2004 DATA REPORT

GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Volume I of II

DECEMBER 2004
REF. NO. 17360 (9)

TABLE OF CONTENTS

			Page
1.0	INTRODUCTION		1
	1.1	PURPOSE	1
	1.2	BACKGROUND AND HISTORY	1
	1.3	REPORT ORGANIZATION	1
2.0	ENVIRONMENTAL SETTING		2
	2.1	REGIONAL GEOLOGY AND HYDROGEOLOGY	2
	2.2	SITE GEOLOGY AND HYDROGEOLOGY	2
	2.2.1	GROUNDWATER FLOW DIRECTION	3
	2.3	TOPOGRAPHY	3
	2.4	HYDROLOGY	4
3.0	SCOPE OF WORK		5
	3.1	SUMMARY OF INVESTIGATION	5
	3.2	SUBSURFACE INVESTIGATION	5
	3.2.1	SOIL BORING INSTALLATION/SOIL SAMPLE COLLECTION	5
	3.2.2	SOIL BORING INSTALLATION/VERTICAL AQUIFER SAMPLING	6
	3.2.3	MONITORING WELL INSTALLATION/ GROUNDWATER SAMPLING	7
	3.3	BOREHOLE/WELL ABANDONMENT	9
	3.4	SURVEYING	9
	3.5	DECONTAMINATION AND CONTAINMENT PROCEDURES	9
	3.6	DISPOSITION OF INVESTIGATION-DERIVED WASTE	10
4.0	RESULTS OF INVESTIGATION		11
	4.1	COMPARISON OF ANALYTICAL RESULTS	11
	4.2	RESULTS OF INVESTIGATION	11
	4.2.1	SOIL INVESTIGATION RESULTS	11
	4.2.2	GROUNDWATER INVESTIGATION RESULTS	12
	4.3	ANALYTICAL DATA VALIDATION RESULTS SUMMARY	14
5.0	SUMMARY		15
	5.1	CONCLUSIONS AND RECOMMENDATIONS	15
	5.1.1	SOIL	15
	5.1.2	GROUNDWATER	16
	5.1.2.1	HISTORIC TCE RELEASE	16
	5.1.2.1.1	ON-SITE VOC PLUME	16
	5.1.2.1.2	OFF-SITE/DOWNGRADIENT VOC PLUME	17
	5.1.2.2	FREE PRODUCT/SEMI-VOLATILE ORGANIC COMPOUNDS	18
	5.1.2.3	UPGRADIENT PCE SOURCE	18

LIST OF FIGURES
(Following Text)

FIGURE 1.1	SITE LOCATION
FIGURE 1.2	SITE PLAN
FIGURE 2.1	GEOLOGIC CROSS-SECTION LOCATIONS
FIGURE 2.2	GEOLOGIC CROSS-SECTION A-A'
FIGURE 2.3	GEOLOGIC CROSS-SECTION B-B'
FIGURE 2.4	GEOLOGIC CROSS-SECTION C-C'
FIGURE 2.5	GEOLOGIC CROSS-SECTION D-D'
FIGURE 2.6	APPROXIMATE AUGUST 8, 2004 GROUNDWATER FLOW DIRECTION
FIGURE 4.1	SELECT TCL VOC CONCENTRATIONS IN SOIL
FIGURE 4.2	SELECT TCL SVOC CONCENTRATIONS IN GROUNDWATER

LIST OF TABLES
(Following Text)

TABLE 2.1	GROUNDWATER ELEVATION MEASUREMENTS
TABLE 3.1	SOIL SAMPLE SUMMARY
TABLE 3.2	VERTICAL AQUIFER SAMPLE SUMMARY
TABLE 3.3	GROUNDWATER SAMPLE SUMMARY
TABLE 4.1	ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
TABLE 4.2	ANALYTICAL RESULTS FOR TCL VOCs IN VERTICAL AQUIFER SAMPLES
TABLE 4.3	ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
TABLE 4.4	ANALYTICAL RESULTS FOR TCL SVOCs IN GROUNDWATER SAMPLES

LIST OF PLANS
(Following Text)

PLAN 1	SELECT TCL VOCs IN VERTICAL AQUIFER SAMPLES
PLAN 2	SELECT TCL VOCs CONCENTRATIONS IN GROUNDWATER
PLAN 3	SELECT TCL VOCs ISOCONTOURS – SOUTHERN AREA
PLAN 4	SELECT TCL VOCs ISOCONTOURS – NORTHERN AREA

LIST OF APPENDICES

(Following Text)

APPENDIX A STRATIGRAPHIC AND MONITORING WELL CONSTRUCTION LOGS

APPENDIX B WELL ABANDONMENT MEMORANDUMS

APPENDIX C LABORATORY ANALYTICAL RESULTS

APPENDIX D DATA QUALITY VALIDATION MEMORANDUMS

1.0 INTRODUCTION

1.1 PURPOSE

Conestoga-Rovers & Associates (CRA) was retained by General Motors Corporation (GM) to conduct an environmental investigation at the GM Grand Rapids Metal Plant located at 300 36th Street in Wyoming, Michigan (Site).

The purpose of this environmental investigation was to further evaluate and delineate chlorinated compound impacts to groundwater above the Michigan Public Act 451, Part 201 Residential Cleanup Criteria, to further define hydrogeologic conditions at the Site, to evaluate the current effectiveness of the groundwater extraction system, to evaluate the effectiveness of select monitoring wells for long term monitoring, and to determine the soil conditions in the area of the soil vapor extraction (SVE) system Due to the implementation date of the environmental investigation activities in July 2004, the June 2004 Quarterly Groundwater Monitoring Activities were conducted in August 2004 and in lieu of a quarterly report being prepared, the results were incorporated herein.

1.2 BACKGROUND AND HISTORY

The Site background is presented in the Work Plan and the Data Report, submitted to the Michigan Department of Environmental Quality (MDEQ) under separate cover on November 24, 2002 and March 2, 2004, respectively. A Site location is presented on Figure 1.1 and a Site plan is presented on Figure 1.2.

1.3 REPORT ORGANIZATION

The remainder of this report is presented in the following sections:

Section 2.0	Environmental Setting
Section 3.0	Scope of Work
Section 4.0	Results of Investigation
Section 5.0	Summary

2.0 ENVIRONMENTAL SETTING

2.1 REGIONAL GEOLOGY AND HYDROGEOLOGY

Kent County is situated in an area near the southwestern margin of the Michigan Basin. Marshall Sandstone bedrock crops out or is found at shallow depth and underlies all of Kent County with overlapping by the Michigan Formation. The Michigan Formation consists primarily of limestone, gypsum, and dolomite, interbedded with shale and sandstone. To the northeast, the Marshall Sandstone and Michigan Formation are progressively overlain by Bayport Limestone, Parma Sandstone, and then the Saginaw Formation. Overlying these rocks is a mass of glacial drift from the Wisconsinan Glacial stage consisting of moraines and former sand lake beds with thicknesses of less than ten feet to several hundred feet. The glacial drift is characterized by ranges of materials from coarse gravel to fine lacustrine clays. The outwash is underlain by a clay layer that has been observed to generally slope to the west-northwest at a gradient of approximately 1 foot in 15 feet. Bedrock in the area of the Site is encountered at approximately 100 feet below graded surface (bgs).

Shallow groundwater in this area of Kent County is generally encountered at less than 20 feet bgs. Groundwater flow is influenced by local topography and surface water drainageways, such as creeks and streams.

Bedrock aquifers near the Site include, in descending order, the Bayport Limestone, the Michigan Formation, and the Marshall Sandstone. Elevated concentrations of naturally occurring sulfate, cadmium, and bicarbonate limit the use of the Bayport Limestone aquifer as a drinking water supply. The Michigan Formation aquifer generally yields only small quantities of poor quality groundwater. The deepest regional aquifer, the Marshall Sandstone aquifer, provides large quantities of better quality groundwater. Groundwater flow in the Bayport Limestone bedrock aquifer in the area is generally uniform and to the southeast.

2.2 SITE GEOLOGY AND HYDROGEOLOGY

Information regarding the geologic conditions at the Site was collected during previous environmental investigations, as well as during this investigation. Numerous soil borings were installed at the Site between 1981 and 2003. Nine additional soil borings were advanced at the Site in 2004 and logged by a CRA geologist to further define the geologic conditions at the Site. The stratigraphic logs generated during this environmental investigation are presented in Appendix A.

The overburden at the Site consists of a sand and/or clay surficial layer containing various amounts of sand and gravel, underlain by interbedded layers of silt and clay material. Bedrock was not encountered during any of the environmental investigations conducted to date.

To better understand the surficial geology at the Site, four cross-sections were prepared, based on previous and current investigation results. Locations of the cross-sections are presented on Figure 2.1. Cross-sections A-A', B-B', C-C', and D-D' are presented on Figures 2.2, 2.3, 2.4, and 2.5, respectively.

2.2.1 GROUNDWATER FLOW DIRECTION

Groundwater level measurements and the corresponding depths were recorded for all monitoring wells.

Groundwater elevation data for the groundwater monitoring events on June 26, 2002, September 26, 2002, December 9, 2002, March 20, 2003, July 14, 2003, and August 8, 2004 are presented in Table 2.1. Groundwater was encountered during the environmental investigations at approximately 20 feet bgs. Based on the August 8, 2004 groundwater levels, the approximate groundwater flow direction is to the north-northwest, towards the Cole Drain, which is consistent with historical groundwater flow direction. Figure 2.6 presents the approximate August 8, 2004 groundwater flow direction.

Based on the groundwater flow direction, it appears that groundwater in the vicinity of the Site is discharging to Cole Drain, which acts as a hydrologic barrier. Based on the review of analytical data for monitoring wells located adjacent to the Cole Drain (see Section 4.2.2), no parameters were currently detected at concentrations exceeding the Michigan Act 451, Part 201 Groundwater-Surface Water Interface (GSI) Cleanup Criteria.

2.3 TOPOGRAPHY

According to the Grand Rapids West, Michigan United States Geological Surrey (USGS) 7.5 minute quadrangle, the Site is located approximately 675 feet above mean sea level (AMSL), with regional elevations ranging from 650 to 690 feet AMSL. The Site and surrounding area display gently rolling to relatively flat topographical features, with local topography sloping towards Cole Drain and Plaster Creek.

2.4 HYDROLOGY

A stormwater retention pond is located on-Site, which discharges to Cole Drain, under a National Pollution Discharge Elimination System (NPDES) permit. There are no natural surface water bodies on the Site. The nearest natural surface water body to the Site is the Cole Drain, which runs along the entire west side of the Site and flows north. Cole Drain discharges to Plaster Creek, which is part of the Grand River Drainage Basin, and ultimately discharges to Lake Michigan.

3.0 SCOPE OF WORK

The Scope of Work (SOW) for the investigation included the installation of soil borings and monitoring wells, the collection and analysis of discrete groundwater samples utilizing a hydropunch method, the collection and analysis of groundwater samples from monitoring wells, the collection and analysis of soil samples in the area of the SVE system, and the abandonment of the SVE extraction well and associated pressure wells. Investigation fieldwork adhered to the methods and procedures specified in the March 2004 Work Plan, including the Quality Assurance Project Plan (QAPP), which was submitted to the MDEQ under separate cover on April 2, 2004.

3.1 SUMMARY OF INVESTIGATION

The SOW that was implemented during the investigation is discussed in the following sections.

3.2 SUBSURFACE INVESTIGATION

3.2.1 SOIL BORING INSTALLATION/SOIL SAMPLE COLLECTION

Five soil borings, SB1-04 through SB5-04, were advanced at the Site and a total of 55 soil samples were collected to define current soil conditions at the historic volatile organic compound (VOC) release area. The five soil borings, SB1-04 though SB5-04, were installed in the area surrounding air purge well 87-3, associated with the former SVE treatment system, to vertically and horizontally determine the current concentrations of chlorinated compounds in the vadose, or unsaturated zone. Stratigraphic soil boring logs are presented in Appendix A.

Soil borings were advanced utilizing a 4 ¼-inch inside diameter hollow stem auger (HSA) with continuous split spoon sampling. Soil samples were collected starting at the top of the ground surface and continuing at two-foot intervals until a terminal depth of twenty-two feet bgs, which is above the water table. A two-foot long, two-inch outside diameter stainless steel split spoon sampler driven into the undisturbed material through the 4¼-inch HSA annulus. Soil samples were described and classified according to the Unified Soil Classification System (USCS) by a CRA Geologist. Soil samples were field screened for visual/olfactory evidence of impact and with an 11.7 eV photoionization detector (PID). PID readings were recorded on the stratigraphic logs presented in Appendix A, with the exception of SB2-04, due to the fact that the PID

malfunctioned during the installation of the soil boring. No PID readings are available for SB2-04. One soil sample was collected from each two-foot split spoon interval.

All soil samples were analyzed for Target Compound List (TCL) VOCs. Collected samples were placed in pre-cleaned laboratory-provided containers, properly labeled, and shipped under chain-of-custody (COC) protocol via overnight courier to Severn Trent Laboratories (STL) in North Canton, Ohio to be analyzed on a two week turnaround time (TAT). Table 3.1 presents a soil sample summary.

3.2.2 SOIL BORING INSTALLATION/VERTICAL AQUIFER SAMPLING

A total of nine soil borings, HP8-04 through HP16-04, were advanced during the implementation of the investigation for vertical aquifer profiling and monitoring well placement. Six of the borings, HP8-04 though HP13-04, were installed downgradient of the former degreaser location to further delineate the extent of the chlorinated compound contamination. One soil boring, HP14-04, was installed to the north of monitoring well 87-5 to further evaluate vinyl chloride contamination in groundwater. Two soil borings, HP15-04 and HP16-04, were installed to the northwest and west of the plant, respectively, to further define chlorinated compound contamination in groundwater and confirm conditions relative to local surface water. Vertical aquifer sampling (VAS) was conducted at each of the soil boring locations to determine the vertical extent of contamination at that location. Stratigraphic soil boring logs are presented in Appendix A.

Soil borings were advanced utilizing 4¼-inch inside diameter HSA with continuous split spoon sample collection. Concrete coring was performed inside the plant, as necessary. Soil samples were described and classified according to the USCS by a CRA Geologist. Soil samples were field screened for visual/olfactory evidence of impact and with an 11.7 eV PID. PID readings were recorded on the stratigraphic logs presented in Appendix A.

Fifty-six discrete groundwater samples were collected from soil borings HP8-04 through HP16-04 utilizing a hydropunch for VAS. VAS was conducted starting at the top of the water table and continuing at ten-foot intervals until the confining clay layer was encountered. Discrete groundwater grab sample depths varied slightly dependent on stratigraphic conditions encountered. A five-foot long, two-inch outside diameter stainless steel hydropunch sampler with a 0.01-inch slotted screen and a well point were driven into the undisturbed material through the 4¼-inch HSA annulus. The well point detached from the hydropunch sampler at the specified sample depth and groundwater

was allowed to flow into and fill the hydropunch sampler. The amount of time required to fill the hydropunch was dependent upon geological factors such as surrounding media (i.e., sand vs. clay) and depth below ground surface (i.e., increasing water pressure with increasing depth). After sufficient time to fill the hydropunch sampler passed (approximately 15 minutes to 1 hour), the sampler was removed from the soil boring and the groundwater sample was collected.

All groundwater samples were analyzed for TCL VOCs. Collected samples were placed in pre-cleaned laboratory-provided containers, properly labeled, and shipped under COC protocol via overnight courier to STL in North Canton, Ohio to be analyzed on a 72-hour TAT for VAS samples, except the samples collected from HP14-04, which were analyzed on a 24-hour TAT. Table 3.2 presents a VAS sample summary.

3.2.3 MONITORING WELL INSTALLATION/GROUNDWATER SAMPLING

The vertical and horizontal extent of contamination in groundwater was investigated during the environmental investigation through the collection and analysis of 40 groundwater samples, including 14 quality assurance/quality control (QA/QC) samples (four duplicates and two matrix spike (MS)/matrix spike duplicate (MSD)) from thirty-six monitoring wells; MW1-03 through MW7-03, MW8-04 through MW11-04, MW13-04 through MW15-04, 85-1, 85-2, 85-3, 85-5B, 85-6, 85-7, 86-1, 86-3, 87-1, 87-2, 87-4, 87-5, 87-8, 87-9, 87-10, 87-11, 87-13, 88-2, 88-3, and 88-4; and two groundwater extraction wells; 86-2 and PWDISCH, and three surface water samples from three culvert locations; C-1, C-2, and C-3.

Soil borings were advanced utilizing a 4 ¼-inch inside diameter HSA with continuous split spoon sampling. As stated in Section 3.2.2, discrete groundwater samples were collected from soil borings HP8-04 through HP16-04 to determine the vertical extent of contamination and determine the screen placement for the monitoring wells.

After completion of the VAS and receipt of analytical data, a second soil boring was advanced adjacent to the VAS soil boring, and a monitoring well was constructed, based on the analytical results from the VAS, excluding HP12-04 and HP16-04, where existing wells were deemed adequate for the area. MW8-04 though MW11-04 and MW13-04 were installed downgradient of the former degreaser location to further delineate the extent of the chlorinated compound contamination. MW14-04 was installed to the north of monitoring well 87-5 to further evaluate vinyl chloride contamination in groundwater. MW15-04 was installed to the northwest of the plant to further define chlorinated compound contamination in groundwater and confirm conditions relative to

local surface water. Monitoring wells were constructed in the borehole annulus through the auger using 2-inch diameter Schedule 40 polyvinyl chloride (PVC) riser with five-foot long, 0.01-inch slot Schedule 40 PVC screens. During completion of the installation, the risers were temporarily capped to prevent entrance of foreign materials during the overburden well installation. The risers and screens were joined with flush threaded joints.

An inert silica sand pack was placed around the screen to a height of three vertical feet above the top of the screen using a flush-threaded 1-inch diameter tremie pipe as the augers were withdrawn from the borehole. If bridging of the silica sand occurred, the bridged material was mechanically broken prior to the addition of more silica sand.

A high solids bentonite grout was installed above the silica sand using a flush-threaded one-inch diameter tremie pipe. Once the grout was set, the remainder of the annulus was filled with concrete and a flushmount casing was installed. The protective flushmount casing was centered over the riser and extends into the concrete collar one-foot bgs. The concrete seal was sloped away from the flushmount casing to deter infiltration of precipitation. Risers were capped with a locking cap.

The new wells were developed by removing a minimum of five well volumes until the groundwater was developed to a silt-free condition, if possible, and the turbidity, pH, temperature, dissolved oxygen (DO), oxidation/reduction potential (ORP), and conductivity of the groundwater had stabilized. The generated development water was containerized in Department of Transportation (DOT) approved 55-gallon drums prior to treatment at the on-Site wastewater treat plant (WWTP) prior to discharge to the Publicly Owned Treatment Works (POTW).

Groundwater samples were collected from monitoring wells MW1-03 through MW7-03, MW8-04 through MW11-04, MW13-04 through MW15-04, 85-1, 85-2, 85-3, 85-5B, 85-6, 85-7, 86-1, 86-3, 87-1, 87-2, 87-4, 87-5, 87-8, 87-9, 87-10, 87-11, 87-13, 88-2, 88-3, and 88-4. Prior to sampling the monitoring wells, the caps were removed and the groundwater was allowed to equilibrate. Stabilization for each well was confirmed by three consecutive readings within 10 percent of each other for the following parameters: pH, turbidity, ORP, DO, temperature, specific conductivity, and draw down of less then 0.3 feet. Groundwater samples from purge wells 86-2 and PWDISCH were also collected. Purge wells were sampled through a side port on the piping system at the well location. The tap was opened and approximately three gallons were purged prior to sample collection.

All groundwater samples were analyzed for TCL VOCs. In addition wells 85-3, 85-5B, 85-6, and 86-1 were sampled for TCL Semi-Volatile Organic Compounds (SVOCs). Collected samples were placed in pre-cleaned laboratory-provided containers, properly labeled, and shipped under COC protocol via overnight courier to STL in North Canton, Ohio to be analyzed on a two week TAT. Table 3.3 presents a groundwater sample summary.

3.3 BOREHOLE/WELL ABANDONMENT

Upon completion of soil and discrete groundwater sample collection, each borehole was completed as a monitoring well or abandoned. All soil borings not completed as monitoring wells during the environmental investigation were abandoned using a tremie method to backfill the annulus with bentonite grout to the ground surface. Asphalt and concrete surfaces were patched, as necessary.

Soil cuttings from all soil boring and monitoring well installations were containerized, labeled as to generation location, and characterized for off-Site disposal as described in Section 3.6.

Seven pressure monitoring wells associated with the SVE system were abandoned in place using a bentonite/grout powder hydrated at one-foot intervals to the top of the well. The SVE extraction well was abandoned in place using bentonite/grout chips hydrated at one-foot intervals to the top of the well. The abandoned locations were finished with concrete and wood floor block, as appropriate. Appendix B presents the well abandonment memorandums.

3.4 SURVEYING

A survey of the Site was conducted by CRA surveyors for all new soil boring and monitoring well locations. Soil boring locations, reference features, and monitoring well locations were surveyed, with elevations established to the nearest 0.01-foot. The survey was benchmarked by National Geographic Survey (NGS) Station Number NF0822.

3.5 DECONTAMINATION AND CONTAINMENT PROCEDURES

Upon mobilization to the Site and prior to commencing drilling, the drill rig and all associated equipment were thoroughly cleaned using a high pressure, low volume

steam wash and inspected by CRA field personnel. Before initiating drilling at each subsequent location, the augers, drill rod, hydropunch sampler, and all other non-disposable sampling and drilling equipment were decontaminated to prevent cross-contamination.

All non-disposable sampling equipment was decontaminated prior to each use by using an Alconox wash, a potable water rinse, a deionized water rinse, and was allowed to air dry.

All decontamination water was visually examined and screened with a PID, and containerized in DOT approved 55-gallon drums. All decontamination water was characterized and discharged to the on-Site WWTP.

3.6 DISPOSITION OF INVESTIGATION-DERIVED WASTE

Soil cuttings generated during drilling were containerized in DOT approved 55-gallon drums. All soil cuttings were properly labeled, characterized, sealed, and staged on-Site in a GM designated area near the maintenance building. Soil cuttings generated during drilling were characterized as non-hazardous waste, as described below, and placed in two roll-off boxes for off-Site disposal by GM.

Waste characterization samples were obtained at two locations: a) SB2-04 soil cuttings and b) all other soil cuttings (roll-off boxes). One composite waste characterization soil sample was collected from the 55-gallon drum containing the soil cuttings from SB2-04 for analysis of Toxicity Characteristic Leaching Procedure (TCLP) VOCs, TCLP SVOCs, TCLP metals, reactivity, corrosivity, and ignitibility (RCI), and TCL VOCs. An additional composite waste characterization soil sample was collected from the roll-off boxes containing the soil cuttings from all other borings for analysis of TCLP VOCs, TCLP SVOCs, TCLP metals, RCI, and TCL VOCs. Soil samples collected for laboratory analysis were placed in pre-cleaned laboratory-provided containers, labeled, and shipped under COC protocol via overnight courier to STL in North Canton, Ohio to be analyzed on a two week TAT for the roll-off box sample and a one week TAT for the SB2-04 drum sample. Analytical results are presented in Appendix C.

Decontamination/purge water was containerized in DOT approved 55-gallon drums. All decontamination/purge water was properly labeled, sealed and staged in 15 DOT approved 55-gallon drums. Decontamination/purge water was discharged to the on-Site WWTP.

4.0 RESULTS OF INVESTIGATION

4.1 COMPARISON OF ANALYTICAL RESULTS

Analytical results for groundwater and soil samples were compared to the cleanup criteria and screening levels found in the Michigan Act 451, Part 201 Residential and Industrial Cleanup Criteria. Waste characterization sample results were compared to Resource Conservation and Recovery Act (RCRA) waste characteristic criteria. Laboratory analytical results for samples collected during this environmental investigation are presented in Appendix C. Data validation memorandums for this environmental investigation are presented in Appendix D.

4.2 RESULTS OF INVESTIGATION

Soil and groundwater samples were collected to further evaluate and delineate chlorinated compound impacts to groundwater above the Michigan Public Act 451, Part 201 Residential Cleanup Criteria, to further define hydrogeologic conditions at the Site, to evaluate the current effectiveness of the groundwater extraction system, to evaluate the effectiveness of select monitoring wells for long term monitoring, and to determine the soil conditions in the area of the SVE system. Sample summaries for soil samples, VAS samples, and groundwater samples are presented in Tables 3.1, 3.2, and 3.3, respectively. Figure 4.1 presents select TCL VOCs in soil samples. Figure 4.2 presents select TCL SVOCs in groundwater. Plan 1 presents a summary of select TCL VOCs in the VAS. Plan 2 presents a summary of select TCL VOCs in groundwater. Plan 3 presents the isocontours for select TCL VOCs, including cis-1,2-dichloroethene (cis-1,2-DCE), trichloroethene (TCE), tetrachloroethene (PCE), and vinyl chloride (VC), on the southern portion of the Site. Plan 4 presents the isocontours for select TCL VOCs, including cis-1,2-DCE, TCE, PCE, and VC, on the northern portion of the Site.

4.2.1 SOIL INVESTIGATION RESULTS

A total of 55 soil samples were collected and analyzed for TCL VOCs in the area surrounding air purge well 87-3, associated with the former SVE treatment system, to vertically and horizontally determine the current concentrations of chlorinated compounds in the vadose, or unsaturated zone. Table 3.1 presented a sample summary for soil. Table 4.1 presents a summary of TCL VOCs in soil samples. Figure 4.1 presents select TCL VOCs in soil samples. Soil samples collected during the environmental investigation were examined by a CRA geologist for odor and visual impact and

screened with a PID. Descriptions and PID readings for soil intervals are included in the stratigraphic borehole logs presented in Appendix A.

TCE was detected in SB1-04 at 2,000 ug/kg (at a depth of 0 to 2 ft bgs), in SB2-04 at 12,000 ug/kg (at a depth of 0 to 2 ft bgs), in SB3-04 at 2,800 ug/kg (at a depth of 0 to 2 ft bgs), in SB4-04 at 190 ug/kg (at a depth of 0 to 2 ft bgs), and in SB5-04 at 5,700 ug/kg (at a depth of 0 to 2 ft bgs). All detections are above the Michigan Act 451, Part 201 Industrial Drinking Water Protection Criteria of 100 ug/kg. In addition, the detections at SB2-04 and SB5-04 are above the Michigan Act 451, Part 201 Groundwater/Surface Water Protection Criteria of 4,000 ug/kg. No other TCL VOCs were detected in the soil samples at concentrations above the Michigan Act 451, Part 201 Industrial Cleanup Criteria. It should be noted that the detection at SB2-04 was above the Michigan Act 451, Part 201 Residential Soil Volatilization to Indoor Air Inhalation of 7,100 ug/kg.

Prior to drilling activities, an evaluation was conducted for the SVE system to determine if the SVE system was removing significant VOC mass from the soil. The results of the study were presented in the Data Report submitted to the MDEQ on March 2, 2004 and identified that the SVE system was not removing significant mass. Subsequently, the system was shut down, under approval of the MDEQ. Based on discussions with the MDEQ following the aforementioned review of the system effectiveness, it was determined that additional evaluation of the current concentrations of VOCs in the vadose zone in the former source area was required for closure of this area. The soil results presented above confirm that there is no longer a significant mass of VOCs in the vadose zone, and that the majority of the VOC mass is present in the top two feet of the soil column. No TCL VOCs were detected in the soil samples collected at concentrations above criteria for complete exposure pathways, under the current industrial land use scenario.

4.2.2 GROUNDWATER INVESTIGATION RESULTS

A total of 96 groundwater samples, including 14 QA/QC samples, and three surface water samples were collected during the environmental investigation. Groundwater samples collected from monitoring wells were analyzed for TCL VOCs and TCL SVOCs (select wells only) and discrete groundwater samples collected from VAS were analyzed for TCL VOCs. Groundwater samples were collected to further evaluate and delineate chlorinated compound impacts to groundwater above the Michigan Public Act 451, Part 201 Residential Cleanup Criteria, to further define hydrogeologic conditions at the Site, to evaluate the current effectiveness of the groundwater extraction system, and to evaluate the effectiveness of select monitoring wells for long term monitoring. Tables

3.2 and 3.3 present sample summaries for VAS and groundwater samples, respectively. Table 4.2 presents a summary of TCL VOCs in vertical aquifer samples, Table 4.3 presents a summary of TCL VOCs in groundwater samples and Table 4.4 presents a summary of TCL SVOCs in groundwater samples.

Several parameters were detected in groundwater samples collected at the Site above the Michigan Act 451, Part 201 cleanup criteria, including: bis(2-ethylhexyl)phthalate, benzo(b)fluoranthene, benzo(a)anthracene, PCE, TCE, and VC. Groundwater sample results for the VAS and monitoring well samples collected during this investigation are further discussed below.

Bis(2-Ethylhexyl)phthalate was detected in groundwater samples collected from 85-3 (screened 20.3 to 30.3 feet bgs and 85-6 (screened 19.5 to 24.5 feet bgs) at concentrations of 8.4 ug/L and 8.6 ug/L, respectively, which are above the Michigan Act 451, Part 201 Residential Drinking Water Criteria (RDWC) of 6 ug/L.

Benzo(b)fluoranthene and benzo(a)anthracene were detected in the groundwater sample collected from 85-5B (screened 21.9 to 31.9 feet bgs) at 4.3 ug/L and 5.4 ug/L, respectively, which are above the Michigan Act 451, Part 201 RDWC of 2.0 ug/L and 2.1 ug/L, respectively.

PCE was detected in the groundwater samples collected from MW2-03 (screened 22 to 27 feet bgs), MW1-03 (screened 30 to 35 feet bgs), and MW11-04 (screened 40 to 45 feet bgs) at concentrations of 10 ug/L, 160 ug/L, and 28 ug/L (27 ug/L in a duplicate groundwater sample), which are above the Michigan Act 451, Part 201 RDWC of 5.0 ug/L. Additionally, the detected concentration of 160 ug/L of PCE at MW1-03 is above Michigan Act 451, Part 201 Groundwater/Surface water (GSI) Criteria of 45 ug/L. PCE was also detected in the discrete groundwater samples collected from HP11-04 at concentrations of 17 ug/L (at 42 feet bgs (15 ug/L in a duplicate groundwater sample)), 15 ug/L (at 42 feet bgs (duplicate)), and 15 ug/L (at 52 feet bgs), which are above the Michigan Act 451, Part 201 RDWC of 5.0 ug/L.

TCE was detected in the groundwater samples collected from MW5-03 (screened 30 to 35 feet bgs), 87-10 (screened 29 to 32 feet bgs), 87-11 (screened 30 to 33 feet bgs), 87-1 (screened 8.5 to 19.5 feet bgs), 87-2 (screened 33.2 to 38.2 feet bgs), MW10-04 (screened 33 to 38 feet bgs), and MW11-04 (screened 40 to 45 feet bgs) at concentrations of 5.9 ug/L, 33 ug/L, 30 ug/L, 37 ug/L, 25 ug/L, 11 ug/L and 45 ug/L (44 ug/L in a duplicate groundwater sample), respectively, which are above the Michigan Act 451, Part 201 RDWC of 5.0 ug/L. TCE was also detected in the discrete groundwater samples collected from HP10-04 (at 35 feet bgs), at a concentration of 5.9 ug/L from HP16-04 (at

20 feet bgs), at a concentration of 6.5 ug/L, and at HP11-04 at concentrations of 23 ug/L (at 32 feet bgs), 34 ug/L (at 42 feet bgs), 33 ug/L (at 42 feet bgs duplicate), 19 ug/L (at 52 feet bgs), and 7.4 ug/L (at 62 feet bgs), which are above the Michigan Act 451, Part 201 RDWC of 5.0 ug/L.

VC was detected in the groundwater samples collected from 87-5 (screened 39.5 to 50.5 feet bgs) and 87-1 (screened 8.5 to 19.5 feet bgs) at concentrations of 69 ug/L and 6.0 ug/L, respectively, which are above the Michigan Act 451, Part 201 RDWC of 2.0 ug/L. Additionally, the concentration of 69 ug/L of VC detected in the groundwater sample collected from 87-5 is also above Michigan Act 451, Part 201 GSI Criteria of 15 ug/L.

No other TCL VOCs were detected in the groundwater samples collected during the investigation above the Michigan Act 451, Part 201 RDWC. Figure 4.1 presents select TCL VOCs in soil samples. Figure 4.2 presents select TCL SVOCs in groundwater. Plan 1 presents a summary of TCL VOCs identified in VAS. Plan 2 presents a summary of TCL VOCs identified in groundwater. Plan 3 presents isocontours for select TCL VOCs in the southern area and Plan 4 presents isocontours for select TCL VOCs in the northern area.

4.3 ANALYTICAL DATA VALIDATION RESULTS SUMMARY

Soil and groundwater samples were submitted under COC protocol to STL in North Canton, Ohio. All samples were analyzed using EPA approved methods set forth in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition and Promulgated Update, November 1986.

The laboratory analytical data was reviewed by a CRA chemist to determine the quality and validity of the analytical data resulting from the collection and analysis of groundwater samples. The laboratory analytical data are presented in Appendix C. The data validation memorandum is presented in Appendix D.

The data validation was performed in accordance with the requirements of the State of Michigan, as identified in the Site-specific QAPP and as approved by MDEQ. The data is usable with a few qualifiers as noted in the validation memorandum in Appendix D.

5.0 SUMMARY

5.1 CONCLUSIONS AND RECOMMENDATIONS

5.1.1 SOIL

Historically, the Site operated and maintained a SVE system, which was located in the source area for the TCE. The source of the TCE was determined to be a former degreaser that was operated at the Site until prior to 1979 (exact date of activity cessation unknown). This system was shut down in 2004 after a review was conducted to evaluate the SVE system and determine if the SVE system was removing significant VOC mass from the soil. The results of the study were presented in the Data Report submitted to the MDEQ on March 2, 2004, and identified that the SVE system was not removing significant mass at that time. During this investigation, five soil borings were advanced in the area of the SVE system and source area to determine the VOC concentrations in the soil. Results of the boring activities demonstrate that no TCL VOCs are present above the Michigan Act 451, Part 201 Cleanup Criteria deeper then two feet below ground surface in this area. In the top two feet of the soil column, TCE was detected at levels in excess of Michigan Act 451, Part 201 Industrial Drinking Water Protection Criteria, Groundwater/Surface Water Protection Criteria, and Residential Soil Volatilization to Indoor Air Criteria. It should be noted that the TCE did not exceed the Michigan Act 451, Part 201 Generic Industrial Soil Volatilization to Indoor Air Criterion, which would be the applicable exposure pathway.

Significant mass has been removed by the SVE, and TCE is limited to the area immediately under the floor, as observed in the soil borings. Exact limits of the residual TCE under the floor have not been defined. However, the lateral boundaries are not expected to be far beyond the current data points because: the source was terminated prior to 1979, the majority of the TCE mass was removed by the SVE system, and there are no forces acting to disperse the residual TCE laterally, as the impact is located under the plant floor.

Based on the fact that the majority of the TCE in soil has been removed via the SVE system, the residual concentrations of TCE in soil appear to be limited in extent vertically, and there are no forces acting to laterally disperse the detected residual contamination, it is recommended that a restrictive deed limiting the use of the property to industrial uses only be implemented for the property.

5.1.2 GROUNDWATER

The groundwater conclusions and recommendations presented below address the following three areas of concern:

- Historic TCE Release;
- Free Product/Semi-volatile Organic Compounds; and
- Upgradient PCE Source.

5.1.2.1 HISTORIC TCE RELEASE

The historic TCE release is believed to have occurred in what is now the middle of the Metal Fabrication Division (MFD) plant near Column T-27. The release occurred from historical degreasing operations conducted at the Site, which ceased prior to 1979. This release is considered to be the source of two separate groundwater contamination areas: an on-Site VOC plume and an off-Site/downgradient VOC plume.

5.1.2.1.1 ON-SITE VOC PLUME

Currently, the Site operates and maintains a groundwater pump and treat system (pump and treat). The system consists of two extraction wells, 86-2 and PWDISCH, located in the MFD Plant and in the parking lot across 36th Street, respectively. Based on an evaluation of the pump and treat system, the removal of a significant mass of VOCs has been achieved in the past and separated the residual groundwater VOCs into two distinct parts, on-Site and off-Site. The off-Site plume is discussed in the next section. VOC constituents in the on-Site plume at concentrations exceeding the Michigan Act 451, Part 201 RDWC include TCE and VC. Additionally, VC has also been identified at one location within the plant, 87-5, to be above the Michigan Act 451, Part 201 GSI Criteria.

Significant TCE mass has been removed by the pump and treat system from 86-2 and PWDISCH, which is evident from historical high concentrations of 100,000 ug/L and 180 ug/L, respectively, to current levels of 4.7 ug/L and 1.6 ug/L, respectively. The extent of VOC contamination has been delineated to Michigan Act 451, Part 201 RDWC both vertically and horizontally on the Site. Based on the distance from the 87-5 location to the Cole Drain, the fact that additional wells are located between the exceedance of VC and the drain that do not exhibit concentrations above the GSI Criteria, and the fact

that the belowground utility corridors in the area of 87-5 are situated above the water table, it is not likely that VC will reach the Cole Drain above the GSI Criteria.

