorinated organics	0 to 5
Limited evidence for anaerobic biodegradation* of chlorinated organics	6 to 14
Adequate evidence for anaerobic biodegradation* of chlorinated organics	15 to 20
Strong evidence for anaerobic biodegradation* of chlorinated organics	>20

* reductive dechlorination

DP-10 Score: 12

Scroll to End of Table

Analysis	Concentration in Most Contam. Zone	Interpretation	Yes	No	Points Awarded
Oxygen*	<0.5 mg/L	Tolerated, suppresses the reductive pathway at higher concentrations	◉	○	3
	> 5mg/L	Not tolerated; however, VC may be oxidized aerobically	○	○	
Nitrate*	<1 mg/L	At higher concentrations may compete with reductive pathway	◉	○	2
Iron II*	>1 mg/L	Reductive pathway possible; VC may be oxidized under Fe(III)-reducing conditions	○	◉	0
Sulfate*	<20 mg/L	At higher concentrations may compete with reductive pathway	○	◉	0
Sulfide*	>1 mg/L	Reductive pathway possible	○	◉	0
Methane*	>0.5 mg/L	Ultimate reductive daughter product, VC Accumulates	○	◉	0
Oxidation Reduction Potential* (ORP)	<50 millivolts (mV)	Reductive pathway possible	◉	○	1
	<-100mV	Reductive pathway likely	○	◉	0
pH*	5 < pH < 9	Optimal range for reductive pathway	◉	○	0
TOC	>20 mg/L	Carbon and energy source; drives dechlorination; can be natural or anthropogenic	○	◉	0
Temperature*	>20°C	At T >20°C biochemical process is accelerated	○	◉	0
Carbon Dioxide	>2x background	Ultimate oxidative daughter product	○	◉	0
Alkalinity	>2x background	Results from interaction of carbon dioxide with aquifer minerals	○	◉	0
Chloride*	>2x background	Daughter product of organic chlorine	○	◉	0
Hydrogen	>1 nM	Reductive pathway possible, VC may accumulate	○	○	
Volatile Fatty Acids	>0.1 mg/L	Intermediates resulting from biodegradation of aromatic compounds; carbon and energy source	○	○	
BTEX*	>0.1 mg/L	Carbon and energy source; drives dechlorination	○	◉	0
PCE*		Material released	◉	○	0
TCE*		Daughter product of PCE [a/]	◉	○	2
DCE*		Daughter product of TCE. If cis is greater than 80% of total DCE it is likely a daughter product of TCE[a/]; 1,1-DCE can be a chem. reaction product of TCA	◉	○	2
VC*		Daughter product of DCE[a/]	◉	○	2
1,1,1-Trichloroethane*		Material released	○	○	
DCA		Daughter product of TCA under reducing conditions	○	○	
Carbon Tetrachloride		Material released	○	○	
Chloroethane*		Daughter product of DCA or VC under reducing conditions	○	○	
Ethene/Ethane	>0.01 mg/L	Daughter product of VC/ethene	○	◉	0
	>0.1 mg/L	Daughter product of VC/ethene	○	◉	0
Chloroform		Daughter product of Carbon Tetrachloride	○	○	
Dichloromethane		Daughter product of Chloroform	○	○	

* required analysis.

a/ Points awarded only if it can be shown that the compound is a daughter product (i.e., not a constituent of the source NAPL).

SCORE Reset

End of Form

Natural Attenuation Screening Protocol

The following is taken from the USEPA protocol (USEPA, 1998). The results of this scoring process have no regulatory significance.

Interpretation	Score
Inadequate evidence for anaerobic biodegradation* of chlorinated organics	0 to 5
Limited evidence for anaerobic biodegradation* of chlorinated organics	6 to 14
Adequate evidence for anaerobic biodegradation* of chlorinated organics	15 to 20
Strong evidence for anaerobic biodegradation* of chlorinated organics	>20