Based on the above, it is recommended that the pump and treat system be turned off on February 28, 2005, that quarterly monitoring in select wells for TCL VOCs and select natural attenuation parameters be performed for four consecutive quarters beginning in March 2005, and that remedial alternatives to address the residual contamination as part of an interim closure be evaluated.

5.1.2.1.2 OFF-SITE/DOWNGRADIENT VOC PLUME

The off-Site, downgradient VOC plume has been identified at the Godwin Heights Public School property (GHPS Property) north of the MFD's 36th Street parking lot. VOC concentrations in the off-Site plume above Michigan Act 451, Part 201 RDWC include TCE and PCE. Off-Site concentrations have not been identified above any other Michigan Act 451, Part 201 Cleanup Criteria. It should be noted that there is a separation of the plumes associated with this release, this is likely because portions of the release migrated downgradient laterally prior to the installation of the pump and treat system purge well at the property boundary in the MFD parking lot in 1993.

Significant TCE mass has been removed by PWDISCH at the border of the GHPS Property. However, VOC contamination off-Site has migrated outside of the PWDISCH capture zone and, based on the distance from the monitoring wells exhibiting the concentrations of TCE and PCE above the Michigan Act 451, Part 201 RDWC, the current treatment system is not effective in remediating impacted groundwater from this area. The extent of contamination has been sufficiently delineated to Michigan Act 451, Part 201 RDWC both vertically and horizontally. Based on the determined groundwater flow direction, from south-southeast to north-northwest and the elevation of the Cole Drain relative to the groundwater table, groundwater in the vicinity of the Cole Drain is discharging to the drain, which acts as a gaining stream. No VOCs were detected at concentrations exceeding the Michigan Act 451, Part 201 GSI Criteria. TCE and PCE were detected in HP11-04 to the depth of clay at levels above the Michigan Act 451, Part 201 RDWC.

Based on the above, it is recommended that the pump and treat system be turned off on February 28, 2005, that quarterly monitoring in select wells for TCL VOCs and select natural attenuation parameters be performed for four consecutive quarters beginning in

March 2005, and that remedial alternatives to address the residual contamination as part of an interim closure be evaluated.

5.1.2.2 FREE PRODUCT/SEMI-VOLATILE ORGANIC COMPOUNDS

Historically, there has been some indication of free product identified on-Site in the northeast corner of the MFD Plant. Primarily, the observations were as accumulated "light non-aqueous phase liquids" (LNAPL) in monitoring wells 85-03 and 85-5B, and as detections of SVOCs in monitoring wells 85-03, 85-5B, and 85-6. The thickness of LNAPL fluctuates from one historic observation of four inches to periodically observed sheens during monitoring events of the last year. SVOCs detected above the Michigan Act 451, Part 201 RDWC during the last monitoring round include benzo(a)anthracene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate. Current and recent monitoring information gives no evidence of the presence of LNAPL as recoverable "free product", due to a lack of volume of product present (i.e., observed as a sheen or less than an eighth of an inch in thickness).

The extent of any SVOC contamination is not yet established as recent samplings show a detection of bis(2-ethylhexyl)phthalate above the Michigan Act 451, Part 201 RDWC at 85-6 (a duplicate sample at the same location was below the detection limit).

Based on the lack of consistent observations of the presence of "free product" and the analytical data for SVOCs in this area, it is recommended that one year of quarterly monitoring at the current locations be conducted to further establish the presence or absence of conditions needing further attention.

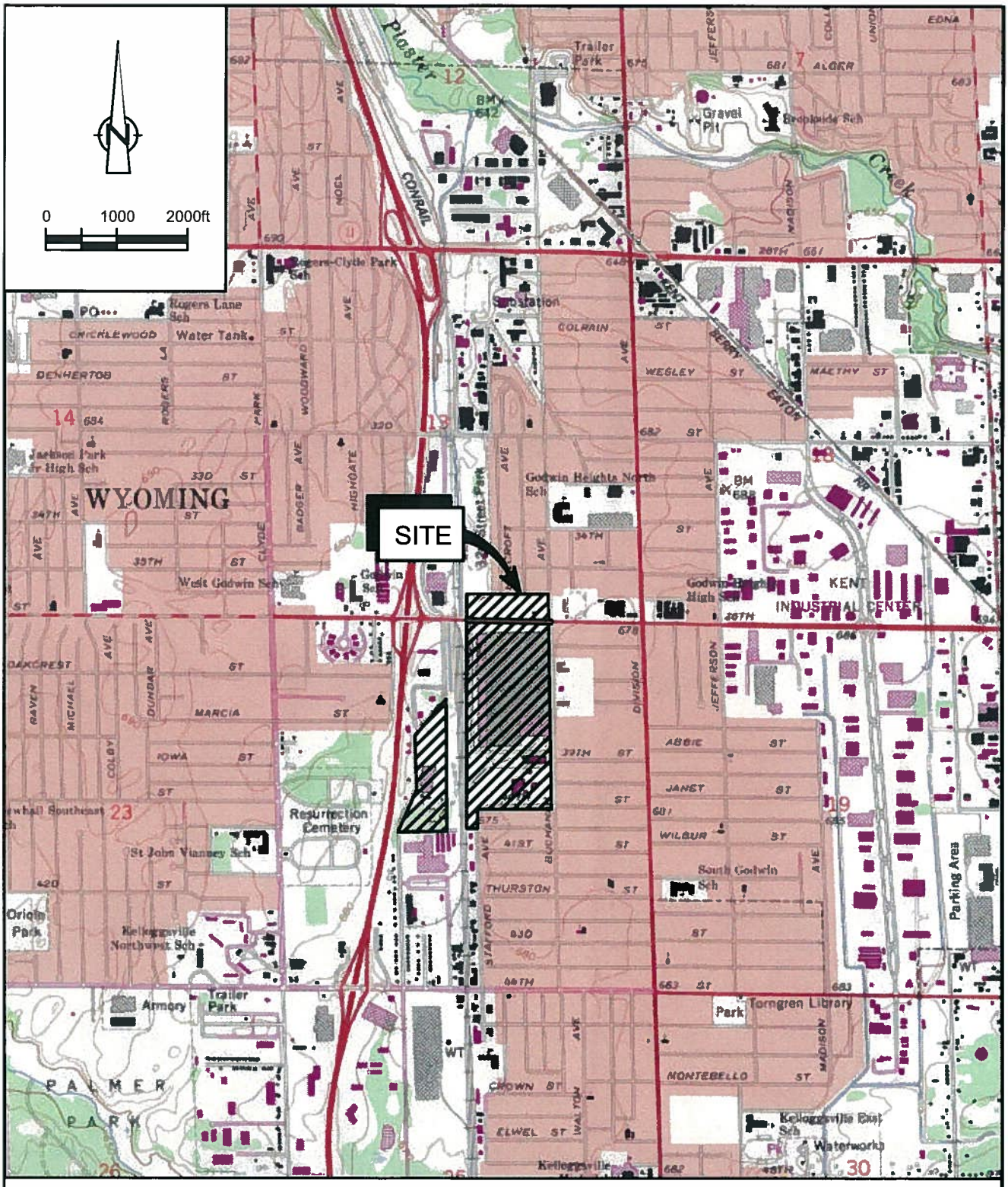
5.1.2.3 UPGRADIENT PCE SOURCE

Based on the review of documents during a Freedom of Information Act (FOIA) request, PCE and TCE were determined to be present in groundwater at concentrations exceeding the Michigan Act 451, Part 201 Cleanup Criteria at an upgradient industrial property. Based on available documentation, no other potential sources were identified upgradient of the Site during this review. This property is upgradient to the southeastern portion of the Site, where PCE was historically and currently identified in groundwater. PCE has been detected above the Michigan Act 451, Part 201 RDWC at the Site in three locations, MW1-03, MW2-03, and MW11-04. At MW1-03, PCE is also above the Michigan Act 451, Part 201 GSI criteria. The PCE was identified at depths

below the groundwater table migrating onto the Site, which is consistent with concentrations that would be present downgradient of a source area/release.

The time of release, specific up-gradient/source area concentrations, and fate of PCE migrating on to the Site has not been identified. PCE is currently migrating to the Site in the area of MW1-03 at a level of 160 ug/L, which is above the Michigan Act 451, Part 201 GSI Criteria of 45 ug/L and the Michigan Act 451, Part 201 RDWC. The screened interval for MW1-03 is from 30 to 35 feet bgs. Based on the review of analytical results obtained during the 2003 investigation conducted by CRA and summarized in a Data Report submitted to the MDEQ on March 2, 2004, vertical profiling results at the water table indicated a concentration of PCE at 7.0 ug/L (7.1 ug/L in a duplicate sample) in a groundwater sample collected at 24 feet bgs from HP1-03 in this area were below the GSI Criteria. This is important to note because at this location and depth, and at this concentration, it is unlikely that PCE is being collected by the facility's groundwater foundation drain system, which is present at approximately 20 feet bgs and serves to collect groundwater in the areas surrounding the building foundation. Groundwater is collected in the drain system and discharged to the on-Site retention pond, and then discharged to the Cole Drain, pursuant to an NPDES permit. The upgradient source PCE may also have commingled with the TCE release from the Site, and been similarly affected by the Site pump and treat system. The detection of PCE at monitoring well MW11-04 may also be a remnant of the upgradient plume prior to the installation of the pump and treat system.

Based on the above, it is recommended that an investigation be conducted to evaluate the impact the off-Site source may have on the foundation drain system at the Site by installing a sampling port in the discharge of the foundation drain system and sampling the discharge three times for PCE, TCE, cis-1,2-DCE, and VC.



SOURCE: USGS QUADRANGLE MAP;
GRAND RAPIDS WEST, MICHIGAN



figure 1.1

SITE LOCATION
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(008)GN-DE001 MAR 10/2004

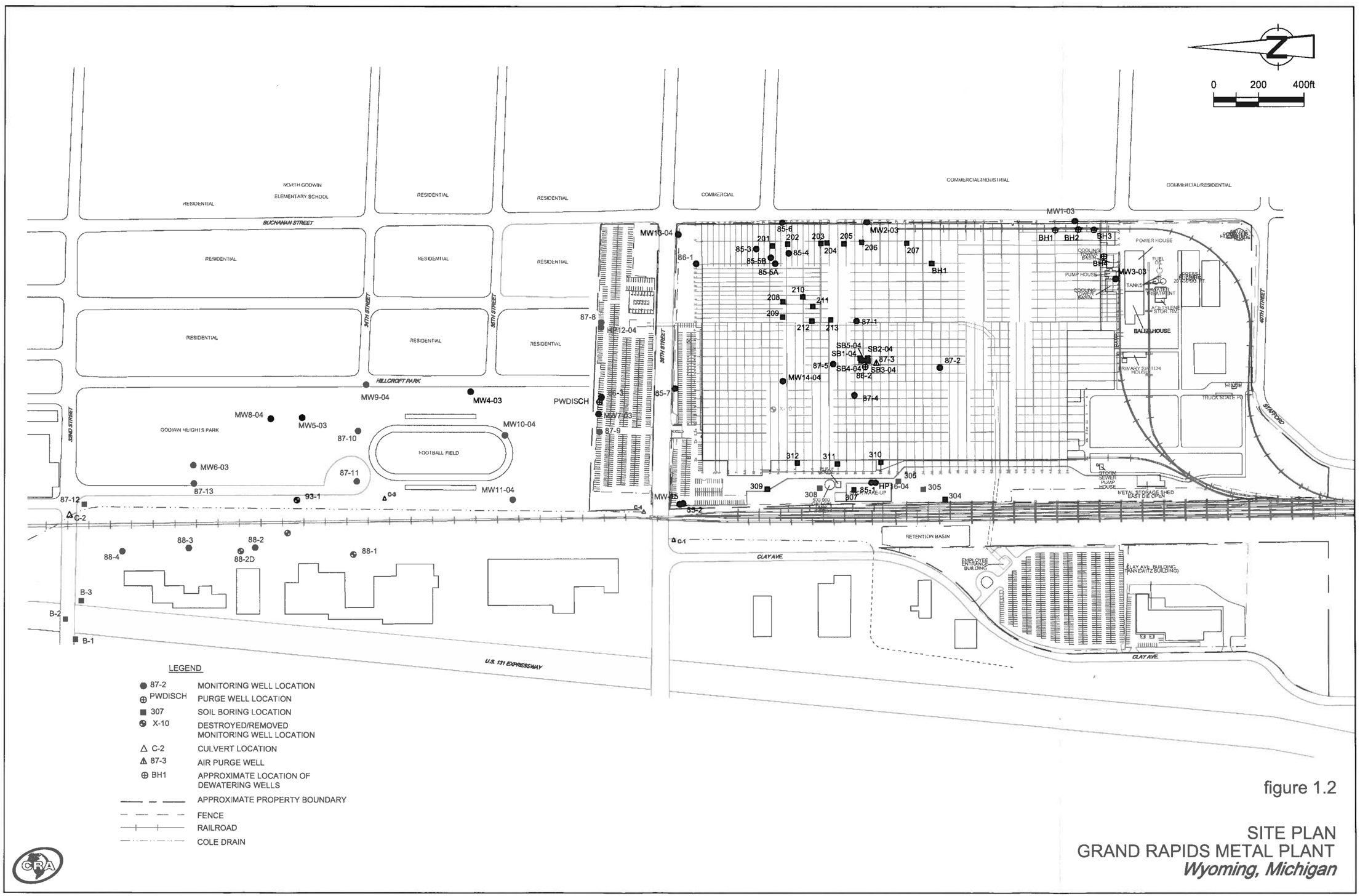


figure 1.2

SITE PLAN
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(009)GN-DE011 DEC 06/2004

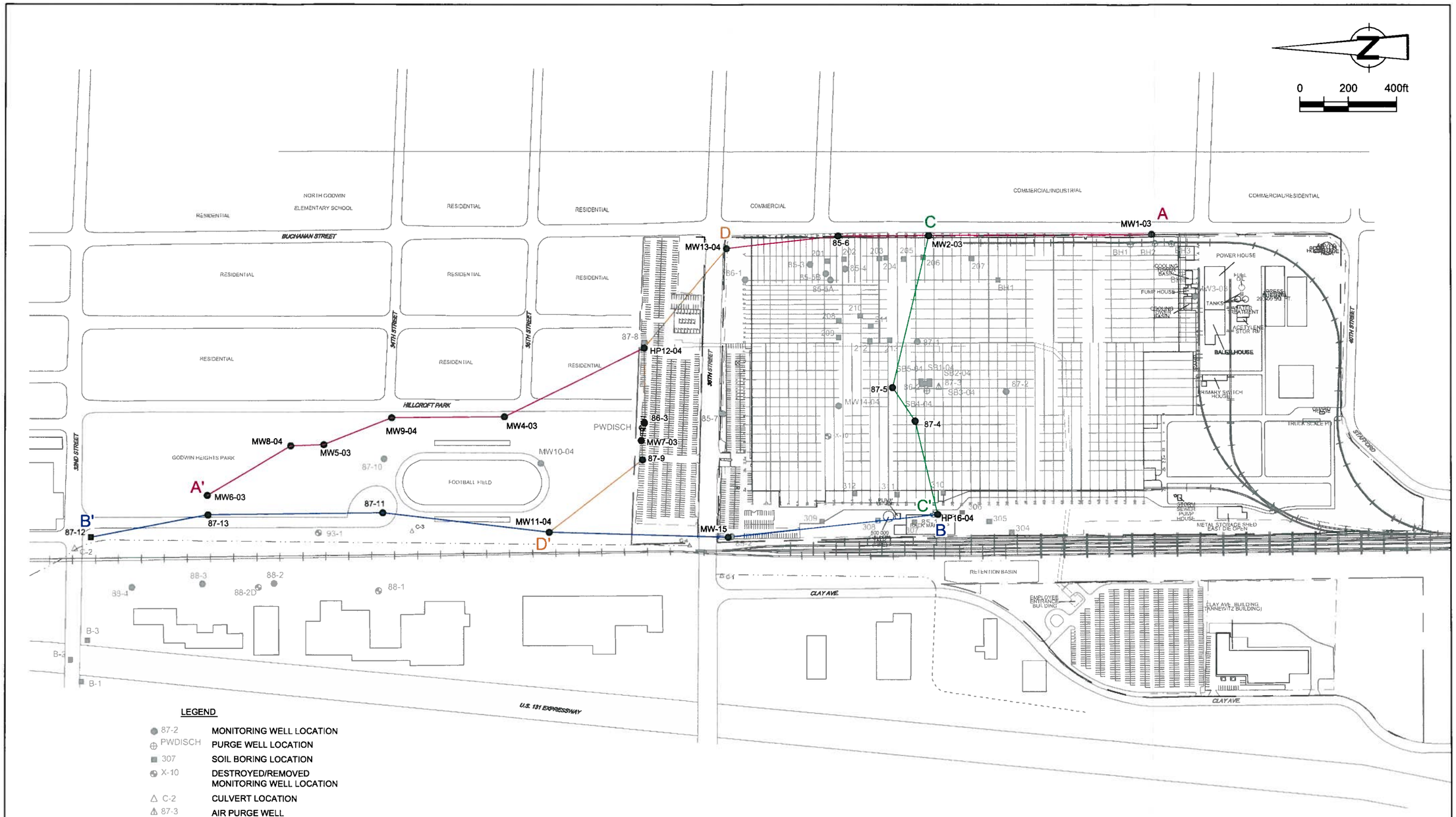


figure 2.1

CROSS SECTION LOCATIONS
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(009)GN-DE006 DEC 06/2004

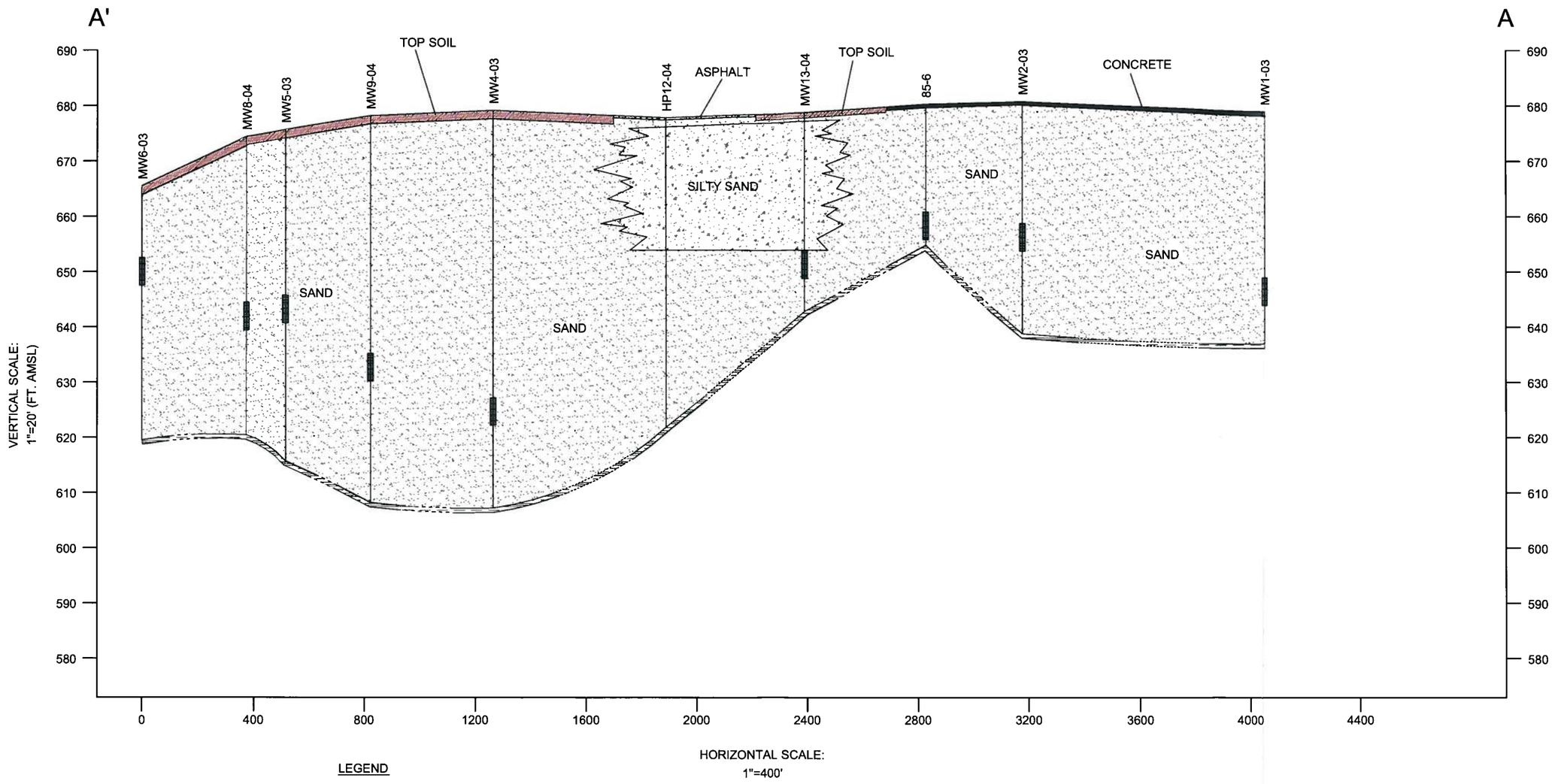
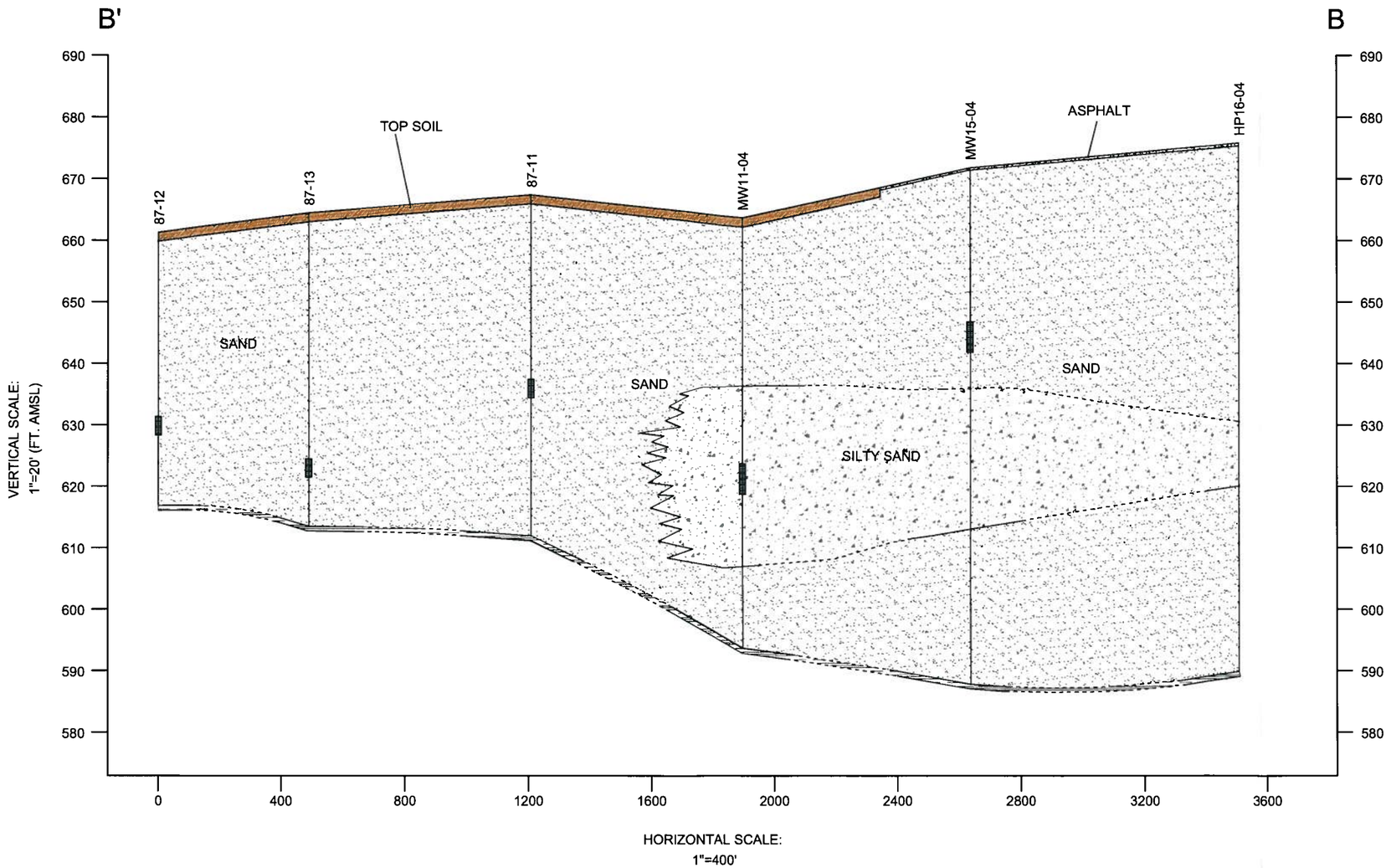


figure 2.2

CROSS SECTION A-A'
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(009)GN-DE007 DEC 06/2004



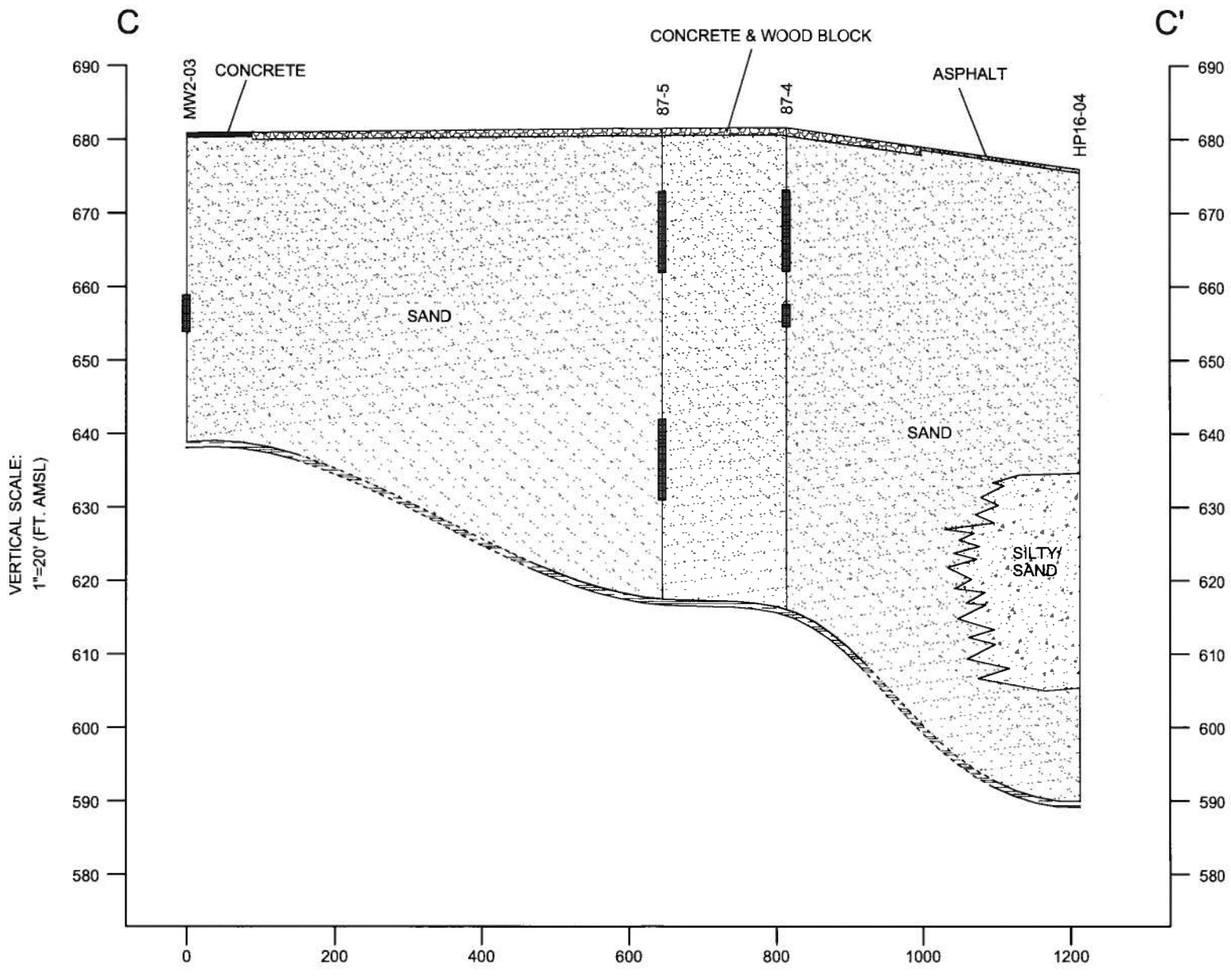
LEGEND

- SCREENED INTERVAL
- INTERPRETIVE CONTACT
- KNOWN CONTACT
- SAND
- CLAY
- SILTY SAND

figure 2.3

CROSS SECTION B-B'
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(009)GN-DE008 DEC 06/2004



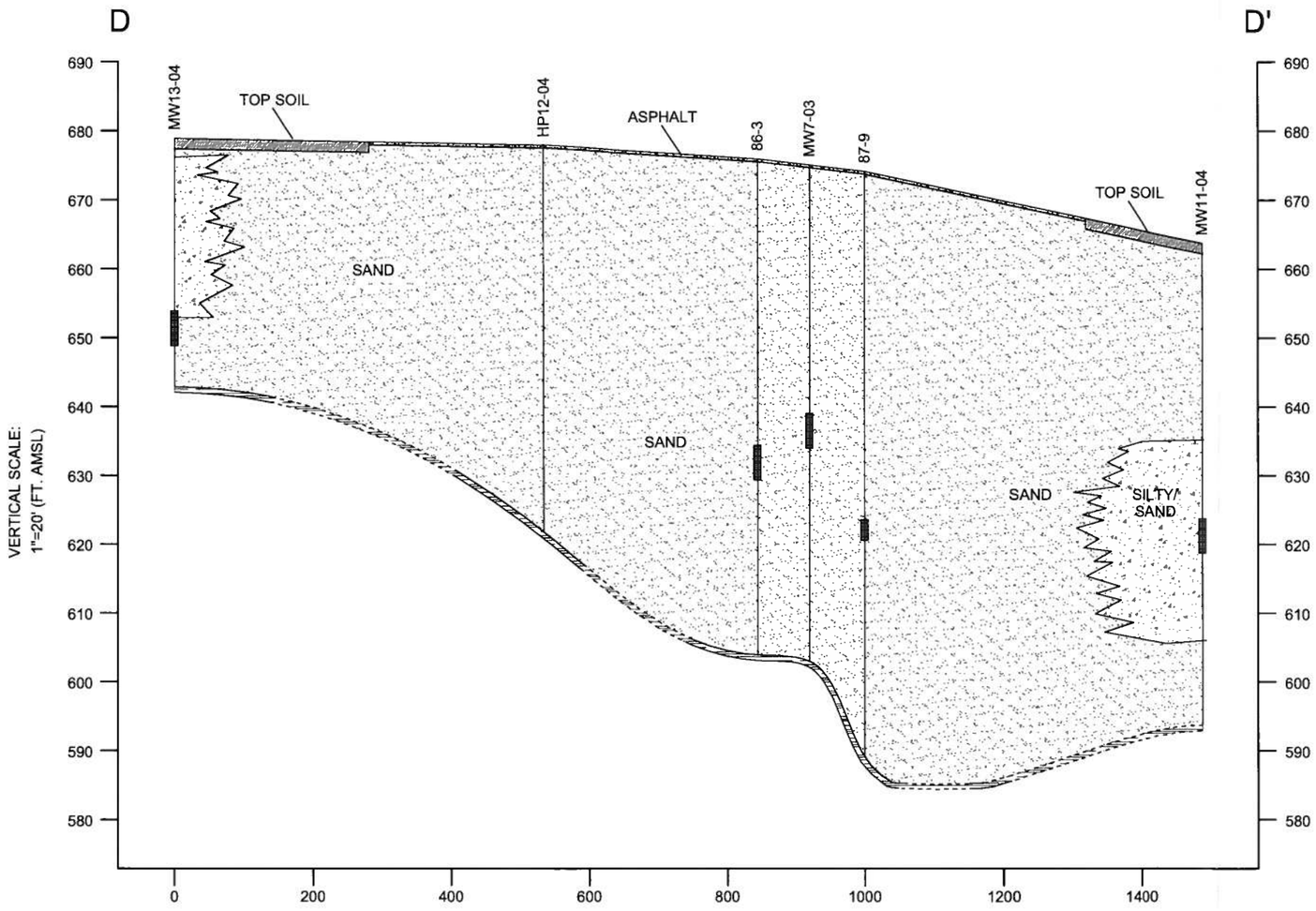
LEGEND

- SCREENED INTERVAL
- INTERPRETIVE CONTACT
- KNOWN CONTACT
- SAND
- CLAY
- SILT

figure 2.4

CROSS SECTION C-C'
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(009)GN-DE009 DEC 06/2004



LEGEND

- SCREENED INTERVAL
- INTERPRETIVE CONTACT
- KNOWN CONTACT
- SAND
- CLAY
- SILTY SAND

figure 2.5

CROSS SECTION D-D'
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(009)GN-DE010 DEC 06/2004

0 200 400ft

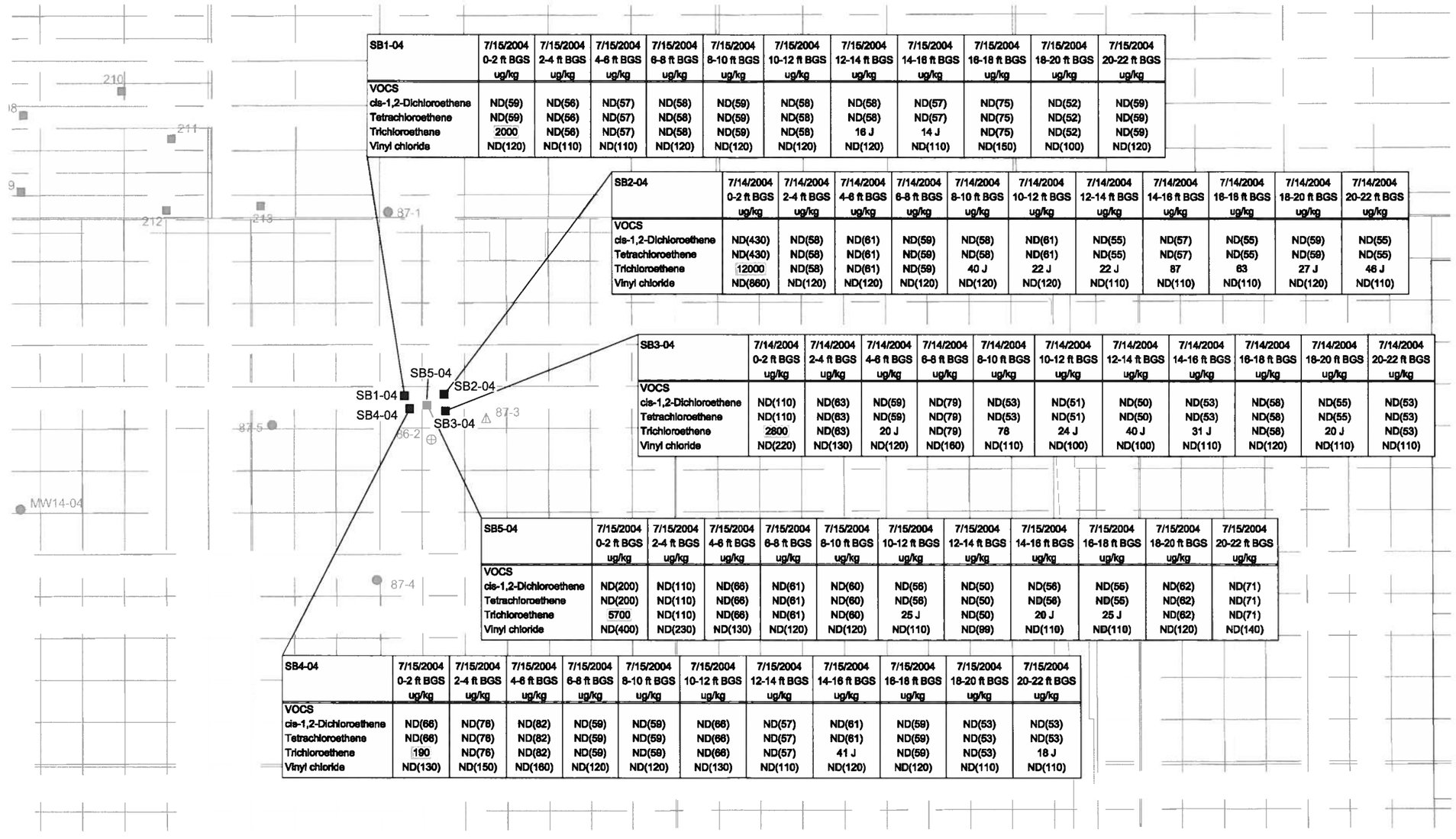
LEGEND

- 87-2 MONITORING WELL LOCATION
- PWDISCH PURGE WELL LOCATION
- 307 SOIL BORING LOCATION
- X-10 DESTROYED/REMOVED MONITORING WELL LOCATION
- C-2 CULVERT LOCATION
- 87-3 AIR PURGE WELL
- BH1 APPROXIMATE LOCATION OF DEWATERING WELLS
- APPROXIMATE PROPERTY BOUNDARY
- FENCE
- RAILROAD
- COLE DRAIN
- GROUNDWATER CONTOURS
- GROUNDWATER ELEVATIONS

figure 2.6

APPROXIMATE AUGUST 8, 2004 GROUNDWATER FLOW DIRECTION
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(009)GN-DE012 DEC 06/2004