DP-15
Score: 12

Scroll to End of Table

* reductive dechlorination

Analysis	Concentration in Most Contam. Zone	Interpretation	Yes	No	Points Awarded
Oxygen*	<0.5 mg/L	Tolerated, suppresses the reductive pathway at higher concentrations	◉	○	3
	> 5mg/L	Not tolerated; however, VC may be oxidized aerobically	○	○	
Nitrate*	<1 mg/L	At higher concentrations may compete with reductive pathway	◉	○	2
Iron II*	>1 mg/L	Reductive pathway possible; VC may be oxidized under Fe(III)-reducing conditions	○	◉	0
Sulfate*	<20 mg/L	At higher concentrations may compete with reductive pathway	○	◉	0
Sulfide*	>1 mg/L	Reductive pathway possible	○	◉	0
Methane*	>0.5 mg/L	Ultimate reductive daughter product, VC Accumulates	○	◉	0
Oxidation Reduction Potential* (ORP)	<50 millivolts (mV)	Reductive pathway possible	◉	○	1
	<-100mV	Reductive pathway likely	○	◉	0
pH*	5 < pH < 9	Optimal range for reductive pathway	◉	○	0
TOC	>20 mg/L	Carbon and energy source; drives dechlorination; can be natural or anthropogenic	○	◉	0
Temperature*	>20°C	At T >20°C biochemical process is accelerated	○	◉	0
Carbon Dioxide	>2x background	Ultimate oxidative daughter product	○	◉	0
Alkalinity	>2x background	Results from interaction of carbon dioxide with aquifer minerals	○	◉	0
Chloride*	>2x background	Daughter product of organic chlorine	○	◉	0
Hydrogen	>1 nM	Reductive pathway possible, VC may accumulate	○	○	
Volatile Fatty Acids	>0.1 mg/L	Intermediates resulting from biodegradation of aromatic compounds; carbon and energy source	○	○	
BTEX*	>0.1 mg/L	Carbon and energy source; drives dechlorination	○	◉	0
PCE*		Material released	◉	○	0
TCE*		Daughter product of PCE [a/]	◉	○	2
DCE*		Daughter product of TCE. If cis is greater than 80% of total DCE it is likely a daughter product of TCE[a/]; 1,1-DCE can be a chem. reaction product of TCA	◉	○	2
VC*		Daughter product of DCE[a/]	◉	○	2
1,1,1-Trichloroethane*		Material released	○	○	
DCA		Daughter product of TCA under reducing conditions	○	○	
Carbon Tetrachloride		Material released	○	○	
Chloroethane*		Daughter product of DCA or VC under reducing conditions	○	○	
Ethene/Ethane	>0.01 mg/L	Daughter product of VC/ethene	○	◉	0
	>0.1 mg/L	Daughter product of VC/ethene	○	◉	0
Chloroform		Daughter product of Carbon Tetrachloride	○	○	
Dichloromethane		Daughter product of Chloroform	○	○	

* required analysis.

a/ Points awarded only if it can be shown that the compound is a daughter product (i.e., not a constituent of the source NAPL).

SCORE Reset

End of Form

Natural Attenuation Screening Protocol

The following is taken from the USEPA protocol (USEPA, 1998). The results of this scoring process have no regulatory significance.

Interpretation	Score
Inadequate evidence for anaerobic biodegradation* of chlorinated organics	0 to 5
Limited evidence for anaerobic biodegradation* of chlorinated organics	6 to 14
Adequate evidence for anaerobic biodegradation* of chlorinated organics	15 to 20
Strong evidence for anaerobic biodegradation* of chlorinated organics	>20