SB1-04	7/15/2004 0-2 ft BGS ug/kg	7/15/2004 2-4 ft BGS ug/kg	7/15/2004 4-6 ft BGS ug/kg	7/15/2004 6-8 ft BGS ug/kg	7/15/2004 8-10 ft BGS ug/kg	7/15/2004 10-12 ft BGS ug/kg	7/15/2004 12-14 ft BGS ug/kg	7/15/2004 14-16 ft BGS ug/kg	7/15/2004 16-18 ft BGS ug/kg	7/15/2004 18-20 ft BGS ug/kg	7/15/2004 20-22 ft BGS ug/kg
VOCS											
cis-1,2-Dichloroethene	ND(59)	ND(56)	ND(57)	ND(58)	ND(59)	ND(58)	ND(58)	ND(57)	ND(75)	ND(52)	ND(59)
Tetrachloroethene	ND(59)	ND(56)	ND(57)	ND(58)	ND(59)	ND(58)	ND(58)	ND(57)	ND(75)	ND(52)	ND(59)
Trichloroethene	2000	ND(56)	ND(57)	ND(58)	ND(59)	ND(58)	16 J	14 J	ND(75)	ND(52)	ND(59)
Vinyl chloride	ND(120)	ND(110)	ND(110)	ND(120)	ND(120)	ND(120)	ND(120)	ND(110)	ND(150)	ND(100)	ND(120)

SB2-04	7/14/2004 0-2 ft BGS ug/kg	7/14/2004 2-4 ft BGS ug/kg	7/14/2004 4-6 ft BGS ug/kg	7/14/2004 6-8 ft BGS ug/kg	7/14/2004 8-10 ft BGS ug/kg	7/14/2004 10-12 ft BGS ug/kg	7/14/2004 12-14 ft BGS ug/kg	7/14/2004 14-16 ft BGS ug/kg	7/14/2004 16-18 ft BGS ug/kg	7/14/2004 18-20 ft BGS ug/kg	7/14/2004 20-22 ft BGS ug/kg
VOCS											
cis-1,2-Dichloroethene	ND(430)	ND(58)	ND(61)	ND(59)	ND(58)	ND(61)	ND(55)	ND(57)	ND(55)	ND(59)	ND(55)
Tetrachloroethene	ND(430)	ND(58)	ND(61)	ND(59)	ND(58)	ND(61)	ND(55)	ND(57)	ND(55)	ND(59)	ND(55)
Trichloroethene	12000	ND(58)	ND(61)	ND(59)	40 J	22 J	22 J	87	63	27 J	46 J
Vinyl chloride	ND(860)	ND(120)	ND(120)	ND(120)	ND(120)	ND(120)	ND(110)	ND(110)	ND(110)	ND(120)	ND(110)

SB3-04	7/14/2004 0-2 ft BGS ug/kg	7/14/2004 2-4 ft BGS ug/kg	7/14/2004 4-6 ft BGS ug/kg	7/14/2004 6-8 ft BGS ug/kg	7/14/2004 8-10 ft BGS ug/kg	7/14/2004 10-12 ft BGS ug/kg	7/14/2004 12-14 ft BGS ug/kg	7/14/2004 14-16 ft BGS ug/kg	7/14/2004 16-18 ft BGS ug/kg	7/14/2004 18-20 ft BGS ug/kg	7/14/2004 20-22 ft BGS ug/kg
VOCS											
cis-1,2-Dichloroethene	ND(110)	ND(63)	ND(59)	ND(79)	ND(53)	ND(51)	ND(50)	ND(53)	ND(58)	ND(55)	ND(53)
Tetrachloroethene	ND(110)	ND(63)	ND(59)	ND(79)	ND(53)	ND(51)	ND(50)	ND(53)	ND(58)	ND(55)	ND(53)
Trichloroethene	2800	ND(63)	20 J	ND(79)	78	24 J	40 J	31 J	ND(58)	20 J	ND(53)
Vinyl chloride	ND(220)	ND(130)	ND(120)	ND(160)	ND(110)	ND(100)	ND(100)	ND(110)	ND(120)	ND(110)	ND(110)

SB5-04	7/15/2004 0-2 ft BGS ug/kg	7/15/2004 2-4 ft BGS ug/kg	7/15/2004 4-6 ft BGS ug/kg	7/15/2004 6-8 ft BGS ug/kg	7/15/2004 8-10 ft BGS ug/kg	7/15/2004 10-12 ft BGS ug/kg	7/15/2004 12-14 ft BGS ug/kg	7/15/2004 14-16 ft BGS ug/kg	7/15/2004 16-18 ft BGS ug/kg	7/15/2004 18-20 ft BGS ug/kg	7/15/2004 20-22 ft BGS ug/kg
VOCS											
cis-1,2-Dichloroethene	ND(200)	ND(110)	ND(66)	ND(61)	ND(60)	ND(56)	ND(50)	ND(56)	ND(55)	ND(62)	ND(71)
Tetrachloroethene	ND(200)	ND(110)	ND(66)	ND(61)	ND(60)	ND(56)	ND(50)	ND(56)	ND(55)	ND(62)	ND(71)
Trichloroethene	5700	ND(110)	ND(66)	ND(61)	ND(60)	25 J	ND(50)	20 J	25 J	ND(62)	ND(71)
Vinyl chloride	ND(400)	ND(230)	ND(130)	ND(120)	ND(120)	ND(110)	ND(99)	ND(110)	ND(110)	ND(120)	ND(140)

SB4-04	7/15/2004 0-2 ft BGS ug/kg	7/15/2004 2-4 ft BGS ug/kg	7/15/2004 4-6 ft BGS ug/kg	7/15/2004 6-8 ft BGS ug/kg	7/15/2004 8-10 ft BGS ug/kg	7/15/2004 10-12 ft BGS ug/kg	7/15/2004 12-14 ft BGS ug/kg	7/15/2004 14-16 ft BGS ug/kg	7/15/2004 16-18 ft BGS ug/kg	7/15/2004 18-20 ft BGS ug/kg	7/15/2004 20-22 ft BGS ug/kg
VOCS											
cis-1,2-Dichloroethene	ND(66)	ND(76)	ND(82)	ND(59)	ND(59)	ND(66)	ND(57)	ND(61)	ND(59)	ND(53)	ND(53)
Tetrachloroethene	ND(66)	ND(76)	ND(82)	ND(59)	ND(59)	ND(66)	ND(57)	ND(61)	ND(59)	ND(53)	ND(53)
Trichloroethene	190	ND(76)	ND(82)	ND(59)	ND(59)	ND(66)	ND(57)	41 J	ND(59)	ND(53)	18 J
Vinyl chloride	ND(130)	ND(150)	ND(160)	ND(120)	ND(120)	ND(130)	ND(110)	ND(120)	ND(120)	ND(110)	ND(110)

LEGEND

- 87-2 MONITORING WELL LOCATION
- 86-2 PURGE WELL LOCATION
- 307 SOIL BORING LOCATION
- 87-3 AIR PURGE WELL
- SB2-04 SOIL BORING LOCATIONS
- 5700 EXCEEDS MICHIGAN PART 201 CRITERIA

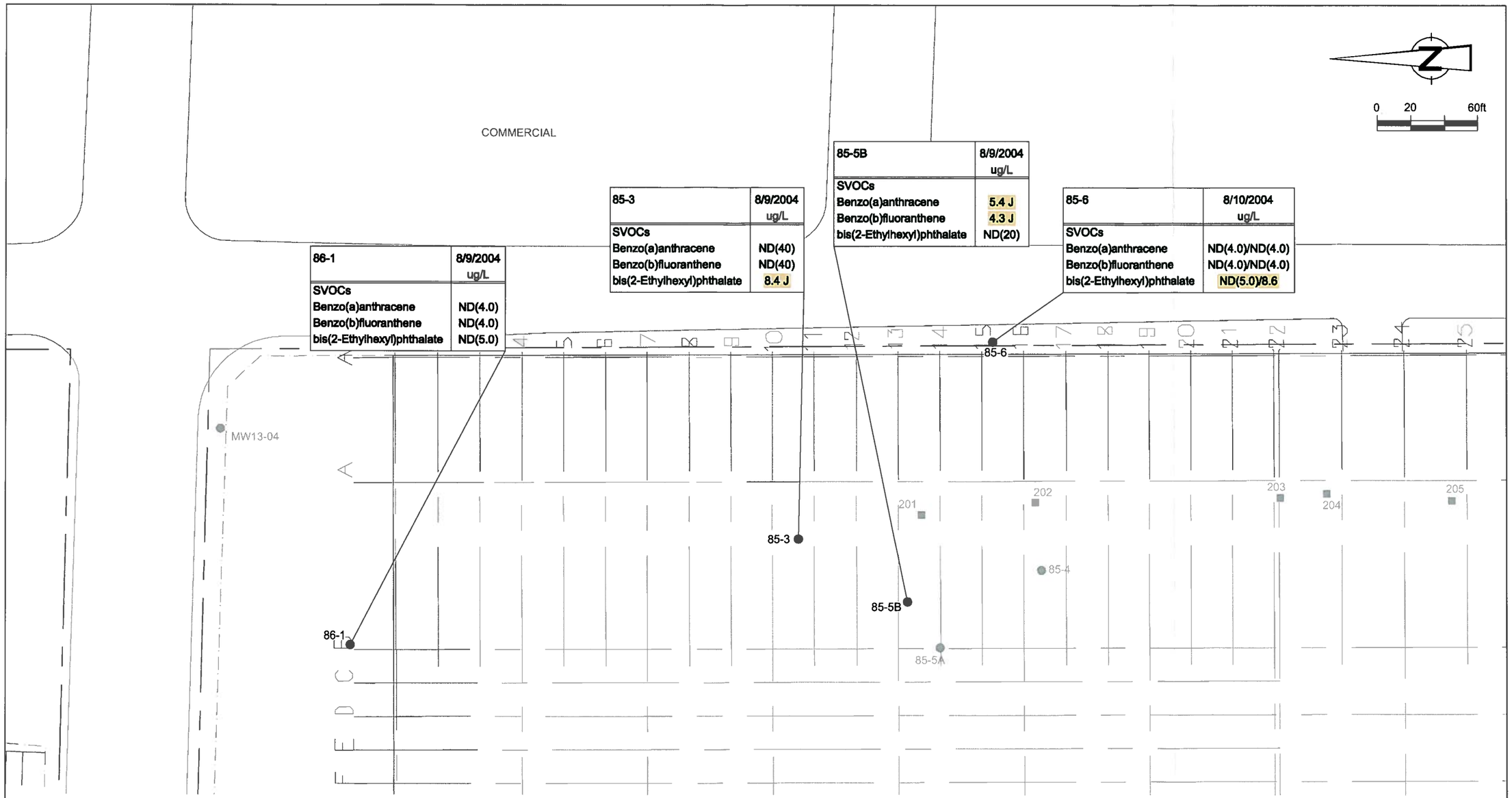
SOURCE: EDI ENGINEERING & SCIENCE, JUNE 1987 AND JUNE 1988 AND EARTH TECH, SEPTEMBER 2001.

Chemical (ug/kg)	Residential & Commercial I Drinking Water Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Direct Contact Criteria
cis-1,2-Dichloroethene	1,400	22,000	64,900
Tetrachloroethene	100	11,000	88,000
Trichloroethene	100	7,100	500,000
Vinyl chloride	40	270	3,800

0 50 100ft

figure 4.1

SELECT TCL VOC IN SOILS
GRAND RAPIDS METAL PLANT
Wyoming, Michigan



LEGEND

- 87-2 MONITORING WELL LOCATION
- 86-2 PURPOSE WELL LOCATION
- 307 SOIL BORING LOCATION
- 8.4 EXCEEDS MICHIGAN PART 201 RESIDENTIAL DRINKING WATER CRITERIA

SOURCE: EDI ENGINEERING & SCIENCE, JUNE 1987 AND JUNE 1988 AND EARTH TECH, SEPTEMBER 2001.

Chemical Name (ug/L)	Residential & Commercial I Drinking Water Criteria
Benzo(a)anthracene	2.1
Benzo(b)fluoranthene	2.0
bis(2-Ethylhexyl)phthalate	6.0

figure 4.2

SELECT TCL SVOC's
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(009)GN-DE013 DEC 06/2004

TABLE 2.1

GROUNDWATER ELEVATIONS
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Monitoring Well Identification	Elevation of Top of Riser	June 26, 2002		September 26, 2002		December 9, 2002	
		Depth to Groundwater ft. (BTOR)	Groundwater Elevation	Depth to Groundwater ft. (BTOR)	Groundwater Elevation	Depth to Groundwater ft. (BTOR)	Groundwater Elevation
93-1	656.62	2.17	654.45	2.14	654.48	2.00	654.62
88-4	661.20	8.32	652.88	8.48	652.72	8.59	652.61
88-3	664.36	10.24	654.12	10.33	654.03	10.41	653.95
88-2	665.80	10.87	654.93	11.03	654.77	11.06	654.74
87-9	673.13	15.87	657.26	16.13	657.00	16.20	656.93
87-8	676.78	19.29	657.49	19.57	657.21	19.87	656.91
87-5	680.39	21.67	658.72	21.86	658.53	21.95	658.44
87-4	680.91	21.90	659.01	22.05	658.86	22.14	658.77
87-2	680.73	20.70	660.03	20.75	659.98	21.20	659.53
87-13	663.57	10.75	652.82	10.77	652.80	10.55	653.02
87-11	666.25	10.50	655.75	10.63	655.62	10.78	655.47
87-10	667.76	11.80	655.96	11.99	655.77	11.76	656.00
87-1	680.74	21.62	659.12	21.48	659.26	22.10	658.64
86-3	675.80	18.59	657.21	18.47	657.33	18.80	657.00
86-2	680.93	22.17	658.76	22.09	658.84	22.35	658.58
86-1	679.92	19.88	660.04	19.85	660.07	19.95	659.97
85-7	677.84	19.86	657.98	20.07	657.77	20.25	657.59
85-6	679.59	18.67	660.92	19.11	660.48	19.01	660.58
85-5B	680.83	20.45	660.38	20.59	660.24	21.30	659.53
85-3	680.91	20.45	660.46	20.57	660.34	21.49	659.42
85-2	671.63	13.68	657.95	13.82	657.81	13.99	657.64
85-1	675.03	15.77	659.26	15.88	659.15	15.91	659.12
C-3	661.97	NA	NA	NA	NA	NA	NA
C-2	658.81	7.97	650.84	8.01	650.80	7.90	650.91
C-1	662.61	5.62	656.99	5.43	657.18	5.30	657.31
MW1-03	678.68	NA	NA	NA	NA	NA	NA
MW2-03	680.60	NA	NA	NA	NA	NA	NA
MW3-03	676.74	NA	NA	NA	NA	NA	NA
MW4-03	679.12	NA	NA	NA	NA	NA	NA
MW5-03	675.82	NA	NA	NA	NA	NA	NA
MW6-03	665.39	NA	NA	NA	NA	NA	NA
MW7-03	674.79	NA	NA	NA	NA	NA	NA
MW8-04	674.32	NA	NA	NA	NA	NA	NA
MW9-04	678.00	NA	NA	NA	NA	NA	NA
MW10-04	666.29	NA	NA	NA	NA	NA	NA
MW11-04	663.27	NA	NA	NA	NA	NA	NA
MW13-04	678.26	NA	NA	NA	NA	NA	NA
MW14-04	680.62	NA	NA	NA	NA	NA	NA
MW15-04	671.69	NA	NA	NA	NA	NA	NA
PWDISCH	677.79	NA	NA	NA	NA	NA	NA

Notes:
ft. BTOR - Feet below top of riser
NA-Not Available
All elevations are measured as Above Mean Sea Level (AMSL)

TABLE 2.1

GROUNDWATER ELEVATIONS
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Monitoring Well Identification	Elevation of Top of Riser	March 20, 2003		July 14, 2003		August 8, 2004	
		Depth to Groundwater ft. (BTOR)	Groundwater Elevation	Depth to Groundwater ft. (BTOR)	Groundwater Elevation	Depth to Groundwater ft. (BTOR)	Groundwater Elevation
93-1	656.62	1.77	654.85	2.42	654.20	NA	656.62
88-4	661.20	8.64	652.56	NA	NA	8.87	NA
88-3	664.36	10.41	653.95	NA	NA	11.23	NA
88-2	665.80	11.12	654.68	NA	NA	11.95	NA
87-9	673.13	16.37	656.76	16.44	656.69	16.13	673.13
87-8	676.78	20.00	656.78	20.29	656.49	19.56	676.78
87-5	680.39	22.24	658.15	21.99	658.40	21.80	680.39
87-4	680.91	22.62	658.29	27.23	653.68	22.13	680.91
87-2	680.73	22.70	658.03	21.33	659.40	21.04	680.73
87-13	663.57	10.76	652.81	10.76	652.81	10.72	663.57
87-11	666.25	10.84	655.41	10.73	655.52	10.67	666.25
87-10	667.76	12.29	655.47	12.19	655.57	12.08	667.76
87-1	680.74	22.47	658.27	22.18	658.56	21.91	680.74
86-3	675.80	19.10	656.70	18.95	656.85	18.79	675.80
86-2	680.93	22.77	658.16	22.48	658.45	22.35	680.93
86-1	679.92	21.25	658.67	NA	NA	21.07	NA
85-7	677.84	20.43	657.41	20.27	657.57	20.12	677.84
85-6	679.59	20.46	659.13	19.79	659.80	19.28	679.59
85-5B	680.83	22.04	658.79	21.27	659.56	20.94	680.83
85-3	680.91	22.32	658.59	21.60	659.31	21.03	680.91
85-2	671.63	15.01	656.62	13.88	657.75	13.82	671.63
85-1	675.03	16.44	658.59	16.16	658.87	16.02	675.03
C-3	661.97	NA	NA	NA	NA	NA	NA
C-2	658.81	7.82	650.99	8.35	650.46	NA	658.81
C-1	662.61	5.45	657.16	5.35	657.26	5.43	662.61
MW1-03	678.68	NA	NA	18.32	660.36	18.03	678.68
MW2-03	680.60	NA	NA	20.56	660.04	20.07	680.60
MW3-03	676.74	NA	NA	15.59	661.15	15.08	676.74
MW4-03	679.12	NA	NA	22.95	656.17	22.81	679.12
MW5-03	675.82	NA	NA	20.54	655.28	20.41	675.82
MW6-03	665.39	NA	NA	12.35	653.04	12.21	665.39
MW7-03	674.79	NA	NA	17.69	657.10	17.58	674.79
MW8-04	674.32	NA	NA	NA	NA	19.79	674.50
MW9-04	678.00	NA	NA	NA	NA	22.21	678.27
MW10-04	666.29	NA	NA	NA	NA	9.70	666.63
MW11-04	663.27	NA	NA	NA	NA	6.68	663.71
MW13-04	678.26	NA	NA	NA	NA	19.25	678.85
MW14-04	680.62	NA	NA	NA	NA	22.20	681.05
MW15-04	671.69	NA	NA	NA	NA	13.96	671.89
PWDISCH	677.79	NA	NA	28.12	649.67	NA	677.79

Notes:
ft. BTOR - Feet below top of riser
NA-Not Available
All elevations are measured as Above

TABLE 3.1

SOIL SAMPLE SUMMARY
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Identification	*Sample Location*	*Sample Depth (feet bgs)*
S-17360-071404-DCR-078	SB3-04	0'-2'
S-17360-071404-DCR-079	SB3-04	2'-4'
S-17360-071404-DCR-080	SB3-04	4'-6'
S-17360-071404-DCR-081	SB3-04	6'-8'
S-17360-071404-DCR-082	SB3-04	8'-10'
S-17360-071404-DCR-083	SB3-04	10'-12'
S-17360-071404-DCR-084	SB3-04	12'-14'
S-17360-071404-DCR-085	SB3-04	14'-16'
S-17360-071404-DCR-086	SB3-04	16'-18'
S-17360-071404-DCR-087	SB3-04	18'-20'
S-17360-071404-DCR-088	SB3-04	20'-22'
S-17360-071404-DCR-089	SB2-04	0'-2'
S-17360-071404-DCR-090	SB2-04	2'-4'
S-17360-071404-DCR-091	SB2-04	4'-6'
S-17360-071404-DCR-092	SB2-04	6'-8'
S-17360-071404-DCR-093	SB2-04	8'-10'
S-17360-071404-DCR-094	SB2-04	10'-12'
S-17360-071404-DCR-095	SB2-04	12'-14'
S-17360-071404-DCR-096	SB2-04	14'-16'
S-17360-071404-DCR-097	SB2-04	16'-18'
S-17360-071404-DCR-098	SB2-04	18'-20'
S-17360-071404-DCR-099	SB2-04	20'-22'
S-17360-071504-DCR-100	SB5-04	0'-2'
S-17360-071504-DCR-101	SB5-04	2'-4'
S-17360-071504-DCR-102	SB5-04	4'-6'
S-17360-071504-DCR-103	SB5-04	6'-8'
S-17360-071504-DCR-104	SB5-04	8'-10'
S-17360-071504-DCR-105	SB5-04	10'-12'
S-17360-071504-DCR-106	SB5-04	12'-14'
S-17360-071504-DCR-107	SB5-04	14'-16'
S-17360-071504-DCR-108	SB5-04	16'-18'
S-17360-071504-DCR-109	SB5-04	18'-20'
S-17360-071504-DCR-110	SB5-04	20'-22'
S-17360-071504-DCR-111	SB4-04	0'-2'
S-17360-071504-DCR-112	SB4-04	2'-4'
S-17360-071504-DCR-113	SB4-04	4'-6'
S-17360-071504-DCR-114	SB4-04	6'-8'
S-17360-071504-DCR-115	SB4-04	8'-10'
S-17360-071504-DCR-116	SB4-04	10'-12'
S-17360-071504-DCR-117	SB4-04	12'-14'
S-17360-071504-DCR-118	SB4-04	14'-16'
S-17360-071504-DCR-119	SB4-04	16'-18'
S-17360-071504-DCR-120	SB4-04	18'-20'
S-17360-071504-DCR-121	SB4-04	20'-22'
S-17360-071504-DCR-122	SB1-04	0'-2'
S-17360-071504-DCR-123	SB1-04	2'-4'
S-17360-071504-DCR-124	SB1-04	4'-6'
S-17360-071504-DCR-125	SB1-04	6'-8'
S-17360-071504-DCR-126	SB1-04	8'-10'
S-17360-071504-DCR-127	SB1-04	10'-12'
S-17360-071504-DCR-128	SB1-04	12'-14'
S-17360-071504-DCR-129	SB1-04	14'-16'
S-17360-071504-DCR-130	SB1-04	16'-18'
S-17360-071504-DCR-131	SB1-04	18'-20'
S-17360-071504-DCR-132	SB1-04	20'-22'

TABLE 3.2

VERTICAL AQUIFER SAMPLE SUMMARY
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Identification	*Sample Location*	*Sample Depth (feet bgs)*	*QA/QC*
GW-17360-071204-DCR-071	HP14-04	25	
GW-17360-071204-DCR-072	HP14-04	35	
GW-17360-071204-DCR-073	HP14-04	35	Duplicate
GW-17360-071204-DCR-074	HP14-04	45	
GW-17360-071204-DCR-075	HP14-04	55	
GW-17360-071204-DCR-076	HP14-04	65	
GW-17360-071204-DCR-077	Trip Blank	- -	Trip Blank
GW-17360-071904-DCR-133	HP13-04	22	
GW-17360-071904-DCR-134	HP13-04	28.5	
GW-17360-071904-DCR-135	Trip Blank	- -	Trip Blank
GW-17360-072004-DCR-136	HP12-04	24	
GW-17360-072004-DCR-137	HP12-04	34	
GW-17360-072004-DCR-138	HP12-04	34	Duplicate
GW-17360-072004-DCR-139	HP12-04	44	MS/MSD
GW-17360-072004-DCR-140	HP12-04	54	
GW-17360-072004-DCR-141	HP15-04	17	
GW-17360-072004-DCR-142	HP15-04	26	
GW-17360-072004-DCR-143	Trip Blank	- -	Trip Blank
GW-17360-072104-BM-144	HP15-04	36	
GW-17360-072104-BM-145	HP15-04	46	
GW-17360-072104-BM-146	HP15-04	56	
GW-17360-072104-BM-147	HP15-04	66	
GW-17360-072104-BM-148	HP15-04	76	
GW-17360-072104-BM-149	HP15-04	83.5	
GW-17360-072104-BM-150	Trip Blank	- -	Trip Blank
GW-17360-072204-DCR-151	HP8-04	22	
GW-17360-072204-DCR-152	HP8-04	32	
GW-17360-072204-DCR-153	HP8-04	32	Duplicate
GW-17360-072204-DCR-154	HP8-04	43	
GW-17360-072204-DCR-155	HP8-04	53.5	
GW-17360-072204-DCR-156	Trip Blank	- -	Trip Blank
GW-17360-072304-DCR-157	HP9-04	26	
GW-17360-072304-DCR-158	HP9-04	36	
GW-17360-072304-DCR-159	HP9-04	46	
GW-17360-072304-DCR-160	HP9-04	56	

Notes:

- - Non Applicable
QA/QC - Quality Assurance/Quality Control
MS/MSD - Matrix Spike/Matrix Spike Duplicate

TABLE 3.2

VERTICAL AQUIFER SAMPLE SUMMARY
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Identification	*Sample Location*	*Sample Depth (feet bgs)*	*QA/QC*
GW-17360-072304-DCR-161	HP9-04	66	
GW-17360-072304-DCR-162	Trip Blank	- -	Trip Blank
GW-17360-072604-DCR-163	HP-10-04	15	
GW-17360-072604-DCR-164	HP-10-04	25	
GW-17360-072604-DCR-165	HP-10-04	35	
GW-17360-072604-DCR-166	HP-10-04	45	MS/MSD
GW-17360-072604-DCR-167	HP-10-04	55	
GW-17360-072604-DCR-168	HP-10-04	65	
GW-17360-072604-DCR-169	HP-10-04	75	
GW-17360-072604-DCR-170	Trip Blank	- -	Trip Blank
GW-17360-072604-DCR-171	HP-10-04	80	
GW-17360-072704-DCR-172	HP11-04	12	
GW-17360-072704-DCR-173	HP11-04	22	
GW-17360-072704-DCR-174	HP11-04	32	
GW-17360-072704-DCR-175	HP11-04	42	
GW-17360-072704-DCR-176	HP11-04	42	Duplicate
GW-17360-072704-DCR-177	HP11-04	52	
GW-17360-072704-DCR-178	Trip Blank	- -	Trip Blank
GW-17360-072704-DCR-179	HP11-04	62	
GW-17360-072704-DCR-180	HP11-04	69	
GW-17360-072804-DCR-181	HP16-04	20	
GW-17360-072804-DCR-182	Trip Blank	- -	Trip Blank
GW-17360-072804-DCR-183	HP16-04	30	
GW-17360-072804-DCR-184	HP16-04	30	Duplicate
GW-17360-072804-DCR-185	HP16-04	40	
GW-17360-072804-DCR-186	HP16-04	50	
GW-17360-072804-DCR-187	HP16-04	60	
GW-17360-072804-DCR-188	HP16-04	70	MS/MSD
GW-17360-072804-DCR-189	HP16-04	80	
GW-17360-072804-DCR-190	HP16-04	84.5	

Notes:

- - Non Applicable
QA/QC - Quality Assurance/Quality Control
MS/MSD - Matrix Spike/Matrix Spike Duplicate

TABLE 3.3

GROUNDWATER SAMPLE SUMMARY
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Identification	*Sample Location*	*Sample Depth (ft. BTOR)*	*QA/QC*
GW-17360-080904-DCR-191	87-5	39.5-50.5	MS/MSD
GW-17360-080904-DCR-192	87-1	24-29	
GW-17360-080904-DCR-193	87-4	24-27	
GW-17360-080904-DCR-194	87-4	24-27	Duplicate
GW-17360-080904-DCR-195	MW14-04	45-50	
GW-17360-080904-DCR-196	86-2	27.5-32.5	
GW-17360-080904-DCR-197	86-1	18.5-29	
GW-17360-080904-DCR-198	87-2	33.2-38.2	
GW-17360-080904-DCR-199	85-5B	21.9-31.9	
GW-17360-080904-DCR-200	85-3	20.3-30.3	
GW-17360-080904-DCR-201	Trip Blank	- -	Trip Blank
GW-17360-081004-DCR-202	85-6	19.5-24.5	
GW-17360-081004-DCR-203	85-6	19.5-24.5	Duplicate
GW-17360-081004-DCR-204	MW2-03	22-27	
GW-17360-081004-DCR-205	MW3-03	25-30	
GW-17360-081004-DCR-206	85-1	15.5-20.5	
GW-17360-081004-DCR-207	MW1-03	30-35	
GW-17360-081004-DCR-208	85-7	20.6-25.6	
GW-17360-081004-DCR-209	MW13-04	25-30	
GW-17360-081004-DCR-210	85-2	13.5-18.5	
GW-17360-081004-DCR-211	MW15-04	25-30	
GW-17360-081004-DCR-212	MW7-03	36-41	
GW-17360-081004-DCR-213	87-9	50.5-53.5	
GW-17360-081004-DCR-214	87-8	19.7-22.7	
GW-17360-081004-DCR-215	87-8	19.7-22.7	Duplicate
GW-17360-081004-DCR-216	86-3	41.5-46.5	
GW-17360-081004-DCR-217	Trip Blank	- -	Trip Blank
GW-17360-081104-DCR-218	88-2	26-29	
GW-17360-081104-DCR-219	88-3	27-30	
GW-17360-081104-DCR-220	88-4	18-21	

Notes:

ND - No Available Depth
- - Non Applicable
QA/QC - Quality Assurance/Quality Control
MS/MSD - Matrix Spike/Matrix Spike Duplicate
BTOR - Below top of riser

TABLE 3.3

GROUNDWATER SAMPLE SUMMARY
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Identification	*Sample Location*	*Sample Depth (ft. BTOR)*	*QA/QC*
GW-17360-081104-DCR-221	PWDISCH	45-55	
GW-17360-081104-DCR-222	87-11	30-33	
GW-17360-081104-DCR-223	87-13	40-43	
GW-17360-081104-DCR-224	MW6-03	13-18	
GW-17360-081104-DCR-225	MW8-04	30-35	
GW-17360-081104-DCR-226	87-10	29-32	
GW-17360-081104-DCR-227	MW5-03	30-35	MS/MSD
GW-17360-081104-DCR-228	MW9-04	43-48	
GW-17360-081104-DCR-229	C-3	ND	
GW-17360-081104-DCR-230	C-2	ND	
GW-17360-081104-DCR-231	C-1	5.43	
GW-17360-081104-DCR-232	Trip Blank	- -	Trip Blank
GW-17360-081204-DCR-233	MW11-04	40-45	
GW-17360-081204-DCR-234	MW11-04	40-45	Duplicate
GW-17360-081204-DCR-235	MW10-04	33-38	
GW-17360-081204-DCR-236	MW4-03	52-57	
GW-17360-081204-DCR-237	Trip Blank	- -	Trip Blank

Notes:

ND - No Available Depth
- - Non Applicable
QA/QC - Quality Assurance/Quality Control
MS/MSD - Matrix Spike/Matrix Spike Duplicate
BTOR - Below top of riser

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location				*Soil*		*SB1-04*	*SB1-04*	*SB1-04*	*SB1-04*
Sample Identification		*Drinking*	*GSI*	*Volatilization to*	*Direct*	*S-17360-071504-DCR-122*	*S-17360-071504-DCR-123*	*S-17360-071504-DCR-124*	*S-17360-071504-DCR-125*
Sample Date		*Water Protection*	*Protection*	*Indoor Air*	*Contact*	*7/15/2004*	*7/15/2004*	*7/15/2004*	*7/15/2004*
Sample Depth		*Criteria*	*Criteria*	*Inhalation*	*Criteria*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*
TCL VOC	*Units*	a	b	c	d				
1,1,1-Trichloroethane	ug/kg	4000	4000	250000	460000	ND(59)	ND(56)	ND(57)	ND(58)
1,1,2,2-Tetrachloroethane	ug/kg	170	1600	4300	53000	ND(120)	ND(110)	ND(110)	ND(120)
1,1,2-Trichloroethane	ug/kg	100	6600	4600	180000	ND(59)	ND(56)	ND(57)	ND(58)
1,1-Dichloroethane	ug/kg	18000	15000	230000	890000	ND(59)	ND(56)	ND(57)	ND(58)
1,1-Dichloroethene	ug/kg	140	1300	62	200000	ND(59)	ND(56)	ND(57)	ND(58)
1,2,4-Trichlorobenzene	ug/kg	4200	1800	1100000	990000	ND(290)	ND(280)	ND(280)	ND(290)
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	4		1200	1200	ND(290)	ND(280)	ND(280)	ND(290)
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	250	250	670	250	ND(290)	ND(280)	ND(280)	ND(290)
1,2-Dichlorobenzene	ug/kg	14000	360	210000	210000	ND(120)	ND(110)	ND(110)	ND(120)
1,2-Dichloroethane	ug/kg	100	7200	2100	91000	ND(59)	ND(56)	ND(57)	ND(58)
1,2-Dichloropropane	ug/kg	100	5800	4000	140000	ND(59)	ND(56)	ND(57)	ND(58)
1,3-Dichlorobenzene	ug/kg	170	1100	ID	170000	ND(120)	ND(110)	ND(110)	ND(120)
1,4-Dichlorobenzene	ug/kg	1700	290	19000	400000	ND(120)	ND(110)	ND(110)	ND(120)
2-Butanone (Methyl Ethyl Ketone)	ug/kg	260000	44000	27000000	27000000	ND(880)	ND(840)	ND(850)	ND(870)
2-Hexanone	ug/kg	20000		990000	2500000	ND(2900)	ND(2800)	ND(2800)	ND(2900)
4-Methyl-2-Pentanone (Methyl Isobutyl Keto	ug/kg	36000	ID	2700000	2700000	ND(2900)	ND(2800)	ND(2800)	ND(2900)
Acetone	ug/kg	15000	34000	110000000	23000000	ND(880)	ND(840)	ND(850)	ND(870)
Benzene	ug/kg	100	4000	1600	180000	ND(59)	ND(56)	ND(57)	ND(58)
Bromodichloromethane	ug/kg	2000	ID	1200	110000	ND(120)	ND(110)	ND(110)	ND(120)
Bromoform	ug/kg	2000	ID	150000	820000	ND(120)	ND(110)	ND(110)	ND(120)
Bromomethane (Methyl Bromide)	ug/kg	200	700	860	320000	ND(290)	ND(280)	ND(280)	ND(290)
Carbon disulfide	ug/kg	16000	ID	76000	280000	ND(290)	ND(280)	ND(280)	ND(290)
Carbon tetrachloride	ug/kg	100	900	190	96000	ND(59)	ND(56)	ND(57)	ND(58)
Chlorobenzene	ug/kg	2000	940	120000	260000	ND(59)	ND(56)	ND(57)	ND(58)
Chloroethane	ug/kg	8600	ID	950000	950000	ND(290)	ND(280)	ND(280)	ND(290)
Chloroform (Trichloromethane)	ug/kg	2000	3400	7200	1200000	ND(59)	ND(56)	ND(57)	ND(58)
Chloromethane (Methyl Chloride)	ug/kg	5200	ID	2300	1100000	ND(290)	ND(280)	ND(280)U	ND(290)
cis-1,2-Dichloroethene	ug/kg	1400	12000	22000	640000	ND(59)	ND(56)	ND(57)	ND(58)
Cyclohexane	ug/kg					ND(1400)	ND(1400)	ND(1400)	ND(1400)
Dibromochloromethane	ug/kg	2000	ID	3900	110000	ND(59)	ND(56)	ND(57)	ND(58)
Dichlorodifluoromethane (CFC-12)	ug/kg	95000	ID	900000	1000000	ND(120)	ND(110)	ND(110)	ND(120)
Ethylbenzene	ug/kg	1500	360	87000	140000	ND(59)	ND(56)	ND(57)	ND(58)
Isopropylbenzene	ug/kg	91000	ID	390000	390000	ND(290)	ND(280)	ND(280)	ND(290)
Methyl acetate	ug/kg					ND(1400)	ND(1400)	ND(1400)	ND(1400)
Methyl cyclohexane	ug/kg					39 J	ND(1400)	ND(1400)	ND(1400)
Methyl Tert Butyl Ether	ug/kg	800	15000	5900000	1500000	ND(290)	ND(280)	ND(280)	ND(290)
Methylene chloride	ug/kg	100	19000	45000	1300000	ND(290)	ND(280)	ND(280)	ND(290)
Styrene	ug/kg	2700	2200	250000	400000	ND(59)	ND(56)	ND(57)	ND(58)
Tetrachloroethene	ug/kg	100	900	11000	88000	ND(59)	ND(56)	ND(57)	ND(58)
Toluene	ug/kg	16000	2800	250000	250000	21 J	ND(110)	ND(110)	ND(120)
trans-1,2-Dichloroethene	ug/kg	2000	30000	23000	1400000	ND(59)	ND(56)	ND(57)	ND(58)
Trichloroethene	ug/kg	100	4000	7100	500000	2000[a]	ND(56)	ND(57)	ND(58)
Trichlorofluoromethane (CFC-11)	ug/kg	52000		560000	560000	ND(120)	ND(110)	ND(110)	ND(120)
Trifluorotrichloroethane (Freon 113)	ug/kg	550000	1700	550000	550000	ND(290)	ND(280)	ND(280)	ND(290)
Vinyl chloride	ug/kg	40	300	270	3800	ND(120)	ND(110)	ND(110)	ND(120)
Xylene (total)	ug/kg	5600	700	150000	150000	38 J	ND(170)	ND(170)	ND(170)
cis-1,3-Dichloropropene	ug/kg					ND(59)	ND(56)	ND(57)	ND(58)
trans-1,3-Dichloropropene	ug/kg					ND(59)	ND(56)	ND(57)	ND(58)
1,3-Dichloropropene- Total	ug/kg	170		1000	10000	ND(59)	ND(56)	ND(57)	ND(58)

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location				*Soil*		*SB1-04*	*SB1-04*	*SB1-04*	*SB1-04*
Sample Identification		*Drinking*	*GSI*	*Volatilization to*	*Direct*	*S-17360-071504-DCR-126*	*S-17360-071504-DCR-127*	*S-17360-071504-DCR-128*	*S-17360-071504-DCR-129*
Sample Date		*Water Protection*	*Protection*	*Indoor Air*	*Contact*	*7/15/2004*	*7/15/2004*	*7/15/2004*	*7/15/2004*
Sample Depth		*Criteria*	*Criteria*	*Inhalation*	*Criteria*	*(8-10)*	*(10-12)*	*(12-14)*	*(14-16)*
TCL VOC	*Units*	a	b	c	d				
1,1,1-Trichloroethane	ug/kg	4000	4000	250000	460000	ND(59)	ND(58)	ND(58)	ND(57)
1,1,2,2-Tetrachloroethane	ug/kg	170	1600	4300	53000	ND(120)	ND(120)	ND(120)	ND(110)
1,1,2-Trichloroethane	ug/kg	100	6600	4600	180000	ND(59)	ND(58)	ND(58)	ND(57)
1,1-Dichloroethane	ug/kg	18000	15000	230000	890000	ND(59)	ND(58)	ND(58)	ND(57)
1,1-Dichloroethene	ug/kg	140	1300	62	200000	ND(59)	ND(58)	ND(58)	ND(57)
1,2,4-Trichlorobenzene	ug/kg	4200	1800	1100000	990000	30 J	ND(290)	ND(290)	ND(290)
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	4		1200	1200	ND(300)	ND(290)	ND(290)	ND(290)
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	250	250	670	250	ND(300)	ND(290)	ND(290)	ND(290)
1,2-Dichlorobenzene	ug/kg	14000	360	210000	210000	ND(120)	ND(120)	ND(120)	ND(110)
1,2-Dichloroethane	ug/kg	100	7200	2100	91000	ND(59)	ND(58)	ND(58)	ND(57)
1,2-Dichloropropane	ug/kg	100	5800	4000	140000	ND(59)	ND(58)	ND(58)	ND(57)
1,3-Dichlorobenzene	ug/kg	170	1100	ID	170000	ND(120)	ND(120)	ND(120)	ND(110)
1,4-Dichlorobenzene	ug/kg	1700	290	19000	400000	ND(120)	ND(120)	ND(120)	ND(110)
2-Butanone (Methyl Ethyl Ketone)	ug/kg	260000	44000	27000000	27000000	ND(890)	ND(870)	ND(880)	ND(860)
2-Hexanone	ug/kg	20000		990000	2500000	ND(3000)	ND(2900)	ND(2900)	ND(2900)
4-Methyl-2-Pentanone (Methyl Isobutyl Keto	ug/kg	36000	ID	2700000	2700000	ND(3000)	ND(2900)	ND(2900)	ND(2900)
Acetone	ug/kg	15000	34000	110000000	23000000	ND(890)	ND(870)	ND(880)	ND(860)
Benzene	ug/kg	100	4000	1600	180000	ND(59)	ND(58)	ND(58)	ND(57)
Bromodichloromethane	ug/kg	2000	ID	1200	110000	ND(120)	ND(120)	ND(120)	ND(110)
Bromoform	ug/kg	2000	ID	150000	820000	ND(120)	ND(120)	ND(120)	ND(110)
Bromomethane (Methyl Bromide)	ug/kg	200	700	860	320000	ND(300)	ND(290)	ND(290)	ND(290)
Carbon disulfide	ug/kg	16000	ID	76000	280000	ND(300)	ND(290)	ND(290)	ND(290)
Carbon tetrachloride	ug/kg	100	900	190	96000	ND(59)	ND(58)	ND(58)	ND(57)
Chlorobenzene	ug/kg	2000	940	120000	260000	ND(59)	ND(58)	ND(58)	ND(57)
Chloroethane	ug/kg	8600	ID	950000	950000	ND(300)	ND(290)	ND(290)	ND(290)
Chloroform (Trichloromethane)	ug/kg	2000	3400	7200	1200000	ND(59)	ND(58)	ND(58)	ND(57)
Chloromethane (Methyl Chloride)	ug/kg	5200	ID	2300	1100000	ND(300)	ND(290)	ND(290)U	ND(290)
cis-1,2-Dichloroethene	ug/kg	1400	12000	22000	640000	ND(59)	ND(58)	ND(58)	ND(57)
Cyclohexane	ug/kg					ND(1400)	ND(1400)	ND(1400)	ND(1400)
Dibromochloromethane	ug/kg	2000	ID	3900	110000	ND(59)	ND(58)	ND(58)	ND(57)
Dichlorodifluoromethane (CFC-12)	ug/kg	95000	ID	900000	1000000	ND(120)	ND(120)	ND(120)	ND(110)
Ethylbenzene	ug/kg	1500	360	87000	140000	ND(59)	ND(58)	ND(58)	ND(57)
Isopropylbenzene	ug/kg	91000	ID	390000	390000	ND(300)	ND(290)	ND(290)	ND(290)
Methyl acetate	ug/kg					ND(1400)	ND(1400)	ND(1400)	ND(1400)
Methyl cyclohexane	ug/kg					ND(1400)	ND(1400)	ND(1400)	ND(1400)
Methyl Tert Butyl Ether	ug/kg	800	15000	5900000	1500000	ND(300)	ND(290)	ND(290)	ND(290)
Methylene chloride	ug/kg	100	19000	45000	1300000	ND(300)	ND(290)	ND(290)	ND(290)
Styrene	ug/kg	2700	2200	250000	400000	ND(59)	ND(58)	ND(58)	ND(57)
Tetrachloroethene	ug/kg	100	900	11000	88000	ND(59)	ND(58)	ND(58)	ND(57)
Toluene	ug/kg	16000	2800	250000	250000	ND(120)	ND(120)	ND(120)	ND(110)
trans-1,2-Dichloroethene	ug/kg	2000	30000	23000	1400000	ND(59)	ND(58)	ND(58)	ND(57)
Trichloroethene	ug/kg	100	4000	7100	500000	ND(59)	ND(58)	16 J	14 J
Trichlorofluoromethane (CFC-11)	ug/kg	52000		560000	560000	ND(120)	ND(120)	ND(120)	ND(110)
Trifluorotrichloroethane (Freon 113)	ug/kg	550000	1700	550000	550000	ND(300)	ND(290)	ND(290)	ND(290)
Vinyl chloride	ug/kg	40	300	270	3800	ND(120)	ND(120)	ND(120)	ND(110)
Xylene (total)	ug/kg	5600	700	150000	150000	ND(180)	ND(170)	ND(180)	ND(170)
cis-1,3-Dichloropropene	ug/kg					ND(59)	ND(58)	ND(58)	ND(57)
trans-1,3-Dichloropropene	ug/kg					ND(59)	ND(58)	ND(58)	ND(57)
1,3-Dichloropropene- Total	ug/kg	170		1000	10000	ND(59)	ND(58)	ND(58)	ND(57)

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location				*Soil*		*SB1-04*	*SB1-04*	*SB1-04*	*SB2-04*
Sample Identification		*Drinking*	*GSI*	*Volatilization to*	*Direct*	*S-17360-071504-DCR-130*	*S-17360-071504-DCR-131*	*S-17360-071504-DCR-132*	*S-17360-071404-DCR-089*
Sample Date		*Water Protection*	*Protection*	*Indoor Air*	*Contact*	*7/15/2004*	*7/15/2004*	*7/15/2004*	*7/14/2004*
Sample Depth		*Criteria*	*Criteria*	*Inhalation*	*Criteria*	*(16-18)*	*(18-20)*	*(20-22)*	*(0-2)*
TCL VOC	*Units*	a	b	c	d				
1,1,1-Trichloroethane	ug/kg	4000	4000	250000	460000	ND(75)	ND(52)	ND(59)	ND(430)
1,1,2,2-Tetrachloroethane	ug/kg	170	1600	4300	53000	ND(150)	ND(100)	ND(120)	ND(860)
1,1,2-Trichloroethane	ug/kg	100	6600	4600	180000	ND(75)	ND(52)	ND(59)	ND(430)
1,1-Dichloroethane	ug/kg	18000	15000	230000	890000	ND(75)	ND(52)	ND(59)	ND(430)
1,1-Dichloroethene	ug/kg	140	1300	62	200000	ND(75)	ND(52)	ND(59)	ND(430)
1,2,4-Trichlorobenzene	ug/kg	4200	1800	1100000	990000	ND(380)	ND(260)	ND(290)	ND(2200)
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	4		1200	1200	ND(380)	ND(260)	ND(290)	ND(2200)
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	250	250	670	250	ND(380)	ND(260)	ND(290)	ND(2200)
1,2-Dichlorobenzene	ug/kg	14000	360	210000	210000	ND(150)	ND(100)	ND(120)	ND(860)
1,2-Dichloroethane	ug/kg	100	7200	2100	91000	ND(75)	ND(52)	ND(59)	ND(430)
1,2-Dichloropropane	ug/kg	100	5800	4000	140000	ND(75)	ND(52)	ND(59)	ND(430)
1,3-Dichlorobenzene	ug/kg	170	1100	ID	170000	ND(150)	ND(100)	ND(120)	ND(860)
1,4-Dichlorobenzene	ug/kg	1700	290	19000	400000	ND(150)	ND(100)	ND(120)	ND(860)
2-Butanone (Methyl Ethyl Ketone)	ug/kg	260000	44000	27000000	27000000	ND(1100)	ND(780)	ND(880)	ND(6500)
2-Hexanone	ug/kg	20000		990000	2500000	ND(3800)	ND(2600)	ND(2900)	ND(22000)
4-Methyl-2-Pentanone (Methyl Isobutyl Keto	ug/kg	36000	ID	2700000	2700000	ND(3800)	ND(2600)	ND(2900)	ND(22000)
Acetone	ug/kg	15000	34000	110000000	23000000	ND(1100)	ND(780)	ND(880)	ND(6500)
Benzene	ug/kg	100	4000	1600	180000	ND(75)	ND(52)	ND(59)	ND(430)
Bromodichloromethane	ug/kg	2000	ID	1200	110000	ND(150)	ND(100)	ND(120)	ND(860)
Bromoform	ug/kg	2000	ID	150000	820000	ND(150)	ND(100)	ND(120)	ND(860)
Bromomethane (Methyl Bromide)	ug/kg	200	700	860	320000	ND(380)	ND(260)	ND(290)	ND(2200)
Carbon disulfide	ug/kg	16000	ID	76000	280000	ND(380)	ND(260)	ND(290)	ND(2200)
Carbon tetrachloride	ug/kg	100	900	190	96000	ND(75)	ND(52)	ND(59)	ND(430)
Chlorobenzene	ug/kg	2000	940	120000	260000	ND(75)	ND(52)	ND(59)	ND(430)
Chloroethane	ug/kg	8600	ID	950000	950000	ND(380)	ND(260)	ND(290)	ND(2200)
Chloroform (Trichloromethane)	ug/kg	2000	3400	7200	1200000	ND(75)	ND(52)	ND(59)	ND(430)
Chloromethane (Methyl Chloride)	ug/kg	5200	ID	2300	1100000	ND(380)	ND(260)	ND(290)	ND(2200)
cis-1,2-Dichloroethene	ug/kg	1400	12000	22000	640000	ND(75)	ND(52)	ND(59)	ND(430)
Cyclohexane	ug/kg					ND(1800)	ND(1200)	ND(1400)	ND(10000)
Dibromochloromethane	ug/kg	2000	ID	3900	110000	ND(75)	ND(52)	ND(59)	ND(430)
Dichlorodifluoromethane (CFC-12)	ug/kg	95000	ID	900000	1000000	ND(150)	ND(100)	ND(120)	ND(860)
Ethylbenzene	ug/kg	1500	360	87000	140000	ND(75)	ND(52)	ND(59)	ND(430)
Isopropylbenzene	ug/kg	91000	ID	390000	390000	ND(380)	ND(260)	ND(290)	ND(2200)
Methyl acetate	ug/kg					ND(1800)	ND(1200)	ND(1400)	ND(10000)
Methyl cyclohexane	ug/kg					ND(1800)	ND(1200)	ND(1400)	200 J
Methyl Tert Butyl Ether	ug/kg	800	15000	5900000	1500000	ND(380)	ND(260)	ND(290)	ND(2200)
Methylene chloride	ug/kg	100	19000	45000	1300000	ND(380)	ND(260)	ND(290)	ND(2200)
Styrene	ug/kg	2700	2200	250000	400000	ND(75)	ND(52)	ND(59)	ND(430)
Tetrachloroethene	ug/kg	100	900	11000	88000	ND(75)	ND(52)	ND(59)	ND(430)
Toluene	ug/kg	16000	2800	250000	250000	ND(150)	ND(100)	ND(120)	160 J
trans-1,2-Dichloroethene	ug/kg	2000	30000	23000	1400000	ND(75)	ND(52)	ND(59)	ND(430)
Trichloroethene	ug/kg	100	4000	7100	500000	ND(75)	ND(52)	ND(59)	12000[abc]
Trichlorofluoromethane (CFC-11)	ug/kg	52000		560000	560000	ND(150)	ND(100)	ND(120)	ND(860)
Trifluorotrichloroethane (Freon 113)	ug/kg	550000	1700	550000	550000	ND(380)	ND(260)	ND(290)	ND(2200)
Vinyl chloride	ug/kg	40	300	270	3800	ND(150)	ND(100)	ND(120)	ND(860)
Xylene (total)	ug/kg	5600	700	150000	150000	ND(230)	ND(160)	ND(180)	280 J
cis-1,3-Dichloropropene	ug/kg					ND(75)	ND(52)	ND(59)	ND(430)
trans-1,3-Dichloropropene	ug/kg					ND(75)	ND(52)	ND(59)	ND(430)
1,3-Dichloropropene- Total	ug/kg	170		1000	10000	ND(75)	ND(52)	ND(59)	ND(430)

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location				*Soil*		*SB2-04*	*SB2-04*	*SB2-04*	*SB2-04*
Sample Identification		*Drinking*	*GSI*	*Volatilization to*	*Direct*	*S-17360-071404-DCR-090*	*S-17360-071404-DCR-091*	*S-17360-071404-DCR-092*	*S-17360-071404-DCR-093*
Sample Date		*Water Protection*	*Protection*	*Indoor Air*	*Contact*	*7/14/2004*	*7/14/2004*	*7/14/2004*	*7/14/2004*
Sample Depth		*Criteria*	*Criteria*	*Inhalation*	*Criteria*	*(2-4)*	*(4-6)*	*(6-8)*	*(8-10)*
TCL VOC	*Units*	a	b	c	d				
1,1,1-Trichloroethane	ug/kg	4000	4000	250000	460000	ND(58)	ND(61)	ND(59)	ND(58)
1,1,2,2-Tetrachloroethane	ug/kg	170	1600	4300	53000	ND(120)	ND(120)	ND(120)	ND(120)
1,1,2-Trichloroethane	ug/kg	100	6600	4600	180000	ND(58)	ND(61)	ND(59)	ND(58)
1,1-Dichloroethane	ug/kg	18000	15000	230000	890000	ND(58)	ND(61)	ND(59)	ND(58)
1,1-Dichloroethene	ug/kg	140	1300	62	200000	ND(58)	ND(61)	ND(59)	ND(58)
1,2,4-Trichlorobenzene	ug/kg	4200	1800	1100000	990000	ND(290)	ND(310)	ND(290)	ND(290)
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	4		1200	1200	ND(290)	ND(310)	ND(290)	ND(290)
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	250	250	670	250	ND(290)	ND(310)	ND(290)	ND(290)
1,2-Dichlorobenzene	ug/kg	14000	360	210000	210000	ND(120)	ND(120)	ND(120)	ND(120)
1,2-Dichloroethane	ug/kg	100	7200	2100	91000	ND(58)	ND(61)	ND(59)	ND(58)
1,2-Dichloropropane	ug/kg	100	5800	4000	140000	ND(58)	ND(61)	ND(59)	ND(58)
1,3-Dichlorobenzene	ug/kg	170	1100	ID	170000	ND(120)	ND(120)	ND(120)	ND(120)
1,4-Dichlorobenzene	ug/kg	1700	290	19000	400000	ND(120)	ND(120)	ND(120)	ND(120)
2-Butanone (Methyl Ethyl Ketone)	ug/kg	260000	44000	27000000	27000000	ND(870)	ND(920)	ND(880)	ND(880)
2-Hexanone	ug/kg	20000		990000	2500000	ND(2900)	ND(3100)	ND(2900)	ND(2900)
4-Methyl-2-Pentanone (Methyl Isobutyl Keto	ug/kg	36000	ID	2700000	2700000	ND(2900)	ND(3100)	ND(2900)	ND(2900)
Acetone	ug/kg	15000	34000	110000000	23000000	ND(870)	ND(920)	ND(880)	ND(880)
Benzene	ug/kg	100	4000	1600	180000	ND(58)	ND(61)	ND(59)	ND(58)
Bromodichloromethane	ug/kg	2000	ID	1200	110000	ND(120)	ND(120)	ND(120)	ND(120)
Bromoform	ug/kg	2000	ID	150000	820000	ND(120)	ND(120)	ND(120)	ND(120)
Bromomethane (Methyl Bromide)	ug/kg	200	700	860	320000	ND(290)	ND(310)	ND(290)	ND(290)
Carbon disulfide	ug/kg	16000	ID	76000	280000	ND(290)	ND(310)	ND(290)	ND(290)
Carbon tetrachloride	ug/kg	100	900	190	96000	ND(58)	ND(61)	ND(59)	ND(58)
Chlorobenzene	ug/kg	2000	940	120000	260000	ND(58)	ND(61)	ND(59)	ND(58)
Chloroethane	ug/kg	8600	ID	950000	950000	ND(290)	ND(310)	ND(290)	ND(290)
Chloroform (Trichloromethane)	ug/kg	2000	3400	7200	1200000	ND(58)	ND(61)	ND(59)	ND(58)
Chloromethane (Methyl Chloride)	ug/kg	5200	ID	2300	1100000	ND(290)U	ND(310)	ND(290)	ND(290)
cis-1,2-Dichloroethene	ug/kg	1400	12000	22000	640000	ND(58)	ND(61)	ND(59)	ND(58)
Cyclohexane	ug/kg					ND(1400)	ND(1500)	ND(1400)	ND(1400)
Dibromochloromethane	ug/kg	2000	ID	3900	110000	ND(58)	ND(61)	ND(59)	ND(58)
Dichlorodifluoromethane (CFC-12)	ug/kg	95000	ID	900000	1000000	ND(120)	ND(120)	ND(120)	ND(120)
Ethylbenzene	ug/kg	1500	360	87000	140000	ND(58)	ND(61)	ND(59)	ND(58)
Isopropylbenzene	ug/kg	91000	ID	390000	390000	ND(290)	ND(310)	ND(290)	ND(290)
Methyl acetate	ug/kg					ND(1400)	ND(1500)	ND(1400)	ND(1400)
Methyl cyclohexane	ug/kg					ND(1400)	ND(1500)	ND(1400)	ND(1400)
Methyl Tert Butyl Ether	ug/kg	800	15000	5900000	1500000	ND(290)	ND(310)	ND(290)	ND(290)
Methylene chloride	ug/kg	100	19000	45000	1300000	ND(290)	ND(310)	ND(290)	ND(290)
Styrene	ug/kg	2700	2200	250000	400000	ND(58)	ND(61)	ND(59)	ND(58)
Tetrachloroethene	ug/kg	100	900	11000	88000	ND(58)	ND(61)	ND(59)	ND(58)
Toluene	ug/kg	16000	2800	250000	250000	ND(120)	ND(120)	ND(120)	ND(120)
trans-1,2-Dichloroethene	ug/kg	2000	30000	23000	1400000	ND(58)	ND(61)	ND(59)	ND(58)
Trichloroethene	ug/kg	100	4000	7100	500000	ND(58)	ND(61)	ND(59)	40 J
Trichlorofluoromethane (CFC-11)	ug/kg	52000		560000	560000	ND(120)	ND(120)	ND(120)	ND(120)
Trifluorotrichloroethane (Freon 113)	ug/kg	550000	1700	550000	550000	ND(290)	ND(310)	ND(290)	ND(290)
Vinyl chloride	ug/kg	40	300	270	3800	ND(120)	ND(120)	ND(120)	ND(120)
Xylene (total)	ug/kg	5600	700	150000	150000	ND(170)	ND(180)	ND(180)	ND(180)
cis-1,3-Dichloropropene	ug/kg					ND(58)	ND(61)	ND(59)	ND(58)
trans-1,3-Dichloropropene	ug/kg					ND(58)	ND(61)	ND(59)	ND(58)
1,3-Dichloropropene- Total	ug/kg	170		1000	10000	ND(58)	ND(61)	ND(59)	ND(58)

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location				*Soil*		*SB2-04*	*SB2-04*	*SB2-04*	*SB2-04*
Sample Identification		*Drinking*	*GSI*	*Volatilization to*	*Direct*	*S-17360-071404-DCR-094*	*S-17360-071404-DCR-095*	*S-17360-071404-DCR-096*	*S-17360-071404-DCR-097*
Sample Date		*Water Protection*	*Protection*	*Indoor Air*	*Contact*	*7/14/2004*	*7/14/2004*	*7/14/2004*	*7/14/2004*
Sample Depth		*Criteria*	*Criteria*	*Inhalation*	*Criteria*	*(10-12)*	*(12-14)*	*(14-16)*	*(16-18)*
TCL VOC	*Units*	a	b	c	d				
1,1,1-Trichloroethane	ug/kg	4000	4000	250000	460000	ND(61)	ND(55)	ND(57)	ND(55)
1,1,2,2-Tetrachloroethane	ug/kg	170	1600	4300	53000	ND(120)	ND(110)	ND(110)	ND(110)
1,1,2-Trichloroethane	ug/kg	100	6600	4600	180000	ND(61)	ND(55)	ND(57)	ND(55)
1,1-Dichloroethane	ug/kg	18000	15000	230000	890000	ND(61)	ND(55)	ND(57)	ND(55)
1,1-Dichloroethene	ug/kg	140	1300	62	200000	ND(61)	ND(55)	ND(57)	ND(55)
1,2,4-Trichlorobenzene	ug/kg	4200	1800	1100000	990000	ND(310)	ND(270)	ND(290)	ND(280)
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	4		1200	1200	ND(310)	ND(270)	ND(290)	ND(280)
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	250	250	670	250	ND(310)	ND(270)	ND(290)	ND(280)
1,2-Dichlorobenzene	ug/kg	14000	360	210000	210000	ND(120)	ND(110)	ND(110)	ND(110)
1,2-Dichloroethane	ug/kg	100	7200	2100	91000	ND(61)	ND(55)	ND(57)	ND(55)
1,2-Dichloropropane	ug/kg	100	5800	4000	140000	ND(61)	ND(55)	ND(57)	ND(55)
1,3-Dichlorobenzene	ug/kg	170	1100	ID	170000	ND(120)	ND(110)	ND(110)	ND(110)
1,4-Dichlorobenzene	ug/kg	1700	290	19000	400000	ND(120)	ND(110)	ND(110)	ND(110)
2-Butanone (Methyl Ethyl Ketone)	ug/kg	260000	44000	27000000	27000000	ND(920)	ND(820)	ND(860)	ND(830)
2-Hexanone	ug/kg	20000		990000	2500000	ND(3100)	ND(2700)	ND(2900)	ND(2800)
4-Methyl-2-Pentanone (Methyl Isobutyl Keto	ug/kg	36000	ID	2700000	2700000	ND(3100)	ND(2700)	ND(2900)	ND(2800)
Acetone	ug/kg	15000	34000	110000000	23000000	ND(920)	ND(820)	ND(860)	ND(830)
Benzene	ug/kg	100	4000	1600	180000	ND(61)	ND(55)	ND(57)	ND(55)
Bromodichloromethane	ug/kg	2000	ID	1200	110000	ND(120)	ND(110)	ND(110)	ND(110)
Bromoform	ug/kg	2000	ID	150000	820000	ND(120)	ND(110)	ND(110)	ND(110)
Bromomethane (Methyl Bromide)	ug/kg	200	700	860	320000	ND(310)	ND(270)	ND(290)	ND(280)
Carbon disulfide	ug/kg	16000	ID	76000	280000	ND(310)	ND(270)	ND(290)	ND(280)
Carbon tetrachloride	ug/kg	100	900	190	96000	ND(61)	ND(55)	ND(57)	ND(55)
Chlorobenzene	ug/kg	2000	940	120000	260000	ND(61)	ND(55)	ND(57)	ND(55)
Chloroethane	ug/kg	8600	ID	950000	950000	ND(310)	ND(270)	ND(290)	ND(280)
Chloroform (Trichloromethane)	ug/kg	2000	3400	7200	1200000	ND(61)	ND(55)	ND(57)	ND(55)
Chloromethane (Methyl Chloride)	ug/kg	5200	ID	2300	1100000	ND(310)	ND(270)U	ND(290)U	ND(280)
cis-1,2-Dichloroethene	ug/kg	1400	12000	22000	640000	ND(61)	ND(55)	ND(57)	ND(55)
Cyclohexane	ug/kg					ND(1500)	ND(1300)	ND(1400)	ND(1300)
Dibromochloromethane	ug/kg	2000	ID	3900	110000	ND(61)	ND(55)	ND(57)	ND(55)
Dichlorodifluoromethane (CFC-12)	ug/kg	95000	ID	900000	1000000	ND(120)	ND(110)	ND(110)	ND(110)
Ethylbenzene	ug/kg	1500	360	87000	140000	ND(61)	ND(55)	ND(57)	ND(55)
Isopropylbenzene	ug/kg	91000	ID	390000	390000	ND(310)	ND(270)	ND(290)	ND(280)
Methyl acetate	ug/kg					ND(1500)	ND(1300)	ND(1400)	ND(1300)
Methyl cyclohexane	ug/kg					ND(1500)	ND(1300)	ND(1400)	ND(1300)
Methyl Tert Butyl Ether	ug/kg	800	15000	5900000	1500000	ND(310)	ND(270)	ND(290)	ND(280)
Methylene chloride	ug/kg	100	19000	45000	1300000	ND(310)	ND(270)	ND(290)	ND(280)
Styrene	ug/kg	2700	2200	250000	400000	ND(61)	ND(55)	ND(57)	ND(55)
Tetrachloroethene	ug/kg	100	900	11000	88000	ND(61)	ND(55)	ND(57)	ND(55)
Toluene	ug/kg	16000	2800	250000	250000	ND(120)	ND(110)	ND(110)	ND(110)
trans-1,2-Dichloroethene	ug/kg	2000	30000	23000	1400000	ND(61)	ND(55)	ND(57)	ND(55)
Trichloroethene	ug/kg	100	4000	7100	500000	22 J	22 J	87	63
Trichlorofluoromethane (CFC-11)	ug/kg	52000		560000	560000	ND(120)	ND(110)	ND(110)	ND(110)
Trifluorotrichloroethane (Freon 113)	ug/kg	550000	1700	550000	550000	ND(310)	ND(270)	ND(290)	ND(280)
Vinyl chloride	ug/kg	40	300	270	3800	ND(120)	ND(110)	ND(110)	ND(110)
Xylene (total)	ug/kg	5600	700	150000	150000	ND(180)	ND(160)	ND(170)	ND(170)
cis-1,3-Dichloropropene	ug/kg					ND(61)	ND(55)	ND(57)	ND(55)
trans-1,3-Dichloropropene	ug/kg					ND(61)	ND(55)	ND(57)	ND(55)
1,3-Dichloropropene- Total	ug/kg	170		1000	10000	ND(61)	ND(55)	ND(57)	ND(55)

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location				*Soil*		*SB2-04*	*SB2-04*	*SB3-04*	*SB3-04*
Sample Identification		*Drinking*	*GSI*	*Volatilization to*	*Direct*	*S-17360-071404-DCR-098*	*S-17360-071404-DCR-099*	*S-17360-071404-DCR-078*	*S-17360-071404-DCR-079*
Sample Date		*Water Protection*	*Protection*	*Indoor Air*	*Contact*	*7/14/2004*	*7/14/2004*	*7/14/2004*	*7/14/2004*
Sample Depth		*Criteria*	*Criteria*	*Inhalation*	*Criteria*	*(18-20)*	*(20-22)*	*(0-2)*	*(2-4)*
TCL VOC	*Units*	a	b	c	d				
1,1,1-Trichloroethane	ug/kg	4000	4000	250000	460000	ND(59)	ND(55)	ND(110)	ND(63)
1,1,2,2-Tetrachloroethane	ug/kg	170	1600	4300	53000	ND(120)	ND(110)	ND(220)	ND(130)
1,1,2-Trichloroethane	ug/kg	100	6600	4600	180000	ND(59)	ND(55)	ND(110)	ND(63)
1,1-Dichloroethane	ug/kg	18000	15000	230000	890000	ND(59)	ND(55)	ND(110)	ND(63)
1,1-Dichloroethene	ug/kg	140	1300	62	200000	ND(59)	ND(55)	ND(110)	ND(63)
1,2,4-Trichlorobenzene	ug/kg	4200	1800	1100000	990000	ND(300)	ND(280)	ND(540)	ND(320)
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	4		1200	1200	ND(300)	ND(280)	ND(540)	ND(320)
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	250	250	670	250	ND(300)	ND(280)	ND(540)	ND(320)
1,2-Dichlorobenzene	ug/kg	14000	360	210000	210000	ND(120)	ND(110)	ND(220)	ND(130)
1,2-Dichloroethane	ug/kg	100	7200	2100	91000	ND(59)	ND(55)	ND(110)	ND(63)
1,2-Dichloropropane	ug/kg	100	5800	4000	140000	ND(59)	ND(55)	ND(110)	ND(63)
1,3-Dichlorobenzene	ug/kg	170	1100	ID	170000	ND(120)	ND(110)	ND(220)	ND(130)
1,4-Dichlorobenzene	ug/kg	1700	290	19000	400000	ND(120)	ND(110)	ND(220)	ND(130)
2-Butanone (Methyl Ethyl Ketone)	ug/kg	260000	44000	27000000	27000000	ND(890)	ND(830)	ND(1600)	ND(950)
2-Hexanone	ug/kg	20000		990000	2500000	ND(3000)	ND(2800)	ND(5400)	ND(3200)
4-Methyl-2-Pentanone (Methyl Isobutyl Keto	ug/kg	36000	ID	2700000	2700000	ND(3000)	ND(2800)	ND(5400)	ND(3200)
Acetone	ug/kg	15000	34000	110000000	23000000	ND(890)	ND(830)	ND(1600)	ND(950)
Benzene	ug/kg	100	4000	1600	180000	ND(59)	ND(55)	ND(110)	ND(63)
Bromodichloromethane	ug/kg	2000	ID	1200	110000	ND(120)	ND(110)	ND(220)	ND(130)
Bromoform	ug/kg	2000	ID	150000	820000	ND(120)	ND(110)	ND(220)	ND(130)
Bromomethane (Methyl Bromide)	ug/kg	200	700	860	320000	ND(300)	ND(280)	ND(540)	ND(320)
Carbon disulfide	ug/kg	16000	ID	76000	280000	ND(300)	ND(280)	ND(540)	ND(320)
Carbon tetrachloride	ug/kg	100	900	190	96000	ND(59)	ND(55)	ND(110)	ND(63)
Chlorobenzene	ug/kg	2000	940	120000	260000	ND(59)	ND(55)	ND(110)	ND(63)
Chloroethane	ug/kg	8600	ID	950000	950000	ND(300)	ND(280)	ND(540)	ND(320)
Chloroform (Trichloromethane)	ug/kg	2000	3400	7200	1200000	ND(59)	ND(55)	ND(110)	ND(63)
Chloromethane (Methyl Chloride)	ug/kg	5200	ID	2300	1100000	ND(300)	ND(280)	ND(540)U	ND(320)U
cis-1,2-Dichloroethene	ug/kg	1400	12000	22000	640000	ND(59)	ND(55)	ND(110)	ND(63)
Cyclohexane	ug/kg					ND(1400)	ND(1300)	18 J	ND(1500)
Dibromochloromethane	ug/kg	2000	ID	3900	110000	ND(59)	ND(55)	ND(110)	ND(63)
Dichlorodifluoromethane (CFC-12)	ug/kg	95000	ID	900000	1000000	ND(120)	ND(110)	ND(220)	ND(130)
Ethylbenzene	ug/kg	1500	360	87000	140000	ND(59)	ND(55)	ND(110)	ND(63)
Isopropylbenzene	ug/kg	91000	ID	390000	390000	ND(300)	ND(280)	ND(540)	ND(320)
Methyl acetate	ug/kg					ND(1400)	ND(1300)	ND(2600)	ND(1500)
Methyl cyclohexane	ug/kg					ND(1400)	ND(1300)	100 J	ND(1500)
Methyl Tert Butyl Ether	ug/kg	800	15000	5900000	1500000	ND(300)	ND(280)	ND(540)	ND(320)
Methylene chloride	ug/kg	100	19000	45000	1300000	ND(300)	ND(280)	ND(540)	ND(320)
Styrene	ug/kg	2700	2200	250000	400000	ND(59)	ND(55)	ND(110)	ND(63)
Tetrachloroethene	ug/kg	100	900	11000	88000	ND(59)	ND(55)	ND(110)	ND(63)
Toluene	ug/kg	16000	2800	250000	250000	ND(120)	ND(110)	42 J	ND(130)
trans-1,2-Dichloroethene	ug/kg	2000	30000	23000	1400000	ND(59)	ND(55)	ND(110)	ND(63)
Trichloroethene	ug/kg	100	4000	7100	500000	27 J	46 J	2800[a]	ND(63)
Trichlorofluoromethane (CFC-11)	ug/kg	52000		560000	560000	ND(120)	ND(110)	ND(220)	ND(130)
Trifluorotrichloroethane (Freon 113)	ug/kg	550000	1700	550000	550000	ND(300)	ND(280)	ND(540)	ND(320)
Vinyl chloride	ug/kg	40	300	270	3800	ND(120)	ND(110)	ND(220)	ND(130)
Xylene (total)	ug/kg	5600	700	150000	150000	ND(180)	ND(170)	84 J	ND(190)
cis-1,3-Dichloropropene	ug/kg					ND(59)	ND(55)	ND(110)	ND(63)
trans-1,3-Dichloropropene	ug/kg					ND(59)	ND(55)	ND(110)	ND(63)
1,3-Dichloropropene- Total	ug/kg	170		1000	10000	ND(59)	ND(55)	ND(110)	ND(63)