DP-23 Score: 13

Scroll to End of Table

* reductive dechlorination

Analysis	Concentration in Most Contam. Zone	Interpretation	Yes	No	Points Awarded
Oxygen*	<0.5 mg/L	Tolerated, suppresses the reductive pathway at higher concentrations	◉	○	3
	> 5mg/L	Not tolerated; however, VC may be oxidized aerobically	○	○	
Nitrate*	<1 mg/L	At higher concentrations may compete with reductive pathway	◉	○	2
Iron II*	>1 mg/L	Reductive pathway possible; VC may be oxidized under Fe(III)-reducing conditions	◉	○	3
Sulfate*	<20 mg/L	At higher concentrations may compete with reductive pathway	○	◉	0
Sulfide*	>1 mg/L	Reductive pathway possible	○	◉	0
Methane*	>0.5 mg/L	Ultimate reductive daughter product, VC Accumulates	○	◉	0
Oxidation Reduction Potential* (ORP)	<50 millivolts (mV)	Reductive pathway possible	◉	○	1
	<-100mV	Reductive pathway likely	○	◉	0
pH*	5 < pH < 9	Optimal range for reductive pathway	◉	○	0
TOC	>20 mg/L	Carbon and energy source; drives dechlorination; can be natural or anthropogenic	○	◉	0
Temperature*	>20°C	At T >20°C biochemical process is accelerated	○	◉	0
Carbon Dioxide	>2x background	Ultimate oxidative daughter product	○	◉	0
Alkalinity	>2x background	Results from interaction of carbon dioxide with aquifer minerals	○	◉	0
Chloride*	>2x background	Daughter product of organic chlorine	○	◉	0
Hydrogen	>1 nM	Reductive pathway possible, VC may accumulate	○	○	
Volatile Fatty Acids	>0.1 mg/L	Intermediates resulting from biodegradation of aromatic compounds; carbon and energy source	○	○	
BTEX*	>0.1 mg/L	Carbon and energy source; drives dechlorination	○	◉	0
PCE*		Material released	◉	○	0
TCE*		Daughter product of PCE [a/]	○	◉	0
DCE*		Daughter product of TCE. If cis is greater than 80% of total DCE it is likely a daughter product of TCE[a/]; 1,1-DCE can be a chem. reaction product of TCA	◉	○	2
VC*		Daughter product of DCE[a/]	◉	○	2
1,1,1-Trichloroethane*		Material released	○	○	
DCA		Daughter product of TCA under reducing conditions	○	○	
Carbon Tetrachloride		Material released	○	○	
Chloroethane*		Daughter product of DCA or VC under reducing conditions	○	○	
Ethene/Ethane	>0.01 mg/L	Daughter product of VC/ethene	○	◉	0
	>0.1 mg/L	Daughter product of VC/ethene	○	◉	0
Chloroform		Daughter product of Carbon Tetrachloride	○	○	
Dichloromethane		Daughter product of Chloroform	○	○	

* required analysis.

a/ Points awarded only if it can be shown that the compound is a daughter product (i.e., not a constituent of the source NAPL).

SCORE | Reset

End of Form

Natural Attenuation Screening Protocol

The following is taken from the USEPA protocol (USEPA, 1998). The results of this scoring process have no regulatory significance.

Interpretation	Score
Inadequate evidence for anaerobic biodegradation* of chlorinated organics	0 to 5
Limited evidence for anaerobic biodegradation* of chlorinated organics	6 to 14
Adequate evidence for anaerobic biodegradation* of chlorinated organics	15 to 20
Strong evidence for anaerobic biodegradation* of chlorinated organics	>20

MW-2
Score: 15

Scroll to End of Table

* reductive dechlorination

Analysis	Concentration in Most Contam. Zone	Interpretation	Yes	No	Points Awarded
Oxygen*	<0.5 mg/L	Tolerated, suppresses the reductive pathway at higher concentrations	◉	○	3
	> 5mg/L	Not tolerated; however, VC may be oxidized aerobically	○	○	
Nitrate*	<1 mg/L	At higher concentrations may compete with reductive pathway	◉	○	2
Iron II*	>1 mg/L	Reductive pathway possible; VC may be oxidized under Fe(III)-reducing conditions	◉	○	3
Sulfate*	<20 mg/L	At higher concentrations may compete with reductive pathway	○	◉	0
Sulfide*	>1 mg/L	Reductive pathway possible	○	◉	0
Methane*	>0.5 mg/L	Ultimate reductive daughter product, VC Accumulates	○	◉	0
Oxidation Reduction Potential* (ORP)	<50 millivolts (mV)	Reductive pathway possible	◉	○	1
	<-100mV	Reductive pathway likely	○	◉	0
pH*	5 < pH < 9	Optimal range for reductive pathway	◉	○	0
TOC	>20 mg/L	Carbon and energy source; drives dechlorination; can be natural or anthropogenic	○	◉	0
Temperature*	>20°C	At T >20°C biochemical process is accelerated	○	◉	0
Carbon Dioxide	>2x background	Ultimate oxidative daughter product	○	◉	0
Alkalinity	>2x background	Results from interaction of carbon dioxide with aquifer minerals	○	◉	0
Chloride*	>2x background	Daughter product of organic chlorine	○	◉	0
Hydrogen	>1 nM	Reductive pathway possible, VC may accumulate	○	○	
Volatile Fatty Acids	>0.1 mg/L	Intermediates resulting from biodegradation of aromatic compounds; carbon and energy source	○	○	
BTEX*	>0.1 mg/L	Carbon and energy source; drives dechlorination	○	◉	0
PCE*		Material released	◉	○	0
TCE*		Daughter product of PCE [a/]	◉	○	2
DCE*		Daughter product of TCE. If cis is greater than 80% of total DCE it is likely a daughter product of TCE[a/]; 1,1-DCE can be a chem. reaction product of TCA	◉	○	2
VC*		Daughter product of DCE[a/]	◉	○	2
1,1,1-Trichloroethane*		Material released	○	○	
DCA		Daughter product of TCA under reducing conditions	○	○	
Carbon Tetrachloride		Material released	○	○	
Chloroethane*		Daughter product of DCA or VC under reducing conditions	○	○	
Ethene/Ethane	>0.01 mg/L	Daughter product of VC/ethene	○	◉	0
	>0.1 mg/L	Daughter product of VC/ethene	○	◉	0
Chloroform		Daughter product of Carbon Tetrachloride	○	○	
Dichloromethane		Daughter product of Chloroform	○	○	