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location				*Soil*		*SB3-04*	*SB3-04*	*SB3-04*	*SB3-04*
Sample Identification		*Drinking*	*GSI*	*Volatilization to*	*Direct*	*S-17360-071404-DCR-080*	*S-17360-071404-DCR-081*	*S-17360-071404-DCR-082*	*S-17360-071404-DCR-083*
Sample Date		*Water Protection*	*Protection*	*Indoor Air*	*Contact*	*7/14/2004*	*7/14/2004*	*7/14/2004*	*7/14/2004*
Sample Depth		*Criteria*	*Criteria*	*Inhalation*	*Criteria*	*(4-6)*	*(6-8)*	*(8-10)*	*(10-12)*
TCL VOC	*Units*	a	b	c	d				
1,1,1-Trichloroethane	ug/kg	4000	4000	250000	460000	ND(59)	ND(79)	ND(53)	ND(51)
1,1,2,2-Tetrachloroethane	ug/kg	170	1600	4300	53000	ND(120)	ND(160)	ND(110)	ND(100)
1,1,2-Trichloroethane	ug/kg	100	6600	4600	180000	ND(59)	ND(79)	ND(53)	ND(51)
1,1-Dichloroethane	ug/kg	18000	15000	230000	890000	ND(59)	ND(79)	ND(53)	ND(51)
1,1-Dichloroethene	ug/kg	140	1300	62	200000	ND(59)	ND(79)	ND(53)	ND(51)
1,2,4-Trichlorobenzene	ug/kg	4200	1800	1100000	990000	ND(300)	ND(400)	ND(270)	ND(260)
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	4		1200	1200	ND(300)	ND(400)	ND(270)	ND(260)
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	250	250	670	250	ND(300)	ND(400)	ND(270)	ND(260)
1,2-Dichlorobenzene	ug/kg	14000	360	210000	210000	ND(120)	ND(160)	ND(110)	ND(100)
1,2-Dichloroethane	ug/kg	100	7200	2100	91000	ND(59)	ND(79)	ND(53)	ND(51)
1,2-Dichloropropane	ug/kg	100	5800	4000	140000	ND(59)	ND(79)	ND(53)	ND(51)
1,3-Dichlorobenzene	ug/kg	170	1100	ID	170000	ND(120)	ND(160)	ND(110)	ND(100)
1,4-Dichlorobenzene	ug/kg	1700	290	19000	400000	ND(120)	ND(160)	ND(110)	ND(100)
2-Butanone (Methyl Ethyl Ketone)	ug/kg	260000	44000	27000000	27000000	ND(890)	ND(1200)	ND(800)	ND(770)
2-Hexanone	ug/kg	20000		990000	2500000	ND(3000)	ND(4000)	ND(2700)	ND(2600)
4-Methyl-2-Pentanone (Methyl Isobutyl Keto	ug/kg	36000	ID	2700000	2700000	ND(3000)	ND(4000)	ND(2700)	ND(2600)
Acetone	ug/kg	15000	34000	110000000	23000000	ND(890)	ND(1200)	ND(800)	ND(770)
Benzene	ug/kg	100	4000	1600	180000	ND(59)	ND(79)	ND(53)	ND(51)
Bromodichloromethane	ug/kg	2000	ID	1200	110000	ND(120)	ND(160)	ND(110)	ND(100)
Bromoform	ug/kg	2000	ID	150000	820000	ND(120)	ND(160)	ND(110)	ND(100)
Bromomethane (Methyl Bromide)	ug/kg	200	700	860	320000	ND(300)	ND(400)	ND(270)	ND(260)
Carbon disulfide	ug/kg	16000	ID	76000	280000	ND(300)	ND(400)	ND(270)	ND(260)
Carbon tetrachloride	ug/kg	100	900	190	96000	ND(59)	ND(79)	ND(53)	ND(51)
Chlorobenzene	ug/kg	2000	940	120000	260000	ND(59)	ND(79)	ND(53)	ND(51)
Chloroethane	ug/kg	8600	ID	950000	950000	ND(300)	ND(400)	ND(270)	ND(260)
Chloroform (Trichloromethane)	ug/kg	2000	3400	7200	1200000	ND(59)	ND(79)	ND(53)	ND(51)
Chloromethane (Methyl Chloride)	ug/kg	5200	ID	2300	1100000	ND(300)	ND(400)U	ND(270)U	ND(260)U
cis-1,2-Dichloroethene	ug/kg	1400	12000	22000	640000	ND(59)	ND(79)	ND(53)	ND(51)
Cyclohexane	ug/kg					ND(1400)	ND(1900)	ND(1300)	ND(1200)
Dibromochloromethane	ug/kg	2000	ID	3900	110000	ND(59)	ND(79)	ND(53)	ND(51)
Dichlorodifluoromethane (CFC-12)	ug/kg	95000	ID	900000	1000000	ND(120)	ND(160)	ND(110)	ND(100)
Ethylbenzene	ug/kg	1500	360	87000	140000	ND(59)	ND(79)	ND(53)	ND(51)
Isopropylbenzene	ug/kg	91000	ID	390000	390000	ND(300)	ND(400)	ND(270)	ND(260)
Methyl acetate	ug/kg					ND(1400)	ND(1900)	ND(1300)	ND(1200)
Methyl cyclohexane	ug/kg					ND(1400)	ND(1900)	ND(1300)	ND(1200)
Methyl Tert Butyl Ether	ug/kg	800	15000	5900000	1500000	ND(300)	ND(400)	ND(270)	ND(260)
Methylene chloride	ug/kg	100	19000	45000	1300000	ND(300)	ND(400)	ND(270)	ND(260)
Styrene	ug/kg	2700	2200	250000	400000	ND(59)	ND(79)	ND(53)	ND(51)
Tetrachloroethene	ug/kg	100	900	11000	88000	ND(59)	ND(79)	ND(53)	ND(51)
Toluene	ug/kg	16000	2800	250000	250000	ND(120)	ND(160)	ND(110)	ND(100)
trans-1,2-Dichloroethene	ug/kg	2000	30000	23000	1400000	ND(59)	ND(79)	ND(53)	ND(51)
Trichloroethene	ug/kg	100	4000	7100	500000	20 J	ND(79)	78	24 J
Trichlorofluoromethane (CFC-11)	ug/kg	52000		560000	560000	ND(120)	ND(160)	ND(110)	ND(100)
Trifluorotrichloroethane (Freon 113)	ug/kg	550000	1700	550000	550000	ND(300)	ND(400)	ND(270)	ND(260)
Vinyl chloride	ug/kg	40	300	270	3800	ND(120)	ND(160)	ND(110)	ND(100)
Xylene (total)	ug/kg	5600	700	150000	150000	ND(180)	ND(240)	ND(160)	ND(150)
cis-1,3-Dichloropropene	ug/kg					ND(59)	ND(79)	ND(53)	ND(51)
trans-1,3-Dichloropropene	ug/kg					ND(59)	ND(79)	ND(53)	ND(51)
1,3-Dichloropropene- Total	ug/kg	170		1000	10000	ND(59)	ND(79)	ND(53)	ND(51)

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location						*SB3-04*	*SB3-04*	*SB3-04*	*SB3-04*
Sample Identification		*Drinking*	*GSI*	*Soil Volatilization to*	*Direct*	*S-17360-071404-DCR-084*	*S-17360-071404-DCR-085*	*S-17360-071404-DCR-086*	*S-17360-071404-DCR-087*
Sample Date		*Water Protection*	*Protection*	*Indoor Air*	*Contact*	*7/14/2004*	*7/14/2004*	*7/14/2004*	*7/14/2004*
Sample Depth		*Criteria*	*Criteria*	*Inhalation*	*Criteria*	*(12-14)*	*(14-16)*	*(16-18)*	*(18-20)*
TCL VOC	*Units*	a	b	c	d				
1,1,1-Trichloroethane	ug/kg	4000	4000	250000	460000	ND(50)	ND(53)	ND(58)	ND(55)
1,1,2,2-Tetrachloroethane	ug/kg	170	1600	4300	53000	ND(100)	ND(110)	ND(120)	ND(110)
1,1,2-Trichloroethane	ug/kg	100	6600	4600	180000	ND(50)	ND(53)	ND(58)	ND(55)
1,1-Dichloroethane	ug/kg	18000	15000	230000	890000	ND(50)	ND(53)	ND(58)	ND(55)
1,1-Dichloroethene	ug/kg	140	1300	62	200000	ND(50)	ND(53)	ND(58)	ND(55)
1,2,4-Trichlorobenzene	ug/kg	4200	1800	1100000	990000	ND(250)	ND(260)	ND(290)	ND(270)
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	4		1200	1200	ND(250)	ND(260)	ND(290)	ND(270)
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	250	250	670	250	ND(250)	ND(260)	ND(290)	ND(270)
1,2-Dichlorobenzene	ug/kg	14000	360	210000	210000	ND(100)	ND(110)	ND(120)	ND(110)
1,2-Dichloroethane	ug/kg	100	7200	2100	91000	ND(50)	ND(53)	ND(58)	ND(55)
1,2-Dichloropropane	ug/kg	100	5800	4000	140000	ND(50)	ND(53)	ND(58)	ND(55)
1,3-Dichlorobenzene	ug/kg	170	1100	ID	170000	ND(100)	ND(110)	ND(120)	ND(110)
1,4-Dichlorobenzene	ug/kg	1700	290	19000	400000	ND(100)	ND(110)	ND(120)	ND(110)
2-Butanone (Methyl Ethyl Ketone)	ug/kg	260000	44000	27000000	27000000	ND(750)	ND(790)	ND(860)	ND(820)
2-Hexanone	ug/kg	20000		990000	2500000	ND(2500)	ND(2600)	ND(2900)	ND(2700)
4-Methyl-2-Pentanone (Methyl Isobutyl Keto	ug/kg	36000	ID	2700000	2700000	ND(2500)	ND(2600)	ND(2900)	ND(2700)
Acetone	ug/kg	15000	34000	110000000	23000000	ND(750)	ND(790)	ND(860)	ND(820)
Benzene	ug/kg	100	4000	1600	180000	ND(50)	ND(53)	ND(58)	ND(55)
Bromodichloromethane	ug/kg	2000	ID	1200	110000	ND(100)	ND(110)	ND(120)	ND(110)
Bromoform	ug/kg	2000	ID	150000	820000	ND(100)	ND(110)	ND(120)	ND(110)
Bromomethane (Methyl Bromide)	ug/kg	200	700	860	320000	ND(250)	ND(260)	ND(290)	ND(270)
Carbon disulfide	ug/kg	16000	ID	76000	280000	ND(250)	ND(260)	ND(290)	ND(270)
Carbon tetrachloride	ug/kg	100	900	190	96000	ND(50)	ND(53)	ND(58)	ND(55)
Chlorobenzene	ug/kg	2000	940	120000	260000	ND(50)	ND(53)	ND(58)	ND(55)
Chloroethane	ug/kg	8600	ID	950000	950000	ND(250)	ND(260)	ND(290)	ND(270)
Chloroform (Trichloromethane)	ug/kg	2000	3400	7200	1200000	ND(50)	ND(53)	ND(58)	ND(55)
Chloromethane (Methyl Chloride)	ug/kg	5200	ID	2300	1100000	ND(250)U	ND(260)U	ND(290)U	ND(270)U
cis-1,2-Dichloroethene	ug/kg	1400	12000	22000	640000	ND(50)	ND(53)	ND(58)	ND(55)
Cyclohexane	ug/kg					ND(1200)	ND(1300)	ND(1400)	ND(1300)
Dibromochloromethane	ug/kg	2000	ID	3900	110000	ND(50)	ND(53)	ND(58)	ND(55)
Dichlorodifluoromethane (CFC-12)	ug/kg	95000	ID	900000	1000000	ND(100)	ND(110)	ND(120)	ND(110)
Ethylbenzene	ug/kg	1500	360	87000	140000	ND(50)	ND(53)	ND(58)	ND(55)
Isopropylbenzene	ug/kg	91000	ID	390000	390000	ND(250)	ND(260)	ND(290)	ND(270)
Methyl acetate	ug/kg					ND(1200)	ND(1300)	ND(1400)	ND(1300)
Methyl cyclohexane	ug/kg					ND(1200)	ND(1300)	ND(1400)	ND(1300)
Methyl Tert Butyl Ether	ug/kg	800	15000	5900000	1500000	ND(250)	ND(260)	ND(290)	ND(270)
Methylene chloride	ug/kg	100	19000	45000	1300000	ND(250)	ND(260)	ND(290)	ND(270)
Styrene	ug/kg	2700	2200	250000	400000	ND(50)	ND(53)	ND(58)	ND(55)
Tetrachloroethene	ug/kg	100	900	11000	88000	ND(50)	ND(53)	ND(58)	ND(55)
Toluene	ug/kg	16000	2800	250000	250000	ND(100)	ND(110)	ND(120)	ND(110)
trans-1,2-Dichloroethene	ug/kg	2000	30000	23000	1400000	ND(50)	ND(53)	ND(58)	ND(55)
Trichloroethene	ug/kg	100	4000	7100	500000	40 J	31 J	ND(58)	20 J
Trichlorofluoromethane (CFC-11)	ug/kg	52000		560000	560000	ND(100)	ND(110)	ND(120)	ND(110)
Trifluorotrichloroethane (Freon 113)	ug/kg	550000	1700	550000	550000	ND(250)	ND(260)	ND(290)	ND(270)
Vinyl chloride	ug/kg	40	300	270	3800	ND(100)	ND(110)	ND(120)	ND(110)
Xylene (total)	ug/kg	5600	700	150000	150000	ND(150)	ND(160)	ND(170)	ND(160)
cis-1,3-Dichloropropene	ug/kg					ND(50)	ND(53)	ND(58)	ND(55)
trans-1,3-Dichloropropene	ug/kg					ND(50)	ND(53)	ND(58)	ND(55)
1,3-Dichloropropene- Total	ug/kg	170		1000	10000	ND(50)	ND(53)	ND(58)	ND(55)

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location *Sample Identification* *Sample Date* *Sample Depth*		*Drinking Water Protection Criteria*	*GSI Protection Criteria*	*Soil Volatilization to Indoor Air Inhalation*	*Direct Contact Criteria*	*SB3-04* *S-17360-071404-DCR-088* *7/14/2004* *(20-22)*	*SB4-04* *S-17360-071504-DCR-111* *7/15/2004* *(0-2)*	*SB4-04* *S-17360-071504-DCR-112* *7/15/2004* *(2-4)*
TCL VOC	*Units*	a	b	c	d			
1,1,1-Trichloroethane	ug/kg	4000	4000	250000	460000	ND(53)	ND(66)	ND(76)
1,1,2,2-Tetrachloroethane	ug/kg	170	1600	4300	53000	ND(110)	ND(130)	ND(150)
1,1,2-Trichloroethane	ug/kg	100	6600	4600	180000	ND(53)	ND(66)	ND(76)
1,1-Dichloroethane	ug/kg	18000	15000	230000	890000	ND(53)	ND(66)	ND(76)
1,1-Dichloroethene	ug/kg	140	1300	62	200000	ND(53)	ND(66)	ND(76)
1,2,4-Trichlorobenzene	ug/kg	4200	1800	1100000	990000	ND(260)	ND(330)	ND(380)
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	4		1200	1200	ND(260)	ND(330)	ND(380)
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	250	250	670	250	ND(260)	ND(330)	ND(380)
1,2-Dichlorobenzene	ug/kg	14000	360	210000	210000	ND(110)	ND(130)	ND(150)
1,2-Dichloroethane	ug/kg	100	7200	2100	91000	ND(53)	ND(66)	ND(76)
1,2-Dichloropropane	ug/kg	100	5800	4000	140000	ND(53)	ND(66)	ND(76)
1,3-Dichlorobenzene	ug/kg	170	1100	ID	170000	ND(110)	ND(130)	ND(150)
1,4-Dichlorobenzene	ug/kg	1700	290	19000	400000	ND(110)	ND(130)	ND(150)
2-Butanone (Methyl Ethyl Ketone)	ug/kg	260000	44000	27000000	27000000	ND(790)	ND(990)	ND(1100)
2-Hexanone	ug/kg	20000		990000	2500000	ND(2600)	ND(3300)	ND(3800)
4-Methyl-2-Pentanone (Methyl Isobutyl Keto	ug/kg	36000	ID	2700000	2700000	ND(2600)	ND(3300)	ND(3800)
Acetone	ug/kg	15000	34000	110000000	23000000	ND(790)	ND(990)	ND(1100)
Benzene	ug/kg	100	4000	1600	180000	ND(53)	ND(66)	ND(76)
Bromodichloromethane	ug/kg	2000	ID	1200	110000	ND(110)	ND(130)	ND(150)
Bromoform	ug/kg	2000	ID	150000	820000	ND(110)	ND(130)	ND(150)
Bromomethane (Methyl Bromide)	ug/kg	200	700	860	320000	ND(260)	ND(330)	ND(380)
Carbon disulfide	ug/kg	16000	ID	76000	280000	ND(260)	ND(330)	ND(380)
Carbon tetrachloride	ug/kg	100	900	190	96000	ND(53)	ND(66)	ND(76)
Chlorobenzene	ug/kg	2000	940	120000	260000	ND(53)	ND(66)	ND(76)
Chloroethane	ug/kg	8600	ID	950000	950000	ND(260)	ND(330)	ND(380)
Chloroform (Trichloromethane)	ug/kg	2000	3400	7200	1200000	ND(53)	ND(66)	ND(76)
Chloromethane (Methyl Chloride)	ug/kg	5200	ID	2300	1100000	ND(260)U	ND(330)	27 J
cis-1,2-Dichloroethene	ug/kg	1400	12000	22000	640000	ND(53)	ND(66)	ND(76)
Cyclohexane	ug/kg					ND(1300)	ND(1600)	ND(1800)
Dibromochloromethane	ug/kg	2000	ID	3900	110000	ND(53)	ND(66)	ND(76)
Dichlorodifluoromethane (CFC-12)	ug/kg	95000	ID	900000	1000000	ND(110)	ND(130)	ND(150)
Ethylbenzene	ug/kg	1500	360	87000	140000	ND(53)	ND(66)	ND(76)
Isopropylbenzene	ug/kg	91000	ID	390000	390000	ND(260)	ND(330)	ND(380)
Methyl acetate	ug/kg					ND(1300)	ND(1600)	ND(1800)
Methyl cyclohexane	ug/kg					ND(1300)	ND(1600)	ND(1800)
Methyl Tert Butyl Ether	ug/kg	800	15000	5900000	1500000	ND(260)	ND(330)	ND(380)
Methylene chloride	ug/kg	100	19000	45000	1300000	ND(260)	ND(330)	ND(380)
Styrene	ug/kg	2700	2200	250000	400000	ND(53)	ND(66)	ND(76)
Tetrachloroethene	ug/kg	100	900	11000	88000	ND(53)	ND(66)	ND(76)
Toluene	ug/kg	16000	2800	250000	250000	ND(110)	ND(130)	ND(150)
trans-1,2-Dichloroethene	ug/kg	2000	30000	23000	1400000	ND(53)	ND(66)	ND(76)
Trichloroethene	ug/kg	100	4000	7100	500000	ND(53)	**190**[a]	ND(76)
Trichlorofluoromethane (CFC-11)	ug/kg	52000		560000	560000	ND(110)	ND(130)	ND(150)
Trifluorotrichloroethane (Freon 113)	ug/kg	550000	1700	550000	550000	ND(260)	ND(330)	ND(380)
Vinyl chloride	ug/kg	40	300	270	3800	ND(110)	ND(130)	ND(150)
Xylene (total)	ug/kg	5600	700	150000	150000	ND(160)	ND(200)	ND(230)
cis-1,3-Dichloropropene	ug/kg					ND(53)	ND(66)	ND(76)
trans-1,3-Dichloropropene	ug/kg					ND(53)	ND(66)	ND(76)
1,3-Dichloropropene- Total	ug/kg	170		1000	10000	ND(53)	ND(66)	ND(76)

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location				*Soil*		*SB4-04*	*SB4-04*	*SB4-04*	*SB4-04*
Sample Identification		*Drinking*	*GSI*	*Volatilization to*	*Direct*	*S-17360-071504-DCR-113*	*S-17360-071504-DCR-114*	*S-17360-071504-DCR-115*	*S-17360-071504-DCR-116*
Sample Date		*Water Protection*	*Protection*	*Indoor Air*	*Contact*	*7/15/2004*	*7/15/2004*	*7/15/2004*	*7/15/2004*
Sample Depth		*Criteria*	*Criteria*	*Inhalation*	*Criteria*	*(4-6)*	*(6-8)*	*(8-10)*	*(10-12)*
TCL VOC	*Units*	a	b	c	d				
1,1,1-Trichloroethane	ug/kg	4000	4000	250000	460000	ND(82)	ND(59)	ND(59)	ND(66)
1,1,2,2-Tetrachloroethane	ug/kg	170	1600	4300	53000	ND(160)	ND(120)	ND(120)	ND(130)
1,1,2-Trichloroethane	ug/kg	100	6600	4600	180000	ND(82)	ND(59)	ND(59)	ND(66)
1,1-Dichloroethane	ug/kg	18000	15000	230000	890000	ND(82)	ND(59)	ND(59)	ND(66)
1,1-Dichloroethene	ug/kg	140	1300	62	200000	ND(82)	ND(59)	ND(59)	ND(66)
1,2,4-Trichlorobenzene	ug/kg	4200	1800	1100000	990000	ND(410)	ND(300)	ND(290)	ND(330)
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	4		1200	1200	ND(410)	ND(300)	ND(290)	ND(330)
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	250	250	670	250	ND(410)	ND(300)	ND(290)	ND(330)
1,2-Dichlorobenzene	ug/kg	14000	360	210000	210000	ND(160)	ND(120)	ND(120)	ND(130)
1,2-Dichloroethane	ug/kg	100	7200	2100	91000	ND(82)	ND(59)	ND(59)	ND(66)
1,2-Dichloropropane	ug/kg	100	5800	4000	140000	ND(82)	ND(59)	ND(59)	ND(66)
1,3-Dichlorobenzene	ug/kg	170	1100	ID	170000	ND(160)	ND(120)	ND(120)	ND(130)
1,4-Dichlorobenzene	ug/kg	1700	290	19000	400000	ND(160)	ND(120)	ND(120)	ND(130)
2-Butanone (Methyl Ethyl Ketone)	ug/kg	260000	44000	27000000	27000000	ND(1200)	ND(890)	ND(880)	ND(980)
2-Hexanone	ug/kg	20000		990000	2500000	ND(4100)	ND(3000)	ND(2900)	ND(3300)
4-Methyl-2-Pentanone (Methyl Isobutyl Keto	ug/kg	36000	ID	2700000	2700000	ND(4100)	ND(3000)	ND(2900)	ND(3300)
Acetone	ug/kg	15000	34000	110000000	23000000	ND(1200)	ND(890)	ND(880)	ND(980)
Benzene	ug/kg	100	4000	1600	180000	ND(82)	ND(59)	ND(59)	ND(66)
Bromodichloromethane	ug/kg	2000	ID	1200	110000	ND(160)	ND(120)	ND(120)	ND(130)
Bromoform	ug/kg	2000	ID	150000	820000	ND(160)	ND(120)	ND(120)	ND(130)
Bromomethane (Methyl Bromide)	ug/kg	200	700	860	320000	ND(410)	ND(300)	ND(290)	ND(330)
Carbon disulfide	ug/kg	16000	ID	76000	280000	ND(410)	ND(300)	ND(290)	ND(330)
Carbon tetrachloride	ug/kg	100	900	190	96000	ND(82)	ND(59)	ND(59)	ND(66)
Chlorobenzene	ug/kg	2000	940	120000	260000	ND(82)	ND(59)	ND(59)	ND(66)
Chloroethane	ug/kg	8600	ID	950000	950000	ND(410)	ND(300)	ND(290)	ND(330)
Chloroform (Trichloromethane)	ug/kg	2000	3400	7200	1200000	ND(82)	ND(59)	ND(59)	ND(66)
Chloromethane (Methyl Chloride)	ug/kg	5200	ID	2300	1100000	ND(410)	ND(300)	ND(290)	21 J
cis-1,2-Dichloroethene	ug/kg	1400	12000	22000	640000	ND(82)	ND(59)	ND(59)	ND(66)
Cyclohexane	ug/kg					ND(2000)	ND(1400)	ND(1400)	ND(1600)
Dibromochloromethane	ug/kg	2000	ID	3900	110000	ND(82)	ND(59)	ND(59)	ND(66)
Dichlorodifluoromethane (CFC-12)	ug/kg	95000	ID	900000	1000000	ND(160)	ND(120)	ND(120)	ND(130)
Ethylbenzene	ug/kg	1500	360	87000	140000	ND(82)	ND(59)	ND(59)	ND(66)
Isopropylbenzene	ug/kg	91000	ID	390000	390000	ND(410)	ND(300)	ND(290)	ND(330)
Methyl acetate	ug/kg					ND(2000)	ND(1400)	ND(1400)	ND(1600)
Methyl cyclohexane	ug/kg					ND(2000)	ND(1400)	ND(1400)	ND(1600)
Methyl Tert Butyl Ether	ug/kg	800	15000	5900000	1500000	ND(410)	ND(300)	ND(290)	ND(330)
Methylene chloride	ug/kg	100	19000	45000	1300000	ND(410)	ND(300)	ND(290)	ND(330)
Styrene	ug/kg	2700	2200	250000	400000	ND(82)	ND(59)	ND(59)	ND(66)
Tetrachloroethene	ug/kg	100	900	11000	88000	ND(82)	ND(59)	ND(59)	ND(66)
Toluene	ug/kg	16000	2800	250000	250000	ND(160)	ND(120)	ND(120)	ND(130)
trans-1,2-Dichloroethene	ug/kg	2000	30000	23000	1400000	ND(82)	ND(59)	ND(59)	ND(66)
Trichloroethene	ug/kg	100	4000	7100	500000	ND(82)	ND(59)	ND(59)	ND(66)
Trichlorofluoromethane (CFC-11)	ug/kg	52000		560000	560000	ND(160)	ND(120)	ND(120)	ND(130)
Trifluorotrichloroethane (Freon 113)	ug/kg	550000	1700	550000	550000	ND(410)	ND(300)	ND(290)	ND(330)
Vinyl chloride	ug/kg	40	300	270	3800	ND(160)	ND(120)	ND(120)	ND(130)
Xylene (total)	ug/kg	5600	700	150000	150000	ND(250)	ND(180)	ND(180)	ND(200)
cis-1,3-Dichloropropene	ug/kg					ND(82)	ND(59)	ND(59)	ND(66)
trans-1,3-Dichloropropene	ug/kg					ND(82)	ND(59)	ND(59)	ND(66)
1,3-Dichloropropene- Total	ug/kg	170		1000	10000	ND(82)	ND(59)	ND(59)	ND(66)

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location				*Soil*		*SB4-04*	*SB4-04*	*SB4-04*	*SB4-04*
Sample Identification		*Drinking*	*GSI*	*Volatilization to*	*Direct*	*S-17360-071504-DCR-117*	*S-17360-071504-DCR-118*	*S-17360-071504-DCR-119*	*S-17360-071504-DCR-120*
Sample Date		*Water Protection*	*Protection*	*Indoor Air*	*Contact*	*7/15/2004*	*7/15/2004*	*7/15/2004*	*7/15/2004*
Sample Depth		*Criteria*	*Criteria*	*Inhalation*	*Criteria*	*(12-14)*	*(14-16)*	*(16-18)*	*(18-20)*
TCL VOC	*Units*	a	b	c	d				
1,1,1-Trichloroethane	ug/kg	4000	4000	250000	460000	ND(57)	ND(61)	ND(59)	ND(53)
1,1,2,2-Tetrachloroethane	ug/kg	170	1600	4300	53000	ND(110)	ND(120)	ND(120)	ND(110)
1,1,2-Trichloroethane	ug/kg	100	6600	4600	180000	ND(57)	ND(61)	ND(59)	ND(53)
1,1-Dichloroethane	ug/kg	18000	15000	230000	890000	ND(57)	ND(61)	ND(59)	ND(53)
1,1-Dichloroethene	ug/kg	140	1300	62	200000	ND(57)	ND(61)	ND(59)	ND(53)
1,2,4-Trichlorobenzene	ug/kg	4200	1800	1100000	990000	ND(280)	ND(310)	ND(290)	ND(270)
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	4		1200	1200	ND(280)	ND(310)	ND(290)	ND(270)
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	250	250	670	250	ND(280)	ND(310)	ND(290)	ND(270)
1,2-Dichlorobenzene	ug/kg	14000	360	210000	210000	ND(110)	ND(120)	ND(120)	ND(110)
1,2-Dichloroethane	ug/kg	100	7200	2100	91000	ND(57)	ND(61)	ND(59)	ND(53)
1,2-Dichloropropane	ug/kg	100	5800	4000	140000	ND(57)	ND(61)	ND(59)	ND(53)
1,3-Dichlorobenzene	ug/kg	170	1100	ID	170000	ND(110)	ND(120)	ND(120)	ND(110)
1,4-Dichlorobenzene	ug/kg	1700	290	19000	400000	ND(110)	ND(120)	ND(120)	ND(110)
2-Butanone (Methyl Ethyl Ketone)	ug/kg	260000	44000	27000000	27000000	ND(850)	ND(920)	ND(880)	ND(800)
2-Hexanone	ug/kg	20000		990000	2500000	ND(2800)	ND(3100)	ND(2900)	ND(2700)
4-Methyl-2-Pentanone (Methyl Isobutyl Keto	ug/kg	36000	ID	2700000	2700000	ND(2800)	ND(3100)	ND(2900)	ND(2700)
Acetone	ug/kg	15000	34000	110000000	23000000	ND(850)	ND(920)	ND(880)	ND(800)
Benzene	ug/kg	100	4000	1600	180000	ND(57)	ND(61)	ND(59)	ND(53)
Bromodichloromethane	ug/kg	2000	ID	1200	110000	ND(110)	ND(120)	ND(120)	ND(110)
Bromoform	ug/kg	2000	ID	150000	820000	ND(110)	ND(120)	ND(120)	ND(110)
Bromomethane (Methyl Bromide)	ug/kg	200	700	860	320000	ND(280)	ND(310)	ND(290)	ND(270)
Carbon disulfide	ug/kg	16000	ID	76000	280000	ND(280)	ND(310)	ND(290)	ND(270)
Carbon tetrachloride	ug/kg	100	900	190	96000	ND(57)	ND(61)	ND(59)	ND(53)
Chlorobenzene	ug/kg	2000	940	120000	260000	ND(57)	ND(61)	ND(59)	ND(53)
Chloroethane	ug/kg	8600	ID	950000	950000	ND(280)	ND(310)	ND(290)	ND(270)
Chloroform (Trichloromethane)	ug/kg	2000	3400	7200	1200000	ND(57)	ND(61)	ND(59)	ND(53)
Chloromethane (Methyl Chloride)	ug/kg	5200	ID	2300	1100000	18 J	ND(310)	ND(290)	ND(270)
cis-1,2-Dichloroethene	ug/kg	1400	12000	22000	640000	ND(57)	ND(61)	ND(59)	ND(53)
Cyclohexane	ug/kg					ND(1400)	ND(1500)	ND(1400)	ND(1300)
Dibromochloromethane	ug/kg	2000	ID	3900	110000	ND(57)	ND(61)	ND(59)	ND(53)
Dichlorodifluoromethane (CFC-12)	ug/kg	95000	ID	900000	1000000	ND(110)	ND(120)	ND(120)	ND(110)
Ethylbenzene	ug/kg	1500	360	87000	140000	ND(57)	ND(61)	ND(59)	ND(53)
Isopropylbenzene	ug/kg	91000	ID	390000	390000	ND(280)	ND(310)	ND(290)	ND(270)
Methyl acetate	ug/kg					ND(1400)	ND(1500)	ND(1400)	ND(1300)
Methyl cyclohexane	ug/kg					ND(1400)	ND(1500)	ND(1400)	ND(1300)
Methyl Tert Butyl Ether	ug/kg	800	15000	5900000	1500000	ND(280)	ND(310)	ND(290)	ND(270)
Methylene chloride	ug/kg	100	19000	45000	1300000	ND(280)	ND(310)	ND(290)	ND(270)
Styrene	ug/kg	2700	2200	250000	400000	ND(57)	ND(61)	ND(59)	ND(53)
Tetrachloroethene	ug/kg	100	900	11000	88000	ND(57)	ND(61)	ND(59)	ND(53)
Toluene	ug/kg	16000	2800	250000	250000	ND(110)	ND(120)	ND(120)	ND(110)
trans-1,2-Dichloroethene	ug/kg	2000	30000	23000	1400000	ND(57)	ND(61)	ND(59)	ND(53)
Trichloroethene	ug/kg	100	4000	7100	500000	ND(57)	41 J	ND(59)	ND(53)
Trichlorofluoromethane (CFC-11)	ug/kg	52000		560000	560000	ND(110)	ND(120)	ND(120)	ND(110)
Trifluorotrichloroethane (Freon 113)	ug/kg	550000	1700	550000	550000	ND(280)	ND(310)	ND(290)	ND(270)
Vinyl chloride	ug/kg	40	300	270	3800	ND(110)	ND(120)	ND(120)	ND(110)
Xylene (total)	ug/kg	5600	700	150000	150000	ND(170)	ND(180)	ND(180)	ND(160)
cis-1,3-Dichloropropene	ug/kg					ND(57)	ND(61)	ND(59)	ND(53)
trans-1,3-Dichloropropene	ug/kg					ND(57)	ND(61)	ND(59)	ND(53)
1,3-Dichloropropene- Total	ug/kg	170		1000	10000	ND(57)	ND(61)	ND(59)	ND(53)

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location				*Soil*		*SB4-04*	*SB5-04*	*SB5-04*	*SB5-04*
Sample Identification		*Drinking*	*GSI*	*Volatilization to*	*Direct*	*S-17360-071504-DCR-121*	*S-17360-071504-DCR-100*	*S-17360-071504-DCR-101*	*S-17360-071504-DCR-102*
Sample Date		*Water Protection*	*Protection*	*Indoor Air*	*Contact*	*7/15/2004*	*7/15/2004*	*7/15/2004*	*7/15/2004*
Sample Depth		*Criteria*	*Criteria*	*Inhalation*	*Criteria*	*(20-22)*	*(0-2)*	*(2-4)*	*(4-6)*
TCL VOC	*Units*	a	b	c	d				
1,1,1-Trichloroethane	ug/kg	4000	4000	250000	460000	ND(53)	ND(200)	ND(110)	ND(66)
1,1,2,2-Tetrachloroethane	ug/kg	170	1600	4300	53000	ND(110)	ND(400)	ND(230)	ND(130)
1,1,2-Trichloroethane	ug/kg	100	6600	4600	180000	ND(53)	ND(200)	ND(110)	ND(66)
1,1-Dichloroethane	ug/kg	18000	15000	230000	890000	ND(53)	ND(200)	ND(110)	ND(66)
1,1-Dichloroethene	ug/kg	140	1300	62	200000	ND(53)	ND(200)	ND(110)	ND(66)
1,2,4-Trichlorobenzene	ug/kg	4200	1800	1100000	990000	ND(270)	ND(1000)	ND(570)	ND(330)
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	4		1200	1200	ND(270)	ND(1000)	ND(570)	ND(330)
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	250	250	670	250	ND(270)	ND(1000)	ND(570)	ND(330)
1,2-Dichlorobenzene	ug/kg	14000	360	210000	210000	ND(110)	ND(400)	ND(230)	ND(130)
1,2-Dichloroethane	ug/kg	100	7200	2100	91000	ND(53)	ND(200)	ND(110)	ND(66)
1,2-Dichloropropane	ug/kg	100	5800	4000	140000	ND(53)	ND(200)	ND(110)	ND(66)
1,3-Dichlorobenzene	ug/kg	170	1100	ID	170000	ND(110)	ND(400)	ND(230)	ND(130)
1,4-Dichlorobenzene	ug/kg	1700	290	19000	400000	ND(110)	ND(400)	ND(230)	ND(130)
2-Butanone (Methyl Ethyl Ketone)	ug/kg	260000	44000	27000000	27000000	ND(800)	ND(3000)	ND(1700)	ND(990)
2-Hexanone	ug/kg	20000		990000	2500000	ND(2700)	ND(10000)	ND(5700)	ND(3300)
4-Methyl-2-Pentanone (Methyl Isobutyl Keto	ug/kg	36000	ID	2700000	2700000	ND(2700)	ND(10000)	ND(5700)	ND(3300)
Acetone	ug/kg	15000	34000	110000000	23000000	ND(800)	ND(3000)	ND(1700)	ND(990)
Benzene	ug/kg	100	4000	1600	180000	ND(53)	33 J	ND(110)	ND(66)
Bromodichloromethane	ug/kg	2000	ID	1200	110000	ND(110)	ND(400)	ND(230)	ND(130)
Bromoform	ug/kg	2000	ID	150000	820000	ND(110)	ND(400)	ND(230)	ND(130)
Bromomethane (Methyl Bromide)	ug/kg	200	700	860	320000	ND(270)	ND(1000)	ND(570)	ND(330)
Carbon disulfide	ug/kg	16000	ID	76000	280000	ND(270)	ND(1000)	ND(570)	ND(330)
Carbon tetrachloride	ug/kg	100	900	190	96000	ND(53)	ND(200)	ND(110)	ND(66)
Chlorobenzene	ug/kg	2000	940	120000	260000	ND(53)	ND(200)	ND(110)	ND(66)
Chloroethane	ug/kg	8600	ID	950000	950000	ND(270)	ND(1000)	ND(570)	ND(330)
Chloroform (Trichloromethane)	ug/kg	2000	3400	7200	1200000	ND(53)	ND(200)	ND(110)	ND(66)
Chloromethane (Methyl Chloride)	ug/kg	5200	ID	2300	1100000	23 J	ND(1000)	ND(570)	ND(330)U
cis-1,2-Dichloroethene	ug/kg	1400	12000	22000	640000	ND(53)	ND(200)	ND(110)	ND(66)
Cyclohexane	ug/kg					ND(1300)	31 J	ND(2700)	ND(1600)
Dibromochloromethane	ug/kg	2000	ID	3900	110000	ND(53)	ND(200)	ND(110)	ND(66)
Dichlorodifluoromethane (CFC-12)	ug/kg	95000	ID	900000	1000000	ND(110)	ND(400)	ND(230)	ND(130)
Ethylbenzene	ug/kg	1500	360	87000	140000	ND(53)	ND(200)	ND(110)	ND(66)
Isopropylbenzene	ug/kg	91000	ID	390000	390000	ND(270)	25 J	ND(570)	ND(330)
Methyl acetate	ug/kg					ND(1300)	ND(4800)	ND(2700)	ND(1600)
Methyl cyclohexane	ug/kg					ND(1300)	200 J	ND(2700)	ND(1600)
Methyl Tert Butyl Ether	ug/kg	800	15000	5900000	1500000	ND(270)	ND(1000)	ND(570)	ND(330)
Methylene chloride	ug/kg	100	19000	45000	1300000	ND(270)	ND(1000)	ND(570)	ND(330)
Styrene	ug/kg	2700	2200	250000	400000	ND(53)	ND(200)	ND(110)	ND(66)
Tetrachloroethene	ug/kg	100	900	11000	88000	ND(53)	ND(200)	ND(110)	ND(66)
Toluene	ug/kg	16000	2800	250000	250000	ND(110)	140 J	ND(230)	ND(130)
trans-1,2-Dichloroethene	ug/kg	2000	30000	23000	1400000	ND(53)	ND(200)	ND(110)	ND(66)
Trichloroethene	ug/kg	100	4000	7100	500000	18 J	5700[ab]	ND(110)	ND(66)
Trichlorofluoromethane (CFC-11)	ug/kg	52000		560000	560000	ND(110)	ND(400)	ND(230)	ND(130)
Trifluorotrichloroethane (Freon 113)	ug/kg	550000	1700	550000	550000	ND(270)	ND(1000)	ND(570)	ND(330)
Vinyl chloride	ug/kg	40	300	270	3800	ND(110)	ND(400)	ND(230)	ND(130)
Xylene (total)	ug/kg	5600	700	150000	150000	ND(160)	200 J	ND(340)	ND(200)
cis-1,3-Dichloropropene	ug/kg					ND(53)	ND(200)	ND(110)	ND(66)
trans-1,3-Dichloropropene	ug/kg					ND(53)	ND(200)	ND(110)	ND(66)
1,3-Dichloropropene- Total	ug/kg	170		1000	10000	ND(53)	ND(200)	ND(110)	ND(66)

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location				*Soil*		*SB5-04*	*SB5-04*	*SB5-04*	*SB5-04*
Sample Identification		*Drinking*	*GSI*	*Volatilization to*	*Direct*	*S-17360-071504-DCR-103*	*S-17360-071504-DCR-104*	*S-17360-071504-DCR-105*	*S-17360-071504-DCR-106*
Sample Date		*Water Protection*	*Protection*	*Indoor Air*	*Contact*	*7/15/2004*	*7/15/2004*	*7/15/2004*	*7/15/2004*
Sample Depth		*Criteria*	*Criteria*	*Inhalation*	*Criteria*	*(6-8)*	*(8-10)*	*(10-12)*	*(12-14)*
TCL VOC	*Units*	a	b	c	d				
1,1,1-Trichloroethane	ug/kg	4000	4000	250000	460000	ND(61)	ND(60)	ND(56)	ND(50)
1,1,2,2-Tetrachloroethane	ug/kg	170	1600	4300	53000	ND(120)	ND(120)	ND(110)	ND(99)
1,1,2-Trichloroethane	ug/kg	100	6600	4600	180000	ND(61)	ND(60)	ND(56)	ND(50)
1,1-Dichloroethane	ug/kg	18000	15000	230000	890000	ND(61)	ND(60)	ND(56)	ND(50)
1,1-Dichloroethene	ug/kg	140	1300	62	200000	ND(61)	ND(60)	ND(56)	ND(50)
1,2,4-Trichlorobenzene	ug/kg	4200	1800	1100000	990000	ND(300)	ND(300)	ND(280)	ND(250)
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	4		1200	1200	ND(300)	ND(300)	ND(280)	ND(250)
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	250	250	670	250	ND(300)	ND(300)	ND(280)	ND(250)
1,2-Dichlorobenzene	ug/kg	14000	360	210000	210000	ND(120)	ND(120)	ND(110)	ND(99)
1,2-Dichloroethane	ug/kg	100	7200	2100	91000	ND(61)	ND(60)	ND(56)	ND(50)
1,2-Dichloropropane	ug/kg	100	5800	4000	140000	ND(61)	ND(60)	ND(56)	ND(50)
1,3-Dichlorobenzene	ug/kg	170	1100	ID	170000	ND(120)	ND(120)	ND(110)	ND(99)
1,4-Dichlorobenzene	ug/kg	1700	290	19000	400000	ND(120)	ND(120)	ND(110)	ND(99)
2-Butanone (Methyl Ethyl Ketone)	ug/kg	260000	44000	27000000	27000000	59 J	ND(900)	ND(830)	ND(750)
2-Hexanone	ug/kg	20000		990000	2500000	ND(3000)	ND(3000)	ND(2800)	ND(2500)
4-Methyl-2-Pentanone (Methyl Isobutyl Keto	ug/kg	36000	ID	2700000	2700000	ND(3000)	ND(3000)	ND(2800)	ND(2500)
Acetone	ug/kg	15000	34000	110000000	23000000	ND(910)	ND(900)	ND(830)	ND(750)
Benzene	ug/kg	100	4000	1600	180000	ND(61)	ND(60)	ND(56)	ND(50)
Bromodichloromethane	ug/kg	2000	ID	1200	110000	ND(120)	ND(120)	ND(110)	ND(99)
Bromoform	ug/kg	2000	ID	150000	820000	ND(120)	ND(120)	ND(110)	ND(99)
Bromomethane (Methyl Bromide)	ug/kg	200	700	860	320000	ND(300)	ND(300)	ND(280)	ND(250)
Carbon disulfide	ug/kg	16000	ID	76000	280000	ND(300)	ND(300)	ND(280)	ND(250)
Carbon tetrachloride	ug/kg	100	900	190	96000	ND(61)	ND(60)	ND(56)	ND(50)
Chlorobenzene	ug/kg	2000	940	120000	260000	ND(61)	ND(60)	ND(56)	ND(50)
Chloroethane	ug/kg	8600	ID	950000	950000	ND(300)	ND(300)	ND(280)	ND(250)
Chloroform (Trichloromethane)	ug/kg	2000	3400	7200	1200000	ND(61)	ND(60)	ND(56)	ND(50)
Chloromethane (Methyl Chloride)	ug/kg	5200	ID	2300	1100000	ND(300)	ND(300)	ND(280)	ND(250)
cis-1,2-Dichloroethene	ug/kg	1400	12000	22000	640000	ND(61)	ND(60)	ND(56)	ND(50)
Cyclohexane	ug/kg					ND(1500)	ND(1400)	ND(1300)	ND(1200)
Dibromochloromethane	ug/kg	2000	ID	3900	110000	ND(61)	ND(60)	ND(56)	ND(50)
Dichlorodifluoromethane (CFC-12)	ug/kg	95000	ID	900000	1000000	ND(120)	ND(120)	ND(110)	ND(99)
Ethylbenzene	ug/kg	1500	360	87000	140000	ND(61)	ND(60)	ND(56)	ND(50)
Isopropylbenzene	ug/kg	91000	ID	390000	390000	ND(300)	ND(300)	ND(280)	ND(250)
Methyl acetate	ug/kg					ND(1500)	ND(1400)	ND(1300)	ND(1200)
Methyl cyclohexane	ug/kg					ND(1500)	ND(1400)	ND(1300)	ND(1200)
Methyl Tert Butyl Ether	ug/kg	800	15000	5900000	1500000	ND(300)	ND(300)	ND(280)	ND(250)
Methylene chloride	ug/kg	100	19000	45000	1300000	ND(300)	ND(300)	ND(280)	ND(250)
Styrene	ug/kg	2700	2200	250000	400000	ND(61)	ND(60)	ND(56)	ND(50)
Tetrachloroethene	ug/kg	100	900	11000	88000	ND(61)	ND(60)	ND(56)	ND(50)
Toluene	ug/kg	16000	2800	250000	250000	ND(120)	ND(120)	ND(110)	ND(99)
trans-1,2-Dichloroethene	ug/kg	2000	30000	23000	1400000	ND(61)	ND(60)	ND(56)	ND(50)
Trichloroethene	ug/kg	100	4000	7100	500000	ND(61)	ND(60)	25 J	ND(50)
Trichlorofluoromethane (CFC-11)	ug/kg	52000		560000	560000	ND(120)	ND(120)	ND(110)	ND(99)
Trifluorotrichloroethane (Freon 113)	ug/kg	550000	1700	550000	550000	ND(300)	ND(300)	ND(280)	ND(250)
Vinyl chloride	ug/kg	40	300	270	3800	ND(120)	ND(120)	ND(110)	ND(99)
Xylene (total)	ug/kg	5600	700	150000	150000	ND(180)	ND(180)	ND(170)	ND(150)
cis-1,3-Dichloropropene	ug/kg					ND(61)	ND(60)	ND(56)	ND(50)
trans-1,3-Dichloropropene	ug/kg					ND(61)	ND(60)	ND(56)	ND(50)
1,3-Dichloropropene- Total	ug/kg	170		1000	10000	ND(61)	ND(60)	ND(56)	ND(50)

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location				*Soil*		*SB5-04*	*SB5-04*	*SB5-04*	*SB5-04*
Sample Identification		*Drinking*	*GSI*	*Volatilization to*	*Direct*	*S-17360-071504-DCR-107*	*S-17360-071504-DCR-108*	*S-17360-071504-DCR-109*	*S-17360-071504-DCR-110*
Sample Date		*Water Protection*	*Protection*	*Indoor Air*	*Contact*	*7/15/2004*	*7/15/2004*	*7/15/2004*	*7/15/2004*
Sample Depth		*Criteria*	*Criteria*	*Inhalation*	*Criteria*	*(14-16)*	*(16-18)*	*(18-20)*	*(20-22)*
TCL VOC	*Units*	a	b	c	d				
1,1,1-Trichloroethane	ug/kg	4000	4000	250000	460000	ND(56)	ND(55)	ND(62)	ND(71)
1,1,2,2-Tetrachloroethane	ug/kg	170	1600	4300	53000	ND(110)	ND(110)	ND(120)	ND(140)
1,1,2-Trichloroethane	ug/kg	100	6600	4600	180000	ND(56)	ND(55)	ND(62)	ND(71)
1,1-Dichloroethane	ug/kg	18000	15000	230000	890000	ND(56)	ND(55)	ND(62)	ND(71)
1,1-Dichloroethene	ug/kg	140	1300	62	200000	ND(56)	ND(55)	ND(62)	ND(71)
1,2,4-Trichlorobenzene	ug/kg	4200	1800	1100000	990000	ND(280)	ND(270)	ND(310)	ND(350)
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	4		1200	1200	ND(280)	ND(270)	ND(310)	ND(350)
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	250	250	670	250	ND(280)	ND(270)	ND(310)	ND(350)
1,2-Dichlorobenzene	ug/kg	14000	360	210000	210000	ND(110)	ND(110)	ND(120)	ND(140)
1,2-Dichloroethane	ug/kg	100	7200	2100	91000	ND(56)	ND(55)	ND(62)	ND(71)
1,2-Dichloropropane	ug/kg	100	5800	4000	140000	ND(56)	ND(55)	ND(62)	ND(71)
1,3-Dichlorobenzene	ug/kg	170	1100	ID	170000	ND(110)	ND(110)	ND(120)	ND(140)
1,4-Dichlorobenzene	ug/kg	1700	290	19000	400000	ND(110)	ND(110)	ND(120)	ND(140)
2-Butanone (Methyl Ethyl Ketone)	ug/kg	260000	44000	27000000	27000000	ND(840)	ND(820)	ND(930)	ND(1100)
2-Hexanone	ug/kg	20000		990000	2500000	ND(2800)	ND(2700)	ND(3100)	ND(3500)
4-Methyl-2-Pentanone (Methyl Isobutyl Keto	ug/kg	36000	ID	2700000	2700000	ND(2800)	ND(2700)	ND(3100)	ND(3500)
Acetone	ug/kg	15000	34000	110000000	23000000	ND(840)	ND(820)	ND(930)	ND(1100)
Benzene	ug/kg	100	4000	1600	180000	ND(56)	ND(55)	ND(62)	ND(71)
Bromodichloromethane	ug/kg	2000	ID	1200	110000	ND(110)	ND(110)	ND(120)	ND(140)
Bromoform	ug/kg	2000	ID	150000	820000	ND(110)	ND(110)	ND(120)	ND(140)
Bromomethane (Methyl Bromide)	ug/kg	200	700	860	320000	ND(280)	ND(270)	ND(310)	ND(350)
Carbon disulfide	ug/kg	16000	ID	76000	280000	ND(280)	ND(270)	ND(310)	ND(350)
Carbon tetrachloride	ug/kg	100	900	190	96000	ND(56)	ND(55)	ND(62)	ND(71)
Chlorobenzene	ug/kg	2000	940	120000	260000	ND(56)	ND(55)	ND(62)	ND(71)
Chloroethane	ug/kg	8600	ID	950000	950000	ND(280)	ND(270)	ND(310)	ND(350)
Chloroform (Trichloromethane)	ug/kg	2000	3400	7200	1200000	ND(56)	ND(55)	ND(62)	ND(71)
Chloromethane (Methyl Chloride)	ug/kg	5200	ID	2300	1100000	ND(280)U	ND(270)	ND(310)	ND(350)
cis-1,2-Dichloroethene	ug/kg	1400	12000	22000	640000	ND(56)	ND(55)	ND(62)	ND(71)
Cyclohexane	ug/kg					ND(1300)	ND(1300)	ND(1500)	ND(1700)
Dibromochloromethane	ug/kg	2000	ID	3900	110000	ND(56)	ND(55)	ND(62)	ND(71)
Dichlorodifluoromethane (CFC-12)	ug/kg	95000	ID	900000	1000000	ND(110)	ND(110)	ND(120)	ND(140)
Ethylbenzene	ug/kg	1500	360	87000	140000	ND(56)	ND(55)	ND(62)	ND(71)
Isopropylbenzene	ug/kg	91000	ID	390000	390000	ND(280)	ND(270)	ND(310)	ND(350)
Methyl acetate	ug/kg					ND(1300)	ND(1300)	ND(1500)	ND(1700)
Methyl cyclohexane	ug/kg					ND(1300)	ND(1300)	ND(1500)	ND(1700)
Methyl Tert Butyl Ether	ug/kg	800	15000	5900000	1500000	ND(280)	ND(270)	ND(310)	ND(350)
Methylene chloride	ug/kg	100	19000	45000	1300000	ND(280)	ND(270)	ND(310)	ND(350)
Styrene	ug/kg	2700	2200	250000	400000	ND(56)	ND(55)	ND(62)	ND(71)
Tetrachloroethene	ug/kg	100	900	11000	88000	ND(56)	ND(55)	ND(62)	ND(71)
Toluene	ug/kg	16000	2800	250000	250000	ND(110)	ND(110)	ND(120)	ND(140)
trans-1,2-Dichloroethene	ug/kg	2000	30000	23000	1400000	ND(56)	ND(55)	ND(62)	ND(71)
Trichloroethene	ug/kg	100	4000	7100	500000	20 J	25 J	ND(62)	ND(71)
Trichlorofluoromethane (CFC-11)	ug/kg	52000		560000	560000	ND(110)	ND(110)	ND(120)	ND(140)
Trifluorotrichloroethane (Freon 113)	ug/kg	550000	1700	550000	550000	ND(280)	ND(270)	ND(310)	ND(350)
Vinyl chloride	ug/kg	40	300	270	3800	ND(110)	ND(110)	ND(120)	ND(140)
Xylene (total)	ug/kg	5600	700	150000	150000	ND(170)	ND(160)	ND(190)	ND(210)
cis-1,3-Dichloropropene	ug/kg					ND(56)	ND(55)	ND(62)	ND(71)
trans-1,3-Dichloropropene	ug/kg					ND(56)	ND(55)	ND(62)	ND(71)
1,3-Dichloropropene- Total	ug/kg	170		1000	10000	ND(56)	ND(55)	ND(62)	ND(71)

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN SOIL SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Notes:

TCL VOC - Target Compound List Volatile Organic Compounds
ND ( ) – Not detected above the value in parenthesis.
J – The associated value is qualified as an estimated quantity.
U – The analyte was analyzed for, but was qualified not detected above the value identified.
value with super script a, b, c, or d indicates specific criterion(s) exceeded

TABLE 4.2

ANALYTICAL RESULTS FOR TCL VOCs IN VERTICAL AQUIFER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*HP8-04*	*HP8-04*	*HP8-04*	*HP8-04*	*HP8-04*
Sample Identification		*GW-17360-072204-DCR-151*	*GW-17360-072204-DCR-152*	*GW-17360-072204-DCR-153*	*GW-17360-072204-DCR-154*	*GW-17360-072204-DCR-155*
Sample Date		*7/22/2004*	*7/22/2004*	*7/22/2004*	*7/22/2004*	*7/22/2004*
Sample Depth		*22'*	*32'*	*32'*	*43'*	*53.5'*
Sample Type				*Duplicate*		
TCL VOC	*Units*					
1,1,1-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	0.56 J	ND(1.0)
1,1-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	ug/L	ND(25)U	ND(25)U	ND(25)U	ND(25)U	ND(25)U
Benzene	ug/L	ND(1.0)	0.38 J	0.35 J	0.22 J	0.22 J
Bromodichloromethane	ug/L	ND(1.0)	1.9	1.9	1.5	6.1
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	1.1 J	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	ND(1.0)	13	13	3.9	13
Chloromethane (Methyl Chloride)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	1.4	ND(1.0)
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	ug/L	ND(1.0)	0.31 J	0.25 J	0.16 J	ND(1.0)
Dibromochloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	0.74 J	2.1
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	ND(1.0)	0.35 J	0.39 J	0.58 J	ND(1.0)
Toluene	ug/L	0.37 J	0.85 J	0.75 J	0.53 J	2.3
trans-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	0.24 J	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	ND(1.0)	2.0	2.1	0.91 J	ND(1.0)
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)

TABLE 4.2

ANALYTICAL RESULTS FOR TCL VOCs IN VERTICAL AQUIFER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*HP9-04*	*HP9-04*	*HP9-04*	*HP9-04*	*HP9-04*
Sample Identification		*GW-17360-072304-DCR-157*	*GW-17360-072304-DCR-158*	*GW-17360-072304-DCR-159*	*GW-17360-072304-DCR-160*	*GW-17360-072304-DCR-161*
Sample Date		*7/23/2004*	*7/23/2004*	*7/23/2004*	*7/23/2004*	*7/23/2004*
Sample Depth		*26'*	*36'*	*46'*	*56'*	*66'*
Sample Type						
TCL VOC	*Units*					
1,1,1-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(1.0)	0.37 J	0.50 J	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(5.0)UJ	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(25)	ND(25)	ND(25)U	ND(25)U	ND(25)
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	0.67 J
Acetone	ug/L	ND(25)U	1.6 J	1.5 J	ND(25)U	ND(25)U
Benzene	ug/L	0.34 J	0.31 J	0.52 J	ND(1.0)	ND(1.0)
Bromodichloromethane	ug/L	ND(1.0)	0.71 J	0.22 J	3.4	5.7
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	2.3	4.9	1.5	16	16
Chloromethane (Methyl Chloride)	ug/L	0.33 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	0.75 J	1.2	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	ug/L	ND(1.0)	ND(1.0)	0.40 J	ND(1.0)	ND(1.0)
Dibromochloromethane	ug/L	ND(1.0)	0.28 J	ND(1.0)	0.92 J	1.9
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	ND(1.0)UJ	0.26 J	0.34 J	ND(1.0)	ND(1.0)
Isopropylbenzene	ug/L	ND(5.0)UJ	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	ug/L	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	ND(1.0)	0.45 J	0.58 J	0.47 J	ND(1.0)
Toluene	ug/L	ND(1.0)UJ	ND(1.0)U	ND(1.2)U	1.3	1.4
trans-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	0.33 J	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	ND(1.0)	1.6	2.7	0.46 J	ND(1.0)
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	ND(3.0)UJ	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)

TABLE 4.2

ANALYTICAL RESULTS FOR TCL VOCs IN VERTICAL AQUIFER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*HP10-04*	*HP10-04*	*HP10-04*	*HP10-04*	*HP10-04*
Sample Identification		*GW-17360-072604-DCR-163*	*GW-17360-072604-DCR-164*	*GW-17360-072604-DCR-165*	*GW-17360-072604-DCR-166*	*GW-17360-072604-DCR-167*
Sample Date		*7/26/2004*	*7/26/2004*	*7/26/2004*	*7/26/2004*	*7/26/2004*
Sample Depth		*15'*	*25'*	*35'*	*45'*	*55'*
Sample Type					*MS/MSD*	
TCL VOC	*Units*					
1,1,1-Trichloroethane	ug/L	ND(1.0)	0.45 J	5.4	2.7	0.96 J
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)U	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(5.0)UJ	ND(5.0)	ND(5.0)	ND(5.0)U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(25)U	ND(25)U	ND(25)U	ND(25)	ND(25)U
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(50)	1.5 J	ND(50)	ND(50)	ND(50)
Acetone	ug/L	ND(25)U	ND(25)U	ND(25)	ND(25)	ND(25)U
Benzene	ug/L	0.49 J	0.57 J	0.45 J	ND(1.0)	0.31 J
Bromodichloromethane	ug/L	ND(1.0)	1.3	0.20 J	0.23 J	1.0
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(5.0)U	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	ND(1.0)	4.2	1.2	1.4	2.7
Chloromethane (Methyl Chloride)	ug/L	ND(1.0)	ND(1.0)	0.16 J	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	ug/L	0.39 J	0.43 J	0.30 J	ND(1.0)	0.18 J
Dibromochloromethane	ug/L	ND(1.0)	0.53 J	ND(1.0)	ND(1.0)	0.39 J
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	0.36 J	0.44 J	0.28 J	ND(1.0)	ND(1.0)
Isopropylbenzene	ug/L	ND(5.0)U	ND(5.0)UJ	ND(5.0)U	ND(5.0)	ND(5.0)U
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	0.50 J	0.53 J	0.57 J	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	ug/L	ND(1.0)	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	ug/L	1.1	4.6 J	1.3	ND(1.0)U	3.8
trans-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	ND(1.0)	0.53 J	11	0.90 J	0.86 J
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	ND(3.0)	0.85 J	ND(3.0)	ND(3.0)	ND(3.0)

TABLE 4.2

ANALYTICAL RESULTS FOR TCL VOCs IN VERTICAL AQUIFER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*HP10-04*	*HP10-04*	*HP10-04*	*HP11-04*	*HP11-04*
Sample Identification		*GW-17360-072604-DCR-168*	*GW-17360-072604-DCR-169*	*GW-17360-072704-DCR-171*	*GW-17360-072704-DCR-172*	*GW-17360-072704-DCR-173*
Sample Date		*7/26/2004*	*7/26/2004*	*7/27/2004*	*7/27/2004*	*7/27/2004*
Sample Depth		*65'*	*75'*	*80'*	*12'*	*22'*
Sample Type						
TCL VOC	*Units*					
1,1,1-Trichloroethane	ug/L	1.0	0.68 J	0.51 J	0.73 J	0.21 J
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(25)U	ND(25)U	1.1 J	ND(25)	ND(25)
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	0.35 J	0.39 J	0.43 J	ND(50)	ND(50)
Acetone	ug/L	ND(25)U	ND(25)U	ND(25)U	ND(25)U	ND(25)
Benzene	ug/L	0.28 J	0.31 J	0.54 J	0.48 J	ND(1.0)
Bromodichloromethane	ug/L	0.76 J	0.69 J	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	3.2	4.3	3.8	ND(1.0)	ND(1.0)
Chloromethane (Methyl Chloride)	ug/L	0.14 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.82 J
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	ug/L	0.14 J	0.18 J	ND(1.0)	0.36 J	ND(1.0)
Dibromochloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	ND(1.0)	ND(1.0)	0.28 J	0.25 J	ND(1.0)
Isopropylbenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	2.7 J
Methylene chloride	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	ug/L	3.8	4.4	4.1	1.0	0.24 J
trans-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	0.73 J	0.79 J	0.72 J	0.93 J	4.5
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)

TABLE 4.2

ANALYTICAL RESULTS FOR TCL VOCs IN VERTICAL AQUIFER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*HP11-04*	*HP11-04*	*HP11-04*	*HP11-04*	*HP11-04*
Sample Identification		*GW-17360-072704-DCR-174*	*GW-17360-072704-DCR-175*	*GW-17360-072704-DCR-176*	*GW-17360-072704-DCR-177*	*GW-17360-072804-DCR-179*
Sample Date		*7/27/2004*	*7/27/2004*	*7/27/2004*	*7/27/2004*	*7/28/2004*
Sample Depth		*32'*	*42'*	*42'*	*52'*	*62'*
Sample Type				*Duplicate*		
TCL VOC	*Units*					
1,1,1-Trichloroethane	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
1,1,2,2-Tetrachloroethane	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
1,1-Dichloroethene	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(10)	ND(8.4)	ND(8.4)	ND(8.4)UJ	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)UJ	ND(1.0)
1,2-Dichloroethane	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)UJ	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)UJ	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(50)	ND(42)	ND(42)	ND(42)	ND(25)
2-Hexanone	ug/L	ND(100)	ND(84)	ND(84)	ND(84)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(100)	ND(84)	ND(84)	ND(84)	ND(50)
Acetone	ug/L	ND(50)U	ND(42)U	ND(42)U	ND(42)U	ND(25)U
Benzene	ug/L	0.45 J	ND(1.7)	ND(1.7)	0.41 J	0.34 J
Bromodichloromethane	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	0.36 J	0.47 J
Bromoform	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
Carbon disulfide	ug/L	ND(10)	ND(8.4)	ND(8.4)	ND(8.4)	ND(5.0)U
Carbon tetrachloride	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
Chlorobenzene	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)UJ	ND(1.0)
Chloroethane	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	ND(2.0)	0.42 J	0.44 J	1.5 J	1.9
Chloromethane (Methyl Chloride)	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	0.16 J
cis-1,2-Dichloroethene	ug/L	57	38	39	37	11
cis-1,3-Dichloropropene	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
Cyclohexane	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	0.20 J
Dibromochloromethane	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
Ethylbenzene	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)UJ	ND(1.0)
Isopropylbenzene	ug/L	ND(10)	ND(8.4)	ND(8.4)	ND(8.4)UJ	ND(5.0)
Methyl acetate	ug/L	ND(20)	ND(17)	ND(17)	ND(17)	ND(10)
Methyl cyclohexane	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	2.3 J	1.9 J	2.9 J	1.3 J	1.7 J
Methylene chloride	ug/L	ND(10)	ND(8.4)	ND(8.4)	ND(8.4)	ND(5.0)
Styrene	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)UJ	ND(1.0)
Tetrachloroethene	ug/L	ND(2.0)	17	15	15	1.2
Toluene	ug/L	0.92 J	0.61 J	0.59 J	1.8 J	1.4
trans-1,2-Dichloroethene	ug/L	4.9	4.4	4.9	2.9	1.3
trans-1,3-Dichloropropene	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
Trichloroethene	ug/L	23	34	33	19	7.4
Trichlorofluoromethane (CFC-11)	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
Vinyl chloride	ug/L	ND(2.0)	ND(1.7)	ND(1.7)	ND(1.7)	ND(1.0)
Xylene (total)	ug/L	ND(6.0)	ND(5.0)	ND(5.0)	ND(5.0)UJ	ND(3.0)

TABLE 4.2

ANALYTICAL RESULTS FOR TCL VOCs IN VERTICAL AQUIFER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*HP11-04*	*HP12-04*	*HP12-04*	*HP12-04*	*HP12-04*
Sample Identification		*GW-17360-072804-DCR-180*	*GW-17360-072004-DCR-136*	*GW-17360-072004-DCR-137*	*GW-17360-072004-DCR-138*	*GW-17360-072004-DCR-139*
Sample Date		*7/28/2004*	*7/20/2004*	*7/20/2004*	*7/20/2004*	*7/20/2004*
Sample Depth		*69'*	*24'*	*34'*	*34'*	*44'*
Sample Type					*Duplicate*	*MS/MSD*
TCL VOC	*Units*					
1,1,1-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(25)	0.72 J	ND(25)	ND(25)	ND(25)
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	ug/L	ND(25)U	ND(25)U	ND(25)U	ND(25)U	ND(25)U
Benzene	ug/L	0.38 J	0.55 J	ND(1.0)	ND(1.0)	0.51 J
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	3.1	3.1	0.43 J
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(5.0)	0.85 J	ND(5.0)	ND(5.0)	0.43 J
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	2.3	0.17 J	5.8	5.9	0.78 J
Chloromethane (Methyl Chloride)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)U	ND(1.0)U	ND(1.0)U
cis-1,2-Dichloroethene	ug/L	25	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	ug/L	0.23 J	0.37 J	ND(1.0)	ND(1.0)	0.32 J
Dibromochloromethane	ug/L	ND(1.0)	ND(1.0)	1.6	1.5	ND(1.0)
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	ND(1.0)	0.27 J	ND(1.0)	ND(1.0)	0.23 J
Isopropylbenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	2.5 J	ND(5.0)	ND(5.0)	ND(5.0)	0.29 J
Methylene chloride	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	3.3	ND(1.0)	ND(1.0)	ND(1.0)	0.25 J
Toluene	ug/L	2.0	0.89 J	2.6	2.6	1.8
trans-1,2-Dichloroethene	ug/L	3.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	17	0.32 J	ND(1.0)	ND(1.0)	ND(1.0)
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)

TABLE 4.2

ANALYTICAL RESULTS FOR TCL VOCs IN VERTICAL AQUIFER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*HP12-04*	*HP13-04*	*HP13-04*	*HP14-04*	*HP14-04*
Sample Identification		*GW-17360-072004-DCR-140*	*GW-17360-071904-DCR-133*	*GW-17360-071904-DCR-134*	*GW-17360-071204-DCR-071*	*GW-17360-071304-DCR-072*
Sample Date		*7/20/2004*	*7/19/2004*	*7/19/2004*	*7/12/2004*	*7/13/2004*
Sample Depth		*54'*	*22'*	*28.5'*	*25'*	*35'*
Sample Type						
TCL VOC	*Units*					
1,1,1-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	0.75 J	0.54 J	0.82 J	ND(25)	ND(25)
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	ug/L	ND(25)U	ND(25)U	ND(25)U	ND(25)U	ND(25)U
Benzene	ug/L	0.54 J	0.32 J	ND(1.0)	0.34 J	ND(1.0)
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	1.6	0.36 J	0.44 J
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(5.0)	ND(5.0)	ND(5.0)U	ND(5.0)U	ND(5.0)
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	2.0	ND(1.0)	4.5	2.4	2.8
Chloromethane (Methyl Chloride)	ug/L	ND(1.0)U	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	ug/L	0.29 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	ug/L	ND(1.0)	ND(1.0)	0.71 J	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	0.22 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	0.18 J	0.22 J	ND(5.0)	ND(5.0)	0.21 J
Methylene chloride	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	ug/L	2.5	ND(1.0)U	ND(1.1)U	0.70 J	0.24 J
trans-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	ND(1.0)	ND(1.0)	0.49 J	0.40 J	0.46 J
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)

TABLE 4.2

ANALYTICAL RESULTS FOR TCL VOCs IN VERTICAL AQUIFER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*HP14-04*	*HP14-04*	*HP14-04*	*HP14-04*	*HP15-04*
Sample Identification		*GW-17360-071304-DCR-073*	*GW-17360-071304-DCR-074*	*GW-17360-071304-DCR-075*	*GW-17360-071304-DCR-076*	*GW-17360-072004-DCR-141*
Sample Date		*7/13/2004*	*7/13/2004*	*7/13/2004*	*7/13/2004*	*7/20/2004*
Sample Depth		*35'*	*45'*	*55'*	*65'*	*17'*
Sample Type		*Duplicate*				
TCL VOC	*Units*					
1,1,1-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	12
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.28 J
1,1-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)U
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(25)	0.81 J	0.76 J	ND(25)	0.45 J
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	ug/L	ND(25)U	ND(25)U	ND(25)U	ND(25)U	ND(25)U
Benzene	ug/L	ND(1.0)	0.42 J	0.31 J	ND(1.0)	0.71 J
Bromodichloromethane	ug/L	0.45 J	ND(1.0)	ND(1.0)	7.2	ND(1.0)
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	0.45 J
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	2.8	3.4	3.9	16	ND(1.0)
Chloromethane (Methyl Chloride)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.38 J
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.38 J
Dibromochloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	2.8	ND(1.0)
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	ND(1.0)	0.25 J	0.20 J	ND(1.0)	0.27 J
Isopropylbenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	0.24 J	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	ug/L	0.24 J	0.90 J	0.72 J	6.5	1.1
trans-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	0.48 J	0.38 J	0.33 J	ND(1.0)	2.5
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)

TABLE 4.2

ANALYTICAL RESULTS FOR TCL VOCs IN VERTICAL AQUIFER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*HP15-04*	*HP15-04*	*HP15-04*	*HP15-04*	*HP15-04*
Sample Identification		*GW-17360-072004-DCR-142*	*GW-17360-072104-BM-144*	*GW-17360-072104-BM-145*	*GW-17360-072104-BM-146*	*GW-17360-072104-BM-147*
Sample Date		*7/20/2004*	*7/21/2004*	*7/21/2004*	*7/21/2004*	*7/21/2004*
Sample Depth		*26'*	*36'*	*46'*	*56'*	*66'*
Sample Type						
TCL VOC	*Units*					
1,1,1-Trichloroethane	ug/L	16	6.5	18	4.0	0.23 J
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	0.41 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	ND(1.5)U	ND(1.0)	0.58 J	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(25)	ND(25)	ND(25)	ND(25)U	ND(25)
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	ug/L	ND(25)U	ND(25)U	ND(25)U	ND(25)U	ND(25)U
Benzene	ug/L	0.27 J	0.22 J	0.25 J	0.25 J	0.33 J
Bromodichloromethane	ug/L	ND(1.0)	0.36 J	ND(1.0)	3.5	1.5
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(5.0)	0.28 J	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	ND(1.0)	0.85 J	ND(1.0)	8.7	3.1
Chloromethane (Methyl Chloride)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	ug/L	0.17 J	0.23 J	ND(1.0)	ND(1.0)	0.19 J
Dibromochloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	1.4	0.49 J
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	ug/L	0.45 J	1.1	0.64 J	6.3	2.1
trans-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	2.7	0.52 J	0.76 J	ND(1.0)	0.30 J
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)

TABLE 4.2

ANALYTICAL RESULTS FOR TCL VOCs IN VERTICAL AQUIFER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*HP15-04*	*HP15-04*	*HP16-04*	*HP16-04*	*HP16-04*
Sample Identification		*GW-17360-072104-BM-148*	*GW-17360-072104-BM-149*	*GW-17360-072804-DCR-181*	*GW-17360-072904-DCR-183*	*GW-17360-072904-DCR-184*
Sample Date		*7/21/2004*	*7/21/2004*	*7/28/2004*	*7/29/2004*	*7/29/2004*
Sample Depth		*76'*	*83.5'*	*20'*	*30'*	*30'*
Sample Type						*Duplicate*
TCL VOC	*Units*					
1,1,1-Trichloroethane	ug/L	0.52 J	0.39 J	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(5.0)UJ	ND(5.0)UJ	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(25)	ND(25)U	ND(25)U	ND(25)	ND(25)
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	ug/L	ND(25)U	ND(25)U	ND(25)U	ND(25)	ND(25)
Benzene	ug/L	0.25 J	ND(1.0)UJ	0.42 J	0.26 J	0.26 J
Bromodichloromethane	ug/L	1.4	ND(1.0)	ND(1.0)	0.76 J	0.84 J
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	4.1	2.7	ND(1.0)	1.4	1.3
Chloromethane (Methyl Chloride)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	2.0	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	ug/L	0.17 J	ND(1.0)	0.25 J	0.52 J	0.52 J
Dibromochloromethane	ug/L	0.46 J	ND(1.0)	ND(1.0)	0.76 J	0.73 J
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	ND(1.0)	ND(1.0)UJ	0.19 J	0.61 J	0.63 J
Isopropylbenzene	ug/L	ND(5.0)	ND(5.0)UJ	ND(5.0)UJ	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	0.68 J	0.72 J
Methyl Tert Butyl Ether	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	ug/L	ND(1.0)	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	ug/L	2.7	2.0 J	0.91 J	ND(1.2)U	ND(1.2)U
trans-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	ND(1.0)	0.58 J	6.5	ND(1.0)	ND(1.0)
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	1.2	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	ND(3.0)	ND(3.0)UJ	ND(3.0)UJ	1.8 J	1.8 J

TABLE 4.2

ANALYTICAL RESULTS FOR TCL VOCs IN VERTICAL AQUIFER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*HP16-04*	*HP16-04*	*HP16-04*	*HP16-04*	*HP16-04*
Sample Identification		*GW-17360-072904-DCR-185*	*GW-17360-072904-DCR-186*	*GW-17360-072904-DCR-187*	*GW-17360-072904-DCR-188*	*GW-17360-072904-DCR-189*
Sample Date		*7/29/2004*	*7/29/2004*	*7/29/2004*	*7/29/2004*	*7/29/2004*
Sample Depth		*40'*	*50'*	*60'*	*70'*	*80'*
Sample Type					*MS/MSD*	
TCL VOC	*Units*					
1,1,1-Trichloroethane	ug/L	ND(1.0)	0.22 J	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(25)	ND(25)	ND(25)	ND(25)	0.53 J
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	0.87 J	ND(50)	ND(50)	ND(50)	0.92 J
Acetone	ug/L	ND(25)	ND(25)	ND(25)	ND(25)	1.0 J
Benzene	ug/L	ND(1.0)	0.24 J	0.24 J	0.41 J	0.35 J
Bromodichloromethane	ug/L	5.5	1.7	3.7	2.1	3.0
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	8.2	2.5	6.0	4.0	6.4
Chloromethane (Methyl Chloride)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	ug/L	ND(1.0)	0.47 J	0.46 J	0.65 J	0.52 J
Dibromochloromethane	ug/L	2.9	1.1	1.9	1.2	1.7
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	ND(1.0)	0.56 J	0.54 J	0.60 J	0.59 J
Isopropylbenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	ND(1.0)	0.62 J	0.64 J	0.76 J	0.71 J
Methyl Tert Butyl Ether	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	ug/L	2.9	ND(1.7)U	3.5	2.7	4.5
trans-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	ND(3.0)	1.6 J	1.6 J	1.7 J	1.7 J

TABLE 4.2

ANALYTICAL RESULTS FOR TCL VOCs IN VERTICAL AQUIFER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*HP16-04*	*Trip Blank*	*Trip Blank*	*Trip Blank*	*Trip Blank*
Sample Identification		*GW-17360-072904-DCR-190*	*GW-17360-071304-DCR-077*	*GW-17360-071904-DCR-135*	*GW-17360-072004-DCR-143*	*GW-17360-072104-BM-150*
Sample Date		*7/29/2004*	*7/13/2004*	*7/19/2004*	*7/20/2004*	*7/21/2004*
Sample Depth		*84.5'*				
Sample Type						
TCL VOC	*Units*					
1,1,1-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	0.26 J	0.51 J	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	0.56 J	ND(25)	ND(25)	ND(25)	0.51 J
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	0.90 J	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	ug/L	1.0 J	8.1 J	8.9 J	13 J	2.8 J
Benzene	ug/L	0.32 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	ug/L	3.1	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(5.0)	2.0 J	1.3 J	ND(5.0)	ND(5.0)
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	6.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl Chloride)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	ug/L	0.47 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	ug/L	1.7	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	0.57 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	0.71 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	ug/L	ND(5.0)	4.9 J	3.7 J	4.4 J	0.68 J
Styrene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	ug/L	4.8	ND(1.0)	0.27 J	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	1.7 J	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)

TABLE 4.2

ANALYTICAL RESULTS FOR TCL VOCs IN VERTICAL AQUIFER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*Trip Blank*	*Trip Blank*	*Trip Blank*	*Trip Blank*	*Trip Blank*
Sample Identification		*GW-17360-072204-DCR-156*	*GW-17360-072304-DCR-162*	*GW-17360-072604-DCR-170*	*GW-17360-072704-DCR-178*	*GW-17360-072804-DCR-182*
Sample Date		*7/22/2004*	*7/23/2004*	*7/26/2004*	*7/27/2004*	*7/28/2004*
Sample Depth						
Sample Type						
TCL VOC	*Units*					
1,1,1-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	ND(1.0)	0.50 J	0.64 J	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	0.81 J	3.7 J	1.4 J	ND(25)	0.66 J
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	ug/L	ND(25)U	ND(25)U	1.5 J	ND(25)U	1.6 J
Benzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(5.0)	ND(5.0)	0.48 J	0.37 J	0.66 J
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl Chloride)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	ug/L	3.1 J	0.58 J	ND(5.0)	0.80 J	1.5 J
Styrene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	ug/L	ND(1.0)	0.24 J	0.21 J	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)

TABLE 4.2

ANALYTICAL RESULTS FOR TCL VOCs IN VERTICAL AQUIFER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Notes:

J – The associated value is qualified as an estimated quantity.
U – The analyte was analyzed for, but was qualified not detected above the value identified.
UJ – The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.
ND ( ) – Not detected above the value in parenthesis.