* required analysis.

a/ Points awarded only if it can be shown that the compound is a daughter product (i.e., not a constituent of the source NAPL).

SCORE Reset

End of Form

Natural Attenuation Screening Protocol

The following is taken from the USEPA protocol (USEPA, 1998). The results of this scoring process have no regulatory significance.

Interpretation	Score
Inadequate evidence for anaerobic biodegradation* of chlorinated organics	0 to 5
Limited evidence for anaerobic biodegradation* of chlorinated organics	6 to 14
Adequate evidence for anaerobic biodegradation* of chlorinated organics	15 to 20
Strong evidence for anaerobic biodegradation* of chlorinated organics	>20

* reductive dechlorination

MW-7
Score: 12

Scroll to End of Table

Analysis	Concentration in Most Contam. Zone	Interpretation	Yes	No	Points Awarded
Oxygen*	<0.5 mg/L	Tolerated, suppresses the reductive pathway at higher concentrations	◉	○	3
	> 5mg/L	Not tolerated; however, VC may be oxidized aerobically	○	○	
Nitrate*	<1 mg/L	At higher concentrations may compete with reductive pathway	◉	○	2
Iron II*	>1 mg/L	Reductive pathway possible; VC may be oxidized under Fe(III)-reducing conditions	○	◉	0
Sulfate*	<20 mg/L	At higher concentrations may compete with reductive pathway	○	◉	0
Sulfide*	>1 mg/L	Reductive pathway possible	○	◉	0
Methane*	>0.5 mg/L	Ultimate reductive daughter product, VC Accumulates	○	◉	0
Oxidation Reduction Potential* (ORP)	<50 millivolts (mV)	Reductive pathway possible	◉	○	1
	<-100mV	Reductive pathway likely	○	◉	0
pH*	5 < pH < 9	Optimal range for reductive pathway	◉	○	0
TOC	>20 mg/L	Carbon and energy source; drives dechlorination; can be natural or anthropogenic	○	◉	0
Temperature*	>20°C	At T >20°C biochemical process is accelerated	○	◉	0
Carbon Dioxide	>2x background	Ultimate oxidative daughter product	○	◉	0
Alkalinity	>2x background	Results from interaction of carbon dioxide with aquifer minerals	○	◉	0
Chloride*	>2x background	Daughter product of organic chlorine	○	◉	0
Hydrogen	>1 nM	Reductive pathway possible, VC may accumulate	○	○	
Volatile Fatty Acids	>0.1 mg/L	Intermediates resulting from biodegradation of aromatic compounds; carbon and energy source	○	○	
BTEX*	>0.1 mg/L	Carbon and energy source; drives dechlorination	○	◉	0
PCE*		Material released	◉	○	0
TCE*		Daughter product of PCE [a/]	◉	○	2
DCE*		Daughter product of TCE. If cis is greater than 80% of total DCE it is likely a daughter product of TCE[a/]; 1,1-DCE can be a chem. reaction product of TCA	◉	○	2
VC*		Daughter product of DCE[a/]	◉	○	2
1,1,1-Trichloroethane*		Material released	○	○	
DCA		Daughter product of TCA under reducing conditions	○	○	
Carbon Tetrachloride		Material released	○	○	
Chloroethane*		Daughter product of DCA or VC under reducing conditions	○	○	
Ethene/Ethane	>0.01 mg/L	Daughter product of VC/ethene	○	◉	0
	>0.1 mg/L	Daughter product of VC/ethene	○	◉	0
Chloroform		Daughter product of Carbon Tetrachloride	○	○	
Dichloromethane		Daughter product of Chloroform	○	○	