TABLE 4.3

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		Residential & Commercial I DW	Groundwater Surface water Interface Criteria	*85-1*	*85-2*	*85-3*	*85-5B*	*85-6*	*85-6*
Sample Identification (GW-17360-)				*081004-DCR-206*	*081004-DCR-210*	*080904-DCR-200*	*080904-DCR-199*	*081004-DCR-202*	*081004-DCR-203*
Sample Date				*8/10/2004*	*8/10/2004*	*8/9/2004*	*8/9/2004*	*8/10/2004*	*8/10/2004*
									Duplicate
TCL VOC	*Units*	*a*	*b*						
1,1,1-Trichloroethane	ug/L	200	200	ND(1.0)	3.8	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	ug/L	8.5	78	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	5	330	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	880	740	ND(1.0)	ND(1.0)	ND(1.0)	0.42 J	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	7	65	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	70	30	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2		ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	1	1	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	600	16	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	5	360	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	5	290	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	6.6	38	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	75	13	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	13000	2200	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)
2-Hexanone	ug/L	1000		ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	1800	ID	ND(50)	ND(50)	ND(50)	0.57 J	ND(50)	ND(50)
Acetone	ug/L	730	1700	ND(25)U	ND(25)U	ND(25)	2.0 J	ND(25)U	ND(25)U
Benzene	ug/L	5	200	ND(1.0)	ND(1.0)U	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)U
Bromodichloromethane	ug/L	100	ID	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	ug/L	100	ID	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	10	35	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	800	ID	ND(5.0)	ND(5.0)	ND(5.0)	7.3	ND(5.0)	ND(5.0)
Carbon tetrachloride	ug/L	5	45	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	100	47	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	430	ID	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	100	170	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.28 J	0.31 J
Chloromethane (Methyl Chloride)	ug/L	260	ID	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	620	1.9	ND(1.0)	ND(1.0)	2.7	ND(1.0)	ND(1.0)
Cyclohexane	ug/L			ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	ug/L	100	ID	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	ug/L	1700	ID	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	74	18	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	ug/L	800	ID	ND(5.0)	ND(5.0)	ND(5.0)	0.44 J	ND(5.0)	ND(5.0)
Methyl acetate	ug/L			ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L			ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	40	730	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	ug/L	5	940	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	ug/L	100	80	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	5	45	ND(1.0)	ND(1.0)	0.35 J	ND(1.0)	1.5	1.5
Toluene	ug/L	790	140	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	ug/L	100	1500	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	5	200	ND(1.0)	0.74 J	ND(1.0)	0.30 J	ND(1.0)	ND(1.0)
Trichlorofluoromethane (CFC-11)	ug/L	2600		ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	170000	32	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	2	15	1.1	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	280	35	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)
cis-1,3-Dichloropropene	ug/L			ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L			ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichloropropene - Total	ug/L	8.5		ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

TABLE 4.3

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*85-7*	*86-1*	*86-2*	*86-3*	*87-1*	*87-2*	*87-4*
Sample Identification (GW-17360-)		*081004-DCR-208*	*080904-DCR-197*	*080904-DCR-196*	*081004-DCR-216*	*080904-DCR-192*	*080904-DCR-198*	*080904-DCR-193*
Sample Date		*8/10/2004*	*8/9/2004*	*8/9/2004*	*8/10/2004*	*8/9/2004*	*8/9/2004*	*8/9/2004*
TCL VOC	*Units*							
1,1,1-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.4	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.9	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(8.4)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(25)	ND(25)	ND(25)	ND(25)	ND(42)	ND(25)	ND(25)
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(84)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(84)	ND(50)	ND(50)
Acetone	ug/L	ND(25)U	ND(25)	ND(25)	ND(25)U	1.5 J	ND(25)	ND(25)
Benzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
Bromodichloromethane	ug/L	0.41 J	ND(1.0)	ND(1.0)	0.41 J	ND(1.7)	ND(1.0)	ND(1.0)
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(8.4)	ND(5.0)	ND(5.0)
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	2.7	ND(1.0)	1.8	2.7	ND(1.7)	ND(1.0)	1.5
Chloromethane (Methyl Chloride)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	0.32 J	ND(1.0)	44	26	ND(1.0)
Cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
Dibromochloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
Isopropylbenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(8.4)	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(17)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	ND(5.0)	ND(5.0)	0.47 J	0.24 J	ND(8.4)	0.93 J	ND(5.0)
Methylene chloride	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(8.4)	ND(5.0)	ND(5.0)
Styrene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
Toluene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	6.2	2.8	ND(1.0)
Trichloroethene	ug/L	0.68 J	ND(1.0)	4.7	2.4	37*	25*	0.36 J
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	6.0*	0.68 J	ND(1.0)
Xylene (total)	ug/L	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(5.0)	ND(3.0)	ND(3.0)
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)
1,3-Dichloropropene - Total	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.7)	ND(1.0)	ND(1.0)

TABLE 4.3

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*87-4*	*87-5*	*87-8*	*87-8*	*87-9*	*87-10*	*87-11*
Sample Identification (GW-17360-)		*080904-DCR-194*	*080904-DCR-191*	*081004-DCR-214*	*081004-DCR-215*	*081004-DCR-213*	*081104-DCR-226*	*081104-DCR-222*
Sample Date		*8/9/2004*	*8/9/2004*	*8/10/2004*	*8/10/2004*	*8/10/2004*	*8/11/2004*	*8/11/2004*
		Duplicate			*Duplicate*			
TCL VOC	*Units*							
1,1,1-Trichloroethane	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	0.99 J	1.4	0.57 J
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,1-Dichloroethane	ug/L	ND(1.0)	6.3	ND(1.0)	ND(1.0)	0.41 J	0.88 J	ND(2.0)
1,1-Dichloroethene	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)U	ND(2.0)U
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(25)	ND(50)	ND(25)	ND(25)	ND(25)	ND(25)	ND(50)
2-Hexanone	ug/L	ND(50)	ND(100)	ND(50)	ND(50)	ND(50)	ND(50)	ND(100)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(50)	ND(100)	ND(50)	ND(50)	ND(50)	ND(50)	ND(100)
Acetone	ug/L	ND(25)	ND(50)	ND(25)U	ND(25)U	ND(25)U	ND(25)	ND(50)U
Benzene	ug/L	ND(1.0)	ND(2.0)	ND(1.0)U	ND(1.0)	ND(1.0)U	ND(1.0)	ND(2.0)
Bromodichloromethane	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Bromoform	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Carbon disulfide	ug/L	ND(5.0)	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)
Carbon tetrachloride	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Chlorobenzene	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Chloroethane	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Chloroform (Trichloromethane)	ug/L	1.6	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Chloromethane (Methyl Chloride)	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	0.98 J	ND(1.0)	ND(1.0)	ND(1.0)	0.82 J	48
Cyclohexane	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Dibromochloromethane	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Ethylbenzene	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Isopropylbenzene	ug/L	ND(5.0)	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)
Methyl acetate	ug/L	ND(10)	ND(20)	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)
Methyl cyclohexane	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Methyl Tert Butyl Ether	ug/L	ND(5.0)	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)
Methylene chloride	ug/L	ND(5.0)	ND(10)U	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)U
Styrene	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Tetrachloroethene	ug/L	ND(1.0)	ND(2.0)	0.31 J	0.23 J	ND(1.0)	0.38 J	ND(2.0)
Toluene	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
trans-1,2-Dichloroethene	ug/L	ND(1.0)	1.7 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.64 J
Trichloroethene	ug/L	0.35 J	ND(2.0)	0.49 J	0.48 J	ND(1.0)	33[a]	30[a]
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Vinyl chloride	ug/L	ND(1.0)	69[ab]	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.0 J
Xylene (total)	ug/L	ND(3.0)	ND(6.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(6.0)
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,3-Dichloropropene - Total	ug/L	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)

TABLE 4.3

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*87-13*	*88-2*	*88-3*	*88-4*	*C-1*	*C-2*	*C-3*
Sample Identification (GW-17360-)		*081104-DCR-223*	*081104-DCR-218*	*081104-DCR-219*	*081104-DCR-220*	*081104-DCR-231*	*081104-DCR-230*	*081104-DCR-229*
Sample Date		*8/11/2004*	*8/11/2004*	*8/11/2004*	*8/11/2004*	*8/11/2004*	*8/11/2004*	*8/11/2004*
TCL VOC	*Units*							
1,1,1-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.29 J	0.51 J
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	ug/L	ND(25)	ND(25)U	ND(25)	ND(25)U	ND(25)U	ND(25)U	ND(25)U
Benzene	ug/L	ND(1.0)U	ND(1.0)	ND(1.0)	ND(1.0)U	ND(1.0)	ND(1.0)	ND(1.0)U
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.24 J	ND(1.0)	ND(1.0)
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.75 J	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	0.44 J	0.31 J	ND(1.0)	ND(1.0)
Chloromethane (Methyl Chloride)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.42 J	3.1	5.4
Cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.26 J	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.8	1.8	4.6
Toluene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	1.5	ND(1.0)	ND(1.0)	ND(1.0)	0.50 J	1.6	1.7
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.36 J	0.94 J
Xylene (total)	ug/L	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichloropropene - Total	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

TABLE 4.3

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW1-03*	*MW2-03*	*MW3-03*	*MW4-03*	*MW5-03*	*MW6-03*	*MW7-03*
Sample Identification (GW-17360-)		*081004-DCR-207*	*081004-DCR-204*	*081004-DCR-205*	*081204-DCR-236*	*081104-DCR-227*	*081104-DCR-224*	*081004-DCR-212*
Sample Date		*8/10/2004*	*8/10/2004*	*8/10/2004*	*8/12/2004*	*8/11/2004*	*8/11/2004*	*8/10/2004*
TCL VOC	*Units*							
1,1,1-Trichloroethane	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.8
1,1,2,2-Tetrachloroethane	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	0.26 J	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.43 J
1,2,4-Trichlorobenzene	ug/L	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(120)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)
2-Hexanone	ug/L	ND(250)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(250)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	ug/L	ND(120)	ND(25)	ND(25)	ND(25)	ND(25)U	ND(25)	ND(25)U
Benzene	ug/L	ND(5.0)U	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.5	ND(1.0)	ND(1.0)
Bromoform	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	ND(5.0)	ND(1.0)	1.0	0.58 J	10	2.2	0.80 J
Chloromethane (Methyl Chloride)	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	0.44 J	0.26 J	ND(1.0)	ND(1.0)
Cyclohexane	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	ug/L	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(50)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	ug/L	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	**160[ab]**	**10[a]**	0.95 J	0.92 J	0.46 J	ND(1.0)	ND(1.0)
Toluene	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	1.6	**5.9[a]**	0.39 J	0.63 J
Trichlorofluoromethane (CFC-11)	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	0.40 J	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	ND(15)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)
cis-1,3-Dichloropropene	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichloropropene - Total	ug/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

TABLE 4.3

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW8-04*	*MW9-04*	*MW10-04*	*MW11-04*	*MW11-04*	*MW13-04*	*MW14-04*
Sample Identification (GW-17360-)		*081104-DCR-225*	*081104-DCR-228*	*081204-DCR-235*	*081204-DCR-233*	*081204-DCR-234*	*081004-DCR-209*	*080904-DCR-195*
Sample Date		*8/11/2004*	*8/11/2004*	*8/12/2004*	*8/12/2004*	*8/12/2004* *Duplicate*	*8/10/2004*	*8/9/2004*
TCL VOC	*Units*							
1,1,1-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	5.5	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(1.0)	0.51 J	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	ND(1.0)	ND(1.0)U	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(10)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(25)	ND(25)	ND(25)	ND(50)	ND(50)	ND(25)	ND(25)
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(100)	ND(100)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(50)	ND(50)	ND(50)	ND(100)	ND(100)	ND(50)	ND(50)
Acetone	ug/L	ND(25)	ND(25)U	ND(25)	ND(50)	ND(50)	ND(25)U	0.88 J
Benzene	ug/L	ND(1.0)	ND(1.0)U	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)U	ND(1.0)
Bromodichloromethane	ug/L	2.1	0.24 J	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	0.83 J
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(10)	ND(5.0)	ND(5.0)
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	12	1.2	0.95 J	ND(2.0)	ND(2.0)	0.22 J	4.1
Chloromethane (Methyl Chloride)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	0.91 J	ND(1.0)	64	62	ND(1.0)	ND(1.0)
Cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(10)	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(20)	ND(20)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	3.2 J	3.3 J	0.27 J	ND(5.0)
Methylene chloride	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)U	ND(10)U	ND(5.0)	ND(5.0)
Styrene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	0.33 J	0.54 J	ND(1.0)	**28[a]**	**27[a]**	ND(1.0)	ND(1.0)
Toluene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	6.6	6.3	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	2.8	2.2	**11[a]**	**45[a]**	**44[a]**	ND(1.0)	0.36 J
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	ND(3.0)	ND(3.0)	ND(3.0)	ND(6.0)	ND(6.0)	ND(3.0)	ND(3.0)
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,3-Dichloropropene - Total	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)

TABLE 4.3

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW15-04*	*PWDISCH*	*Trip Blank*	*Trip Blank*	*Trip Blank*	*Trip Blank*
Sample Identification (GW-17360-)		*081004-DCR-211*	*081104-DCR-221*	*080904-DCR-201*	*081004-DCR-217*	*081104-DCR-232*	*081204-DCR-237*
Sample Date		*8/10/2004*	*8/11/2004*	*8/9/2004*	*8/10/2004*	*8/11/2004*	*8/12/2004*
TCL VOC	*Units*						
1,1,1-Trichloroethane	ug/L	10	0.53 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	0.80 J	ND(1.0)	ND(1.0)	ND(1.0)	0.44 J	ND(1.0)
1,2,4-Trichlorobenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)
2-Hexanone	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	ug/L	ND(25)U	ND(25)	ND(25)	8.9 J	11 J	ND(25)U
Benzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)U	ND(1.0)U	ND(1.0)
Bromodichloromethane	ug/L	ND(1.0)	0.43 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	ug/L	ND(1.0)	2.9	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl Chloride)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	ug/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	ug/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	ug/L	ND(5.0)	0.25 J	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	ug/L	ND(5.0)	ND(5.0)	ND(5.0)U	3.9 J	ND(5.0)U	ND(5.0)U
Styrene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	0.18 J	0.18 J	ND(1.0)
trans-1,2-Dichloroethene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ug/L	2.0	1.8	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichlorofluoromethane (CFC-11)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	ug/L	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)
cis-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichloropropene - Total	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

TABLE 4.3

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Notes:

J – The associated value is qualified as an estimated quantity.
U – The analyte was analyzed for, but was qualified not detected above the value identified.
UJ – The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.
ND ( ) – Not detected above the value in parenthesis.
value with super script a or b indicates specific criterion(s) exceeded

TABLE 4.4

ANALYTICAL RESULTS FOR TCL SVOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*Residential & Commercial I DW*	*85-3*	*85-5B*	*85-6*	*85-6*	*86-1*
Sample Identification (GW-17360-)			*080904-DCR-200*	*080904-DCR-199*	*081004-DCR-202*	*081004-DCR-203*	*080904-DCR-197*
Sample Date			*8/9/2004*	*8/9/2004*	*8/10/2004 (Original)*	*8/10/2004 Duplicate*	*8/9/2004*
TCL SVOC	*Units*						
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L		ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
2,4,5-Trichlorophenol	ug/L	730	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
2,4,6-Trichlorophenol	ug/L	120	ND(40)	ND(16)	ND(4.0)	ND(4.0)	ND(4.0)
2,4-Dichlorophenol	ug/L	73	ND(100)	ND(40)	ND(10)	ND(10)	ND(10)
2,4-Dimethylphenol	ug/L	370	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
2,4-Dinitrophenol	ug/L		ND(200)	ND(80)	ND(20)	ND(20)	ND(20)
2,4-Dinitrotoluene	ug/L	7.7	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
2,6-Dinitrotoluene	ug/L		ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
2-Chloronaphthalene	ug/L	1800	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
2-Chlorophenol	ug/L	45	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
2-Methylnaphthalene	ug/L	260	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
2-Methylphenol	ug/L	370	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
2-Nitroaniline	ug/L		ND(200)	ND(80)	ND(20)	ND(20)	ND(20)
2-Nitrophenol	ug/L	20	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
3,3'-Dichlorobenzidine	ug/L	1.1	ND(40)	ND(16)	ND(4.0)	ND(4.0)	ND(4.0)
3-Nitroaniline	ug/L		ND(200)	ND(80)	ND(20)	ND(20)	ND(20)
4,6-Dinitro-2-methylphenol	ug/L	20	ND(200)	ND(80)	ND(20)	ND(20)	ND(20)
4-Bromophenyl phenyl ether	ug/L		ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
4-Chloro-3-methylphenol	ug/L	150	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
4-Chloroaniline	ug/L		ND(200)	ND(80)	ND(20)	ND(20)	ND(20)
4-Chlorophenyl phenyl ether	ug/L		ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
4-Methylphenol	ug/L	370	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
4-Nitroaniline	ug/L		ND(200)	ND(80)	ND(20)	ND(20)	ND(20)
4-Nitrophenol	ug/L		ND(200)	ND(80)	ND(20)	ND(20)	ND(20)
Acenaphthene	ug/L	1300	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Acenaphthylene	ug/L	52	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Acetophenone	ug/L	1500	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Anthracene	ug/L	43	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Atrazine	ug/L	3	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Benzaldehyde	ug/L		ND(100)	ND(40)	ND(10)	ND(10)	ND(10)
Benzo(a)anthracene	ug/L	2.1	ND(40)	**5.4 J[a]**	ND(4.0)	ND(4.0)	ND(4.0)
Benzo(a)pyrene	ug/L	5	ND(40)	2.3 J	ND(4.0)	ND(4.0)	ND(4.0)
Benzo(b)fluoranthene	ug/L	2	ND(40)	**4.3 J[a]**	ND(4.0)	ND(4.0)	ND(4.0)
Benzo(g,h,i)perylene	ug/L	5	ND(50)	2.0 J	ND(5.0)	ND(5.0)	ND(5.0)
Benzo(k)fluoranthene	ug/L	5	ND(50)	2.1 J	ND(5.0)	ND(5.0)	ND(5.0)

TABLE 4.4

ANALYTICAL RESULTS FOR TCL SVOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*Residential & Commercial I DW*	*85-3*	*85-5B*	*85-6*	*85-6*	*86-1*
Sample Identification (GW-17360-)			*080904-DCR-200*	*080904-DCR-199*	*081004-DCR-202*	*081004-DCR-203*	*080904-DCR-197*
Sample Date			*8/9/2004*	*8/9/2004*	*8/10/2004 (Original)*	*8/10/2004 Duplicate*	*8/9/2004*
TCL SVOC	*Units*	*a*					
Biphenyl	ug/L		ND(100)	ND(40)	ND(10)	ND(10)	ND(10)
bis(2-Chloroethoxy)methane	ug/L		ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
bis(2-Chloroethyl)ether	ug/L	2	ND(40)	ND(16)	ND(4.0)	ND(4.0)	ND(4.0)
bis(2-Ethylhexyl)phthalate	ug/L	6	**8.4 J[a]**	ND(20)	**8.6[a]**	ND(5.0)	ND(5.0)
Butyl benzylphthalate	ug/L	1200	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Caprolactam	ug/L	5800	9.5 J	ND(40)	ND(10)	ND(10)	ND(10)
Carbazole	ug/L	85	ND(100)	ND(40)	ND(10)	ND(10)	ND(10)
Chrysene	ug/L	5	ND(50)	4.0 J	ND(5.0)	ND(5.0)	ND(5.0)
Dibenz(a,h)anthracene	ug/L	2	ND(40)	ND(16)	ND(4.0)	ND(4.0)	ND(4.0)
Dibenzofuran	ug/L	ID	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Diethyl phthalate	ug/L	5500	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Dimethyl phthalate	ug/L	73000	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Di-n-butylphthalate	ug/L	880	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Di-n-octyl phthalate	ug/L	130	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Fluoranthene	ug/L	210	5.8 J	19 J	ND(5.0)	ND(5.0)	ND(5.0)
Fluorene	ug/L	880	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Hexachlorobenzene	ug/L	1	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Hexachlorobutadiene	ug/L	15	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Hexachlorocyclopentadiene	ug/L	50	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Hexachloroethane	ug/L	7.3	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Indeno(1,2,3-cd)pyrene	ug/L	2	ND(40)	1.8 J	ND(4.0)	ND(4.0)	ND(4.0)
Isophorone	ug/L	770	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Naphthalene	ug/L	520	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Nitrobenzene	ug/L	3.4	ND(40)	ND(16)	ND(4.0)	ND(4.0)	ND(4.0)
N-Nitrosodi-n-propylamine	ug/L	5	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
N-Nitrosodiphenylamine	ug/L	270	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Pentachlorophenol	ug/L	1	ND(200)	ND(80)	ND(20)	ND(20)	ND(20)
Phenanthrene	ug/L	52	ND(50)	4.3 J	ND(5.0)	ND(5.0)	ND(5.0)
Phenol	ug/L	4400	ND(50)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Pyrene	ug/L	140	6.1 J	22	ND(5.0)	ND(5.0)	ND(5.0)

TABLE 4.4

ANALYTICAL RESULTS FOR TCL SVOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Notes:

J – The associated value is qualified as an estimated quantity.
U – The analyte was analyzed for, but was qualified not detected above the value identified.
UJ – The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.
ND ( ) – Not detected above the value in parenthesis.
value with super script indicates criterion exceeded

2004 DATA REPORT

GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Volume II of II

DECEMBER 2004
REF. NO. 17360 (9)

APPENDIX A

STRATIGRAPHIC AND MONITORING WELL CONSTRUCTION LOGS

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP8-04
DATE COMPLETED: July 15, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	674.45						
0	SP-SANDS, trace silts & loose, fine to medium grained, poorly graded, light brown, moist		NATIVE SOILS	1SS		75	7	0.0
2				2SS		75	8	0.0
4				3SS		66	7	0.0
		669.45		4SS		80	3	0.0
6	SW-SANDS, trace silts & fine gravels, loose, fine to coarse grained, well graded, tan/beige, moist			5SS		66	6	0.0
8								
		665.20						
10	SP-SANDS, trace silts, loose, fine to coarse grained, poorly graded, tan/beige, moist - fine to medium grained at 10.5ft BGS		8" BOREHOLE	6SS		75	4	0.0
12	- fine gravel at 12.5ft BGS			7SS		90	4	0.0
14				8SS		85	7	0.0
16			BENTONITE GROUT	9SS		80	11	0.0
		657.20						
18	SM-SILTY SANDS, compact, fine grained, poorly graded, light brown, moist - very moist to saturated at 19.8ft BGS			10SS		75	13	0.0
20				11SS		75	8	0.0
22				12SS		75	12	0.0
24								
		649.95		13SS		75	7	0.0
26	SP-SANDS, trace silts, loose, fine to medium grained, poorly graded, orange brown, saturated, oxidation	648.95 648.45		14SS		90	19	0.0
28	SM/SP-SANDS & SILTS, loose, fine sands, brown, gray and orange brown, saturated, oxidation			15SS		25	12	0.0
30	SP-SANDS, trace silts, loose, fine to medium grained, poorly graded, saturated, oxidation, occasional 1"-2" SM/SP seam - fine to coarse grained, trace fine gravels at 30.0ft BGS			16SS		75	7	0.0
32				17SS		75	9	0.0
34				18SS		33	5	0.0
36				19SS		75	11	0.0
38				20SS		75	7	0.0
40				21SS		66	9	0.0
42	- fine to medium grained, light brown at 41.3ft BGS - fine to coarse grained, moderately graded at 43.0ft BGS			22SS		90	16	0.0
44								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (22SS)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP8-04
DATE COMPLETED: July 15, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
46				23SS		80	17	0.0
48			8" BOREHOLE	24SS		75	9	0.0
50				25SS		75	12	0.0
52	SW-SANDS, trace silts and fine gravels, compact, fine to coarse grained, well graded, brown, saturated	623.95	BENTONITE GROUT	26SS		75	9	0.0
54	CL-SILTY CLAYS, trace fine sands, very stiff, low plasticity, gray, moist	620.95 620.45		27SS			34	0.0
56	END OF BOREHOLE @ 54.0ft BGS							
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								
82								
84								
86								
88								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (27SS)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP9-04
DATE COMPLETED: July 23, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	678.27						
0	SM-SILTY SANDS, trace fine gravels, compact, fine to medium grained, poorly graded, dark brown, moist		NATIVE SOILS	1SS		80	13	0.0
2	- brown, trace orange streaking, oxidation at 0.8ft BGS			2SS		50	5	0.0
4	- tan/beige at 4.5ft BGS - brown at 5.0ft BGS			3SS		75	8	0.0
6	- fine grained at 6.3ft BGS			4SS		75	6	0.0
8	- fine to medium grained at 8.8ft BGS			5SS		85	5	0.0
10			8" BOREHOLE	6SS		75	5	0.0
12	- fine grained, tan/beige, trace orange streaking, oxidation at 11.5ft BGS			7SS		75	9	0.0
14				8SS		75	7	0.0
16	- increase in silt content at 16.5ft BGS		BENTONITE GROUT	9SS		80	10	0.0
18				10SS		75	19	0.0
20				11SS		75	12	0.0
22	- very moist at 22.5ft BGS - saturated, brown at 23.0ft BGS			12SS		75	11	0.0
24	- decrease in silt content at 24.5ft BGS			13SS		66	5	0.0
26		651.77		14SS		75	6	0.0
28	SP-SANDS, trace silts, loose, fine to medium grained, poorly graded, brown, saturated			15SS		75	5	0.0
30				(16SS)		75	7	0.0
32		645.77		17SS		80	6	0.0
34	ML/SP-SANDS & SILTS, trace clays, loose/soft, fine sands, brown-gray, saturated			18SS		25	12	0.0
36		643.27		19SS		75	9	0.0
38	SP-SANDS-trace silts, compact, fine to medium grained, poorly graded, brown, saturated			20SS		75	4	0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP9-04
DATE COMPLETED: July 23, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
42	- trace silts, fine to coarse grained, moderately graded in some areas at 41.0ft BGS			21SS		75	5	0.0
44				22SS		80	8	0.0
46				(23SS)		80	7	0.0
48			8" BOREHOLE	24SS		75	17	0.0
50				25SS		75	12	0.0
52			BENTONITE GROUT	26SS		90	5	0.0
54				27SS		25	4	0.0
56	- fine to medium grained, light brown at 56.0ft BGS			(28SS)		50	2	0.0
58				29SS		90	11	0.0
60				30SS		25	5	0.0
62	SW-GRAVELLY SANDS- trace silts, dense, fine to coarse grained, well graded, brown, saturated, fine to medium gravels	617.02		31SS		50	4	0.0
64				32SS		90	34	0.0
66	- with gravels at 65.0ft BGS			(33SS)		75	61	0.0
68				34SS		0		0.0
70	CL-SILTY CLAYS with firm sands to fine gravels, hard, hard, low plasticity, gray, moist	610.27		35SS		90	77	0.0
72	END OF BOREHOLE @ 70.0ft BGS	608.27						
74								
76								
78								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP10-04
DATE COMPLETED: July 26, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	666.63						
0	SM-SILTY SANDS, trace fine gravels, loose, fine to coarse grained, poorly graded, dark brown, moist, trace grasses, rootlets		NATIVE SOILS	1SS		80	6	0.0
2	- brown at 1.5ft BGS - light brown, trace oxidation at 2.5ft BGS			2SS		80	16	0.0
4				3SS		75	12	0.0
6	- fine grained, brown at 5.5ft BGS - fine to coarse grained, light brown at 6.5ft BGS			4SS		90	8	0.0
8				5SS		75	8	0.0
10	- fine to medium grained at 10.5ft BGS		8" BOREHOLE	6SS		80	4	0.0
12	- very moist to saturated, brown-gray at 11.5ft BGS - saturated at 12.0ft BGS			7SS		66	7	0.0
14		652.13		8SS		75	6	0.0
16	SP-SANDS, trace silts & fine gravels, loose, fine to coarse gravel, poorly to moderately graded, brown-gray, saturated		BENTONITE GROUT	9SS		90	13	0.0
18				10SS		80	8	0.0
20				11SS		75	10	0.0
22				12SS		75	7	0.0
24	- fine to medium grained, poorly graded at 24.0ft BGS			13SS		75	5	0.0
26		639.63		14SS		85	12	0.0
28	SM-SILTY SANDS, compact, fine grained, poorly graded, brow, saturated			15SS		75	10	0.0
30	- light brown at 30.8ft BGS			16SS		75	8	0.0
32				17SS		75	11	0.0
34	- fine to medium grained, brown at 34.0ft BGS			18SS		80	8	0.0
36				19SS		75	7	0.0
38		627.38		20SS		75	6	0.0
	SP-SANDS, trace silts & fine gravels, loose,							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP10-04
DATE COMPLETED: July 26, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
42	fine to medium grained, poorly graded, brown			21SS		75	8	0.0
	SM-SILTY SANDS, compact, fine grained, poorly graded, brow, saturated	624.13		22SS		80	19	0.0
44	- fine to coarse grained at 43.8ft BGS			(23SS)		90	13	0.0
46	- with silts at 46.0ft BGS			24SS		80	37	0.0
48	- fine to medium grained at 47.8ft BGS			25SS		25	13	0.0
50	SP-SANDS, trace silts & fine gravels, fine to coarse grained, poorly graded, brown, saturated	616.63		26SS		90	4	0.0
52				27SS		88	8	0.0
54			8" BOREHOLE	(28SS)		90	10	0.0
56				29SS		75	33	0.0
58	SM-SILTY SANDS, dense, fine grained, poorly graded, brown, saturated	609.38		30SS		80	15	0.0
60				31SS		80	7	0.0
62	SP-SANDS, trace silts, compact, fine to medium grained, poorly graded, brown, saturated	605.13		32SS		75	34	0.0
64				(33SS)		25	23	0.0
66				34SS		25	6	0.0
68				35SS		75	5	0.0
70			BENTONITE GROUT	36SS		80	12	0.0
72				37SS		80	5	0.0
74	- fine to coarse grained, light brown at 74.5ft BGS			(38SS)		25	11	0.0
76	- trace fine to medium gravels, very dense at 77.0ft BGS			39SS		90	47	0.0
78				40SS		90	100	0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (SS)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP10-04
DATE COMPLETED: July 26, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
82	CL-SILTY CLAYS, trace fine sands to fine gravels, very stiff, low plasticity, gray, moist	585.63	8" BOREHOLE	41SS		90	19	0.0
	END OF BOREHOLE @ 82.0ft BGS	584.63	BENTONITE GROUT					
84								
86								
88								
90								
92								
94								
96								
98								
100								
102								
104								
106								
108								
110								
112								
114								
116								
118								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (41SS)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP11-04
DATE COMPLETED: July 27, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	663.71						
2	SM-SILTY SANDS W/ CLAYS, trace fine gravels, loose, fine grained, poorly graded, non-plastic, dark brown, moist, trace peat		NATIVE SOILS	1SS		75	18	0.0
	- light brown, compact at 3.3ft BGS			2SS		75	17	0.0
4	- brown & dark brown banding, occasional 1/4" to 1/2" peat seam at 4.5ft BGS			3SS		85	12	0.0
6	- fine to coarse grained, brown with silts at 6.0ft BGS			4SS		75	6	0.0
8	- very moist to saturated at 8.5ft BGS			5SS		75	4	0.0
	- saturated at 9.0ft BGS	654.46	8" BOREHOLE	6SS		75	8	0.0
10	SW-SANDS W/ GRAVELS, trace silts, compact, fine to coarse grained, well graded, brown-gray, saturated, fine to medium gravels			7SS		75	7	0.0
12				8SS		75	8	0.0
14			BENTONITE GROUT	9SS		85	7	0.0
16				10SS		66	9	0.0
18	SP-SANDS, trace silts & fine gravels, compact, fine to coarse grained, poorly graded, brown-gray, saturated	645.71		11SS		75	7	0.0
20	- fine to medium grained at 21.0ft BGS			12SS		66	11	0.0
22	- fine to coarse grained at 22.0ft BGS			13SS		66	3	0.0
24				14SS		75	14	0.0
26				15SS		90	2	0.0
28	SM-SILTY SANDS, compact, fine grained, poorly graded, brown, saturated	636.46		16SS		66	5	0.0
30				17SS		75	15	0.0
32				18SS		75	4	0.0
34				19SS		90	15	0.0
36				20SS		90	8	0.0
38				21SS		80	12	0.0
40	SM/SP- SILTS & SANDS, compact, fine sands, non-plastic, brown & gray banded, saturated	624.21		22SS		90	15	0.0
	SM-SILTY SANDS, compact, fine to coarse grained, poorly graded, brown, saturated	623.46						
42	- fine-grained, gray-brown at 42.0ft BGS							
44								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (12SS, 17SS, 22SS)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP11-04
DATE COMPLETED: July 27, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
46				23SS		80	10	0.0
48			BENTONITE GROUT	24SS		66	13	0.0
50				25SS		66	14	0.0
52			8" BOREHOLE	26SS		75	20	0.0
54	- trace fine gravels, fine to medium grained at 53.5ft BGS			27SS		66	19	0.0
56				28SS		100	9	0.0
58	SP-SANDS, trace silts & fine gravels, compact, fine to coarse grained, poorly graded, brown, saturated	607.21						
60								
62	- fine to medium grained at 62.0ft BGS							
64								
66								
68								
70	OL-SILTY CLAYS, trace fine sands, stiff, low plasticity, gray, moist	594.46						
	END OF BOREHOLE @ 70.0ft BGS	593.71						
72								
74								
76								
78								
80								
82								
84								
86								
88								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (27SS)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP12-04
DATE COMPLETED: July 20, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	677.90						
	ASPHALT-black	677.70	ASPHALT					
	SM-SILTY SANDS, trace fine gravels, compact, fine grained, poorly graded, brown, moist		NATIVE SOILS	1SS		75	18	0.0
2				2SS		75	17	0.0
	- light brown at 1.0ft BGS							
4	- fine to coarse grained, light brown at 3.8ft BGS			3SS		85	12	0.0
6	- light brown, some orange banding, oxidation at 4.5ft BGS			4SS		66	6	0.0
8				5SS				0.0
10			8" BOREHOLE	6SS				0.0
12	- fine to medium grained, tan-beige at 11.5ft BGS			7SS				0.0
14				8SS				0.0
16	- light brown at 16.0ft BGS		BENTONITE GROUT	9SS				0.0
18				10SS				0.0
20				11SS				0.0
22	- fine to coarse grained, brown, very moist at 21.0ft BGS - saturated at 21.5ft BGS			12SS				0.0
24		653.90		13SS				0.0
	SP-SANDS, trace silts & fine gravels, compact, fine to coarse grained, poorly to moderately graded, brown, saturated							
26	- fine grained, poorly graded, light brown at 26.3ft BGS			14SS				0.0
28	- fine to medium grained, occasional 1"-2" well graded seam at 28.5ft BGS			15SS				0.0
30				16SS				0.0
32	- fine to coarse grained, brown at 33.0ft BGS			17SS				0.0
34				18SS				0.0
36	- moderately graded at 36.5ft BGS			19SS				0.0
38				20SS				0.0
40	- poorly graded at 39.5ft BGS			21SS				0.0
42				22SS				0.0
44								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP12-04
DATE COMPLETED: July 20, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
46	- moderately graded at 45.0ft BGS		8" BOREHOLE	23SS				0.0
48				24SS				0.0
50			BENTONITE GROUT	25SS				
52				26SS				0.0
54				27SS				0.0
56	CL-SILTY CLAYS, trace fine sands, stiff, low plasticity, gray, moist	623.40		28SS				0.0
58	END OF BOREHOLE @ 56.0ft BGS	621.90						
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								
82								
84								
86								
88								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP13-04
DATE COMPLETED: July 19, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	678.85						
0	SM-SILTY SANDS, trace fine gravels, compact, fine grained, poorly graded, dark brown, moist, trace rootlets		NATIVE SOILS	1SS		75	12	0.1
2	- fine to coarse grained, orange brown at 2.8ft BGS			2SS		75	13	0.0
4	- fine grained, light brown at 5.0ft BGS			3SS		75	9	0.0
6	- no gravels at 6.8ft BGS			4SS		66	7	0.0
8				5SS		75	7	0.0
10	- fine to coarse grained, dark brown, and orange brown at 9.5ft BGS		8" BOREHOLE	6SS		75	8	0.0
12	- light brown at 10.8ft BGS			7SS		90	7	0.0
14	- fine to medium grained, tan/beige, trace fine gravels at 13.3ft BGS			8SS		90	11	0.0
16	- fine to coarse grained at 14.5ft BGS		BENTONITE GROUT	9SS		85	10	0.0
18	- fine to medium grained at 17.5ft BGS			10SS		75	9	0.0
20	- very moist to saturated, brown at 19.5ft BGS			(11SS)		75	5	0.0
22	- saturated, fine grained at 20.0ft BGS			12SS		90	15	0.0
24	- fine to coarse grained at 23.5ft BGS			13SS		75	9	0.0
26	SP-SANDS, trace silts and fine gravels, compact, fine to coarse grained, poorly graded, brown, saturated	654.35		14SS		100	9	0.0
28	SM-SILTY SANDS, compact, fine grained, poorly graded, brown, saturated	651.85		(15SS)		75	11	0.0
30	CL-SILT CLAYS, stiff, low plasticity, gray, moist	649.85		16SS		75	8	0.0
32	ML-SILTS W/ SANDS & CLAY, loose/firm, fine sands, low to non-plastic, gray, saturated, occasion 1" CL-silty clay seam	648.60		17SS		75	19	0.0
34	CL-SILTY CLAYS, trace fine sands, very stiff, low plasticity, gray, moist	647.10		18SS		100	13	0.0
36	END OF BOREHOLE @ 36.0ft BGS	642.85						
38								
40								
42								
44								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (11SS) (15SS)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP13-04
DATE COMPLETED: July 19, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
46			← 8" BOREHOLE					
48								
50			← BENTONITE GROUT					
52								
54								
56								
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								
82								
84								
86								
88								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP14-04
DATE COMPLETED: July 12, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	GROUND SURFACE	681.05
0	WOOD BLOCK FLOORING	680.80
	CONCRETE-with fine gravels, white, competent	680.05
2	SM-SILTY SANDS W/ GRAVELS, loose, fine to coarse grained, poorly graded, brown, moist, fine to medium gravels	
4	- trace fine gravels, fine to medium grained at 3.0ft BGS	
6	- trace fine to medium gravels, fine to coarse grained at 4.0ft BGS	
8	- fine grained, no gravels, light brown, trace orange, streaking, oxidation at 5.3ft BGS	
10		
12	- fine to medium grained at 11.3ft BGS	
14	SW-SANDS, trace silts and fine gravels, fine to coarse grained, well graded, brown and gray, moist	667.80
16	- compact at 16.0ft BGS	
18		
20		
22	- saturated at 23.0ft BGS	
24		
26	- gray at 26.0ft BGS	
28		
30		
32		
34		
36		
38		
40	SP-SANDS, trace silts, compact, fine to coarse grained, poorly graded, brown-gray, saturated	641.05
42		
44		