* required analysis.

a/ Points awarded only if it can be shown that the compound is a daughter product (i.e., not a constituent of the source NAPL).

SCORE Reset

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Natural Attenuation Screening Protocol

The following is taken from the USEPA protocol (USEPA, 1998). The results of this scoring process have no regulatory significance.

Interpretation	Score
Inadequate evidence for anaerobic biodegradation* of chlorinated organics	0 to 5
Limited evidence for anaerobic biodegradation* of chlorinated organics	6 to 14
Adequate evidence for anaerobic biodegradation* of chlorinated organics	15 to 20
Strong evidence for anaerobic biodegradation* of chlorinated organics	>20

MW-11
Score: 10

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* reductive dechlorination

Analysis	Concentration in Most Contam. Zone	Interpretation	Yes	No	Points Awarded
Oxygen*	<0.5 mg/L	Tolerated, suppresses the reductive pathway at higher concentrations	◉	○	3
	> 5mg/L	Not tolerated; however, VC may be oxidized aerobically	○	○	
Nitrate*	<1 mg/L	At higher concentrations may compete with reductive pathway	◉	○	2
Iron II*	>1 mg/L	Reductive pathway possible; VC may be oxidized under Fe(III)-reducing conditions	○	◉	0
Sulfate*	<20 mg/L	At higher concentrations may compete with reductive pathway	○	◉	0
Sulfide*	>1 mg/L	Reductive pathway possible	○	◉	0
Methane*	>0.5 mg/L	Ultimate reductive daughter product, VC Accumulates	○	◉	0
Oxidation Reduction Potential* (ORP)	<50 millivolts (mV)	Reductive pathway possible	◉	○	1
	<-100mV	Reductive pathway likely	○	◉	0
pH*	5 < pH < 9	Optimal range for reductive pathway	◉	○	0
TOC	>20 mg/L	Carbon and energy source; drives dechlorination; can be natural or anthropogenic	○	◉	0
Temperature*	>20°C	At T >20°C biochemical process is accelerated	○	◉	0
Carbon Dioxide	>2x background	Ultimate oxidative daughter product	○	◉	0
Alkalinity	>2x background	Results from interaction of carbon dioxide with aquifer minerals	○	◉	0
Chloride*	>2x background	Daughter product of organic chlorine	○	◉	0
Hydrogen	>1 nM	Reductive pathway possible, VC may accumulate	○	○	
Volatile Fatty Acids	>0.1 mg/L	Intermediates resulting from biodegradation of aromatic compounds; carbon and energy source	○	○	
BTEX*	>0.1 mg/L	Carbon and energy source; drives dechlorination	○	◉	0
PCE*		Material released	◉	○	0
TCE*		Daughter product of PCE [a/]	◉	○	2
DCE*		Daughter product of TCE. If cis is greater than 80% of total DCE it is likely a daughter product of TCE[a/], 1,1-DCE can be a chem. reaction product of TCA	◉	○	2
VC*		Daughter product of DCE[a/]	○	◉	0
1,1,1-Trichloroethane*		Material released	○	○	
DCA		Daughter product of TCA under reducing conditions	○	○	
Carbon Tetrachloride		Material released	○	○	
Chloroethane*		Daughter product of DCA or VC under reducing conditions	○	○	
Ethene/Ethane	>0.01 mg/L	Daughter product of VC/ethene	○	◉	0
	>0.1 mg/L	Daughter product of VC/ethene	○	◉	0
Chloroform		Daughter product of Carbon Tetrachloride	○	○	
Dichloromethane		Daughter product of Chloroform	○	○	

* required analysis.

a/ Points awarded only if it can be shown that the compound is a daughter product (i.e., not a constituent of the source NAPL).

SCORE | Reset

End of Form