BOREHOLE INSTALLATION: 8" BOREHOLE; BENTONITE GROUT

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
1HA		100		6.9
2SS		66	10	15.8
3SS		33	19	4.9
4SS		66	10	4.4
5SS		66	7	9.8
6SS		66	13	4.2
7SS		50	10	4.8
8SS		50	10	2.9
9SS		50	8	1.8
10SS		50	14	1.9
11SS		50	18	1.3
12SS		50	12	1.0
13SS				
14SS		25	22	0.8
15SS		33	5	0.9
16SS		33	6	0.8
17SS		50	8	1.2
18SS		50	13	0.8
19SS		33	15	0.7
20SS		50	16	0.8
21SS		50	17	0.7
22SS		50	18	0.6

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP14-04
DATE COMPLETED: July 12, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
46				23SS		50	16	0.8
48	- fine to medium grained at 47.5ft BGS		8" BOREHOLE	24SS		50	27	0.6
50				25SS		25	17	0.8
52			BENTONITE GROUT	26SS		75	14	6.8
54				27SS		75	10	0.3
56				28SS		50	13	0.0
58	- fine to coarse grained, medium brown at 57.3ft BGS			29SS		75	26	0.4
60				30SS		50	24	0.3
62				31SS		50	26	0.2
64				32SS		50	21	0.3
66	END OF BOREHOLE @ 65.0ft BGS	616.05						
68								
70								
72								
74								
76								
78								
80								
82								
84								
86								
88								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (28SS)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP15-04
DATE COMPLETED: July 20, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	671.89						
0	ASPHALT-black	671.69	ASPHALT	1SS		50	7	0.0
2	SM-SILTY SANDS, loose, fine to coarse gravel, poorly graded, dark brown, moist		NATIVE SOILS	2SS		75	3	0.0
4	- orange-brown oxidation at 2.3ft BGS			3SS		66	6	0.0
6	- brown with concrete and slag debris at 4.5ft BGS			4SS		50	5	0.0
8				5SS		25	2	0.0
10		661.64	8" BOREHOLE					
	PT-PEAT, trace fine sands, soft, black, trace rootlets	661.14		6SS		75	6	0.0
12	OL-ORGANIC CLAYS, trace fine sands, soft, low plasticity, light gray, moist	660.39		7SS		75	16	0.0
14	SM-SILTY SANDS, loose, fine to coarse gravel, poorly graded, TAN/BEIGE, moist	657.39		8SS		85	16	0.0
	- very moist at 14.0ft BGS		BENTONITE GROUT	9SS		85	12	0.0
16	SP-SANDS, trace silts and fine gravels, compact, fine to coarse grained, poorly graded, saturated			10SS		75	11	0.0
18	- moderately graded at 19.0ft BGS			11SS		85	9	0.0
20				12SS		85	13	0.0
22	- poorly graded at 23.5ft BGS			13SS		75	7	0.0
24				14SS		75	7	
26				15SS		75	12	
28	- fine grained at 30.0ft BGS			16SS		50	7	
30				17SS		90	21	
32				18SS		80	16	
34		636.89		19SS		80	45	
	SM-SILTY SANDS, compact, fine grained, poorly graded, brown, saturated			20SS		60	15	
36				21SS		90	14	
38				22SS		80	19	
40				23SS		60	5	
42								
44								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP15-04
DATE COMPLETED: July 20, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
48				24SS		60	7	
50				25SS		60	10	
52				26SS		80	3	
				27SS		70	7	
54	SW-SANDS, trace silts & fine gravels, loose, fine to coarse grained, well graded, brown, saturated	618.89						
			8" BOREHOLE	28SS		70	8	
56				29SS		90	8	
58				30SS		90	19	
60	- with gravels, compact at 60.0ft BGS			31SS		80	28	
62				32SS		20	19	
64			BENTONITE GROUT	33SS		0	25	
66				34SS		60	28	
68				35SS		40	28	
70	- trace gravels at 70.0ft BGS			36SS		10	34	
72	- 1" fine sand seam at 71.5ft BGS			37SS		0	30	
74				38SS		40	25	
76	SM-SILTY SANDS, compact, fine to coarse grained, poorly graded, brown, saturated	595.89		39SS		50	87	
78				40SS		50		
80	- fine grained at 80.0ft BGS			41SS		50	43	
82				42SS		50	20	
84	CL-SILTY CLAYS, trace fine sands to fine gravels, stiff to very stiff, low plasticity, gray, moist	588.39 587.89						
86	END OF BOREHOLE @ 84.0ft BGS							
88								
90								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP16-04
DATE COMPLETED: July 28, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	675.90						
	ASPHALT-black	675.70	ASPHALT	1SS		50		0.0
	CONCRETE-white	674.40	NATIVE SOILS					
2	SM-SILTY SANDS W/GRAVELS (FILL), compact, fine grained, poorly graded, dark brown & brown, moist, fine subangular gravels			2SS		25		0.0
4				3SS		50	48	0.0
6	- trace fine gravels, dark brown, trace slag debris at 6.5ft BGS			4SS		66	27	0.0
8	- brown & dark brown at 8.5ft BGS			5SS		80	10	0.0
10	- fine to medium grained at 10.0ft BGS - very moist to saturated at 10.8ft BGS		8" BOREHOLE	6SS		75	6	0.0
		664.65						
12	PT-PEAT, compact, black, with rootlets, moist to very moist,	663.90		7SS		75	11	0.0
14	SP-SANDS, trace silts, compact, fine to medium grained, poorly graded, tan/beige, moist			8SS		66	6	0.0
16	- fine to coarse grained, light brown at 14.5ft BGS - fine to medium grained at 16.0ft BGS		BENTONITE GROUT	9SS		75	7	0.0
18	- very moist at 16.5ft BGS - saturated, brown at 17.0ft BGS			10SS		75	4	0.0
20	- fine grained, light brown at 18.5ft BGS - fine to coarse grained, brown at 20.5ft BGS			11SS		75	3	0.0
22				12SS		66	4	0.0
24				13SS		75	6	0.0
26				14SS		75	13	0.0
28				15SS		90	9	0.0
30	- fine to medium grained at 31.0ft BGS			16SS		0	9	
32				17SS		90	9	0.0
34				18SS		80	11	0.0
36				19SS		75	12	0.0
38				20SS		66	12	0.0
40				21SS		75	9	0.0
42	- fine to coarse grained at 42.5ft BGS			22SS		50	18	0.0
44								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (10SS)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: HP16-04
DATE COMPLETED: July 28, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
46	SM-SILTY SANDS, compact, fine grained, poorly graded, light brown, saturated	630.90	8" BOREHOLE	23SS		80	6	0.0
				24SS		75	15	0.0
48				(25SS)		75	8	0.0
50			BENTONITE GROUT	26SS		75	8	0.0
52				27SS		85	24	0.0
54				28SS		85	6	0.0
56	SP-SANDS, trace silts, loose, fine grained, poorly graded, brown to light brown, saturated - fine to medium grained, brown at 57.5ft BGS	620.40		29SS		75	8	0.0
58	- fine to coarse grained, mostly poorly graded but occasional moderately graded seams at 58.5ft BGS			(30SS)		80	17	0.0
60				31SS		66	8	0.0
62				32SS		75	20	0.0
64				33SS		85	19	0.0
66				34SS		90	12	0.0
68				(35SS)		90	15	0.0
70				36SS		85	6	0.0
72				37SS		90	29	0.0
74				38SS		90	12	0.0
76				39SS		80	16	0.0
78				(40SS)		80	12	0.0
80				41SS		90	8	0.0
82				42SS		90	36	0.0
84	- with fine gravels, trace clays, dense, light brown to orange -brown at 83.3ft BGS - brown at 84.0ft BGS	590.65		(43SS)		90	14	0.0
86	CL-SILTY CLAYS, trace fine sands to fine gravels, stiff to very stiff, low plasticity, gray, moist	589.90						
88	END OF BOREHOLE @ 86.0ft BGS							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW8-04
DATE COMPLETED: July 30, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	674.45						
0	SP-SANDS, trace silts & loose, fine to medium grained, poorly graded, light brown, moist		CONCRETE	1SS		75	7	0.0
2			SAND PACK	2SS		75	8	0.0
4				3SS		66	7	0.0
6	SW-SANDS, trace silts & fine gravels, loose, fine to coarse grained, well graded, tan/beige, moist	669.45		4SS		80	3	0.0
8			8-1/2" BOREHOLE	5SS		66	6	0.0
10	SP-SANDS, trace silts, loose, fine to coarse grained, poorly graded, tan/beige, moist - fine to medium grained at 10.5ft BGS	665.20		6SS		75	4	0.0
12	- fine grained at 12.5ft BGS			7SS		90	4	0.0
14			2" PVC WELL CASING	8SS		85	12	0.0
16				9SS		80	11	0.0
18	SM-SILTY SANDS, compact, fine grained, poorly graded, light brown, moist	657.20		10SS		75	13	0.0
20	- very moist to saturated at 19.8ft BGS - saturated at 20.0ft BGS		BENTONITE GROUT	11SS		75	8	0.0
22				12SS		75	12	0.0
24		649.95		13SS		75	7	0.0
26	SP-SANDS, trace silts, loose, fin to medium grained, poorly graded, orange brown, saturated, oxidation	648.95		14SS		90	19	0.0
28	SM/SP-SANDS & SILTS, loose, fine sands, brown, gray & orange brown, saturated, oxidation	648.45	SAND PACK	15SS		25	12	0.0
30	SM-SILTY SANDS, compact, fine grained, poorly graded, moist, occasional 1"-2" SM/SP seam			16SS		75	7	0.0
32			2" PVC WELL SCREEN	17SS		75	9	0.0
34				18SS		33	2	0.0
36	END OF BOREHOLE @ 35.0ft BGS	639.45						
38								
40								
42								
44								

WELL DETAILS
Screened interval:
644.45 to 639.45ft AMSL
30.00 to 35.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Sand Pack:
647.45 to 639.45ft AMSL
27.00 to 35.00ft BGS
Material: Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW9-04
DATE COMPLETED: August 2, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	678.27						
0	SM-SILTY SANDS, trace fine gravels, compact, fine to medium grained, poorly graded, dark brown, moist		CONCRETE	1SS		80	13	0.0
2	- brown, trace orange streaking, oxidation at 0.8ft BGS		NATIVE SOILS	2SS		50	5	0.0
4	- tan/beige at 4.5ft BGS - brown at 5.0ft BGS			3SS		75	8	0.0
6	- fine grained at 6.3ft BGS			4SS		75	6	0.0
8	- fine to medium grained at 8.8ft BGS		8-1/2" BOREHOLE	5SS		85	5	0.0
10				6SS		75	5	0.0
12	- fine grained, tan/beige, trace orange streaking, oxidation at 11.5ft BGS			7SS		75	9	0.0
14			2" PVC WELL CASING	8SS		75	7	0.0
16	- increase is silt content at 16.5ft BGS			9SS		80	10	0.0
18				10SS		75	19	0.0
20			BENTONITE GROUT	11SS		75	12	0.0
22	- very moist at 22.5ft BGS - saturated, brown at 23.0ft BGS			12SS		75	11	0.0
24	- decrease in silt content at 24.5ft BGS			(13SS)		66	5	0.0
26	SP-SANDS, trace silts, loose, fine to medium grained, poorly graded, brown, saturated	651.77		14SS		75	6	0.0
28				15SS		75	5	0.0
30				16SS		75	7	0.0
32	ML/SP-SANDS & SILTS, trace clays, loose/soft, fine sands, brown-gray, saturated	645.77		17SS		80	6	0.0
34		643.27		(18SS)		25	12	0.0
36	SP-SANDS, trace with silts, compact, fine to medium grained, poorly graded, brown, saturated			19SS		75	9	0.0
38				20SS		75	4	0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW9-04
DATE COMPLETED: August 2, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
42	- trace silts, fine to coarse grained, moderately graded in some areas at 41.0ft BGS		SAND PACK	21SS		75	5	0.0
44				22SS		80	8	0.0
46				(23SS)		80	7	0.0
48			2" PVC WELL SCREEN	24SS		75	17	0.0
50	END OF BOREHOLE @ 48.0ft BGS	630.27	WELL DETAILS Screened interval: 635.27 to 630.27ft AMSL 43.00 to 48.00ft BGS Length: 5ft Diameter: 2in Slot Size: 0.010 Material: PVC Sand Pack: 638.27 to 630.27ft AMSL 40.00 to 48.00ft BGS Material: Silica Sand					
52								
54								
56								
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (23SS)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW10-04
DATE COMPLETED: August 3, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	666.63						
0	SM-SILTY SANDS, trace fine gravels, loose, fine to coarse grained, poorly graded, dark brown, moist, trace grasses, rootlets		CONCRETE	1SS		80	6	0.0
2			NATIVE SOILS					
	- brown at 1.5ft BGS			2SS		80	16	0.0
4	- light brown, trace oxidation at 2.5ft BGS			3SS		75	12	0.0
	- fine grained, brown at 5.5ft BGS			4SS		90	8	0.0
6	- fine to coarse grained, light brown at 6.5ft BGS		8-1/2" BOREHOLE	5SS		75	8	0.0
8				6SS		80	4	0.0
10	- fine to medium grained at 10.5ft BGS			7SS		66	7	0.0
	- very moist to saturated, brown-gray at 11.5ft BGS							
12	- saturated at 12.0ft BGS							
14		652.13	2" PVC WELL CASING	8SS		75	6	0.0
	SP-SANDS, trace silts and fine gravels, loose, fine to coarse gravel, poorly to moderately graded, brown-gray, saturated			9SS		90	13	0.0
16				10SS		80	8	0.0
18			BENTONITE GROUT	11SS		75	10	0.0
20				12SS		75	7	0.0
22				13SS		75	5	0.0
24	- fine to medium grained, brown at 24.0ft BGS							
26		639.63		14SS		85	12	0.0
	SM-SILTY SANDS, compact, fine grained, poorly graded, brown, saturated			15SS		75	10	0.0
28				16SS		75	8	0.0
30	- light brown at 30.8ft BGS			17SS		75	11	0.0
32				18SS		80	8	0.0
34	- fine to medium grained, brown at 34.0ft BGS		2" PVC WELL SCREEN	19SS		75	7	0.0
36			SAND PACK					
38		628.63						
	END OF BOREHOLE @ 38.0ft BGS							
40								
42								
44								
46								
48								

WELL DETAILS
Screened interval:
633.63 to 628.63ft AMSL
33.00 to 38.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Sand Pack:
636.63 to 628.63ft AMSL
30.00 to 38.00ft BGS
Material: Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW11-04
DATE COMPLETED: August 3, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	GROUND SURFACE	663.71
0	SM-SILTY SANDS with clays, trace fine gravels, loose, fine grained, poorly graded, non-plastic, dark brown, moist, trace peat	
	- light brown, compact at 3.3ft BGS	
5	- brown & dark brown banding, occasional 1/4" to 1/2" peat seam at 4.5ft BGS	
	- fine to coarse grained, brown with silts at 6.0ft BGS	
	- very moist to saturated at 8.5ft BGS	
	- saturated at 9.0ft BGS	654.46
10	SW-SANDS WITH GRAVELS, trace silts, compact, fine to coarse grained, well graded, brown-gray, saturated, fine to medium gravels	
15		645.71
	SP-SANDS, trace silts & fine gravels, compact, fine to coarse grained, poorly graded, brown-gray, saturated	
20	- fine to medium grained at 21.0ft BGS	
	- fine to coarse grained at 22.0ft BGS	
25		636.46
	SM-SILTY SANDS, compact, fine grained, poorly graded, brown, saturated	
30		
35		
		624.21
40	SM/SP-SILTS & SANDS, compact, fine sands, non-plastic, brown & gray banded, saturated	623.46
	SM-SILTY SANDS, compact, fine to coarse grained, poorly graded, brown, saturated	
	- fine grained, gray-brown at 42.0ft BGS	
45	END OF BOREHOLE @ 45.0ft BGS	618.71
50		

MONITORING WELL: CONCRETE; NATIVE SOILS; 8-1/2" BOREHOLE; 2" PVC WELL CASING; BENTONITE GROUT; SAND PACK; 2" PVC WELL SCREEN

WELL DETAILS
Screened interval:
623.71 to 618.71ft AMSL
40.00 to 45.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Sand Pack:
626.71 to 618.71ft AMSL

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
1SS		75	9	0.0
2SS		66	11	0.0
3SS		75	14	0.0
4SS		66	15	0.0
5SS		66	16	0.0
(6SS)		75	10	0.0
7SS		75	12	0.0
8SS		75	10	0.0
9SS		80	6	0.0
10SS		90	12	0.0
(11SS)		90	6	0.0
12SS		90	14	0.0
13SS		85	40	0.0
14SS		75	11	0.0
15SS		66	16	0.0
(16SS)		90	11	0.0
17SS		80	19	0.0
18SS		75	4	0.0
19SS		75	13	0.0
20SS		80	11	0.0
(21SS)		90	13	0.0
22SS		75	12	0.0
23SS		25	2	0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW11-04
DATE COMPLETED: August 3, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
			37.00 to 45.00ft BGS Material: Silica Sand					

60
65
70
75
80
85
90
95
100
105

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW13-04
DATE COMPLETED: August 2, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	678.85						
0	SM-SILTY SANDS, trace fine gravels, compact, fine grained, poorly graded, dark brown, moist, trace rootlets		CONCRETE	1SS		75	12	0.1
2	- fine to coarse grained, orange brown at 2.8ft BGS		NATIVE SOILS	2SS		75	13	0.0
4	- fine grained, light brown at 5.0ft BGS			3SS		75	9	0.0
6	- no gravels at 6.8ft BGS			4SS		66	7	0.0
8			8-1/2" BOREHOLE	5SS		75	7	0.0
10	- fine to coarse grained, dark brown and orange-brown at 9.5ft BGS - light brown at 10.8ft BGS			6SS		75	8	0.0
12				7SS		90	7	0.0
14	- fine to medium grained, tan/beige, trace fine gravels at 13.3ft BGS - fine to coarse grained at 14.5ft BGS		2" PVC WELL CASING	8SS		90	11	0.0
16				9SS		85	10	0.0
18	- fine to medium grained at 17.5ft BGS			10SS		75	9	0.0
20	- very moist to saturated, brown at 19.5ft BGS - saturated, fine grained at 20.0ft BGS		BENTONITE GROUT	11SS		75	5	0.0
22				12SS		90	15	0.0
24	- fine to coarse grained at 23.5ft BGS			13SS		75	9	0.0
26	SP-SANDS, trace silts and fine gravels, compact, fine to coarse grained, poorly graded, brown, saturated	654.35	2" PVC WELL SCREEN	14SS		100	9	0.0
28	SM-SILTY SANDS, compact, fine grained, poorly graded, brown, saturated	651.85	SAND PACK	15SS		25	11	0.0
30	CL-SILTY CLAYS, stiff, low plasticity, gray, moist	649.85						
	END OF BOREHOLE @ 30.0ft BGS	648.85						
32								
34								
36								
38								
40								
42								
44								

WELL DETAILS
Screened interval:
653.85 to 648.85ft AMSL
25.00 to 30.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Sand Pack:
656.85 to 648.85ft AMSL
22.00 to 30.00ft BGS
Material: Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (11SS)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW14-04
DATE COMPLETED: July 16, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	681.05						
	WOOD BLOCK FLOORING	680.80	CONCRETE	1HA		100		6.9
	CONCRETE-with fine gravels, white, competent	680.05	NATIVE SOILS					
2	SM-SILTY SANDS WITH GRAVELS, loose, fine to coarse grained, poorly graded, brown, moist, fine to medium gravels			2SS		66	10	5.8
4	- trace fine gravels, fine to medium grained at 3.0ft BGS			3SS		33	19	4.9
6	- trace fine to medium gravels, fine to coarse grained at 4.0ft BGS			4SS		66	10	4.4
8	- fine grained, no gravels, light brown, trace orange streaking, oxidation at 5.3ft BGS			5SS		66	7	9.8
10				6SS		66	13	4.2
12	- fine to medium grained at 11.3ft BGS			7SS		50	10	4.8
14	SW-SANDS, trace silts and fine gravels, fine to coarse grained, well graded, brown and gray, moist	667.80	2" PVC WELL CASING	8SS		50	10	2.9
16	- compact at 16.0ft BGS			9SS		50	8	1.8
18				10SS		50	14	1.9
20				11SS		50	18	1.3
22	- saturated at 23.0ft BGS			12SS		50	12	1.0
24			BENTONITE GROUT	13SS				
26	- gray at 26.0ft BGS			14SS		25	22	0.8
28				15SS		33	5	0.9
30			8-1/2" BOREHOLE	16SS		33	6	0.8
32				17SS		50	8	1.2
34				18SS		50	13	0.8
36				19SS		33	15	0.7
38				20SS		50	16	0.8

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (13SS)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW14-04
DATE COMPLETED: July 16, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
42	SP-SANDS, trace silts, compact, fine to coarse grained, poorly graded, brown-gray, saturated	641.05	BENTONITE GROUT	21SS		50	17	0.7
44			2" PVC WELL CASING	22SS		50	18	0.6
46			8-1/2" BOREHOLE	23SS		50	16	0.8
48	- fine to medium grained at 47.5ft BGS		2" PVC WELL SCREEN	24SS		50	27	0.6
50			SAND PACK	25SS		25	17	0.8
52	END OF BOREHOLE @ 50.0ft BGS	631.05						
54								
56								
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								

WELL DETAILS
Screened interval:
636.05 to 631.05ft AMSL
45.00 to 50.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Sand Pack:
639.05 to 631.05ft AMSL
42.00 to 50.00ft BGS
Material: Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (23SS)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

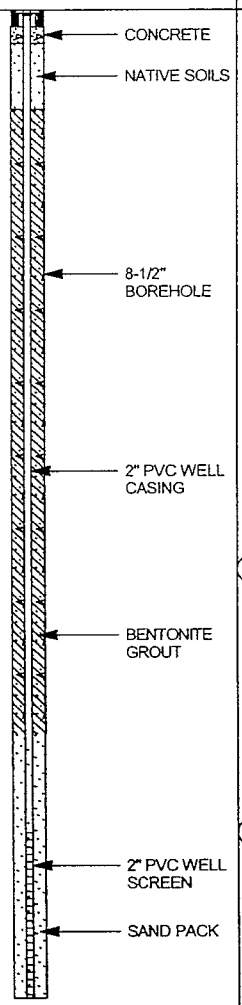
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW15-04
DATE COMPLETED: July 30, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	GROUND SURFACE	671.89
0	ASPHALT-black	671.69
	SM-SILTY SANDS, loose, fine to coarse grained, poorly graded, dark brown, moist	
2	- orange-brown, oxidation at 2.3ft BGS	
4	- brown, with concrete and slag debris at 4.5ft BGS	
6		
8		
10		661.64
	PT-PEAT, trace fine sands, soft, black, trace rootlets	661.14
12	OL-ORGANIC CLAYS, trace fine sands, soft, low plasticity, light gray, moist	660.39
	SM-SILTY SANDS, loose, fine to coarse grained, poorly graded, tan/beige, moist	
14	- very moist at 14.0ft BGS	657.39
16	SP-SANDS, trace silts and fine gravels, compact, fine to coarse grained, poorly graded, saturated	
18	- moderately graded at 19.0ft BGS	
20		
22		
24	- poorly graded at 23.5ft BGS	
26		
28		
30	END OF BOREHOLE @ 30.0ft BGS	641.89
32		
34		
36		
38		

MONITORING WELL



WELL DETAILS
Screened interval:
646.89 to 641.89ft AMSL
25.00 to 30.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Sand Pack:
649.89 to 641.89ft AMSL
22.00 to 30.00ft BGS
Material: Silica Sand

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
1SS		50	7	0.0
2SS		75	3	0.0
3SS		66	6	0.0
4SS		50	5	0.0
5SS		25	2	0.0
6SS		75	6	0.0
7SS		75	16	0.0
8SS		85	16	0.0
(9SS)		85	12	0.0
10SS		75	11	0.0
11SS		85	9	0.0
12SS		85	13	0.0
(13SS)		75	7	0.0
14SS		75	7	0.0
15SS		75	12	0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 10/21/04

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB1-04
DATE COMPLETED: July 15, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	wood block floor	0.20	CONCRETE	1HA				402
	CONCRETE-with fine gravels, white	1.00		2SS			14	397
2	SM-SILTY SAND, trace fine gravels, compact, fine grained, poorly graded, dark brown, moist			3SS			15	12.8
4	- orange brown-oxidation at 2.5ft BGS			4SS			21	10.1
6	- fine grained at 5.3ft BGS			5SS			21	7
8	- light brown at 6.5ft BGS		8" BOREHOLE	6SS			15	3.1
10	- orange-brown at 9.5ft BGS			7SS			21	3.0
12	- brown at 11.5ft BGS			8SS			12	2.8
14	- fine to medium grained, tan/beige at 13.3ft BGS		BENTONITE CHIPS	9SS			29	1.8
16				10SS			46	2.1
18	- fine to coarse grained, light gray to white, trace fine to medium gravels at 17.5ft BGS			11SS			12	1.4
20	- fine grained, tan/beige, no gravels at 21.0ft BGS							
22	END OF BOREHOLE @ 22.0ft BGS	22.00						
24								
26								
28								
30								
32								
34								
36								
38								
40								
42								
44								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 9/30/04

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB2-04
DATE COMPLETED: July 14, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	wood block floor	0.20	CONCRETE	1HA			
	CONCRETE-with fine gravels, white	1.00					
2	SM-SILTY SAND, trace fine gravels, compact, fine grained, poorly graded, red brown, moist			2SS			17
4	- orange brown-oxidation at 3.0ft BGS - fine to medium grained at 3.5ft BGS			3SS			16
6	- no gravels, fine grained, tan/beige at 6.5ft BGS			4SS			17
8	- orange-brown at 8.5ft BGS			5SS			16
10	- fine to medium grained, light gray to white at 9.5ft BGS		8" BOREHOLE	6SS			10
12	- fine to coarse grained, tan/beige at 12.5ft BGS			7SS			28
14				8SS			23
16			BENTONITE CHIPS	9SS			30
18	- dense, fine to medium grained at 17.0ft BGS - fine to coarse grained, tan/beige at 18.0ft BGS			10SS			21
20	- fine grained at 20.5ft BGS - very moist at 21.3ft BGS			11SS			21
22	END OF BOREHOLE @ 22.0ft BGS	22.00					
24							
26							
28							
30							
32							
34							
36							
38							
40							
42							
44							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 9/30/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB3-04
DATE COMPLETED: July 14, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	wood block floor	0.20	CONCRETE	1HA				3.6
	CONCRETE-with fine gravels, white	1.00						
2	SM-SILTY SAND, trace fine gravels, compact, fine grained, poorly graded, red brown, moist			2SS			24	3.1
4	- light brown at 2.5ft BGS			3SS			18	4.1
	- fine to medium grained, orange brown, oxidation at 5.0ft BGS							
6	- fine grained, tan/beige, no gravels at 6.5ft BGS			4SS			18	3.7
8	- fine to coarse grained, light gray to white, trace fine gravels at 8.3ft BGS			5SS			23	2.9
10			8" BOREHOLE	6SS			20	3.1
12				7SS			24	3.7
14				8SS			21	2.4
16			BENTONITE CHIPS	9SS			45	3.4
18	- dense, fine grained, no gravels, tan/beige at 17.5ft BGS			10SS			26	3.9
20	- compact, fine to medium grained at 18.8ft BGS			11SS			20	3.1
	- fine grained at 20.5ft BGS							
22	- very moist at 21.8ft BGS	22.00						
	END OF BOREHOLE @ 22.0ft BGS							
24								
26								
28								
30								
32								
34								
36								
38								
40								
42								
44								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 9/30/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB4-04
DATE COMPLETED: July 15, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	wood block floor	0.20	CONCRETE	1HA				430
	CONCRETE-with fine gravels, white	1.00		2SS			14	442
2	SM-SILTY SAND, trace fine gravels, compact, fine grained, poorly graded, red brown, moist			3SS			14	412
4	- orange-brown oxidation at 2.8ft BGS			4SS			7	87.1
	- fine grained, brown, no gravels at 5.0ft BGS			5SS			8	402
6								
8			8" BOREHOLE	6SS			10	431
10	- fine to medium grained, medium brown at 11.0ft BGS			7SS			4	317
12	- fine to coarse grained, light gray to white, trace fine gravels at 12.5ft BGS			8SS			42	306
14			BENTONITE CHIPS	9SS			18	265
16				10SS			28	178
18	- fine grained, tan/beige, no gravels at 17.5ft BGS			11SS			13	219
20	- fine to coarse grained, trace fine gravels at 18.8ft BGS							
22	END OF BOREHOLE @ 22.0ft BGS	22.00						
24								
26								
28								
30								
32								
34								
36								
38								
40								
42								
44								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 9/30/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360-09
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB5-04
DATE COMPLETED: July 15, 2004
DRILLING METHOD: HSA/SPLIT SPOON
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	wood block floor	0.20	CONCRETE SEAL	1HA				786
	CONCRETE	1.00						
2	SM-SILTY SAND, trace fine gravels, compact, fine grained, poorly graded, red brown, moist			2SS			26	+2000
4	- dark brown at 2.5ft BGS - orange brown, oxidation, fine to medium grained, at 3.0ft BGS			3SS			14	957
6	- light brown at 5.0ft BGS - fine grained, tan/beige at 6.5ft BGS			4SS			22	794
8				5SS			13	586
10			8" BOREHOLE	6SS			14	639
12	- fine to coarse grained, light gray to white, trace fine gravels at 11.5ft BGS			7SS			10	473
14				8SS			5	498
16			BENTONITE CHIPS	9SS			12	+2000
18	- well graded at 17.3ft BGS			10SS			16	1151
20	- fine grained, tan/beige, no gravels at 19.5ft BGS			11SS			6	1221
22	END OF BOREHOLE @ 22.0ft BGS	22.00						
24								
26								
28								
30								
32								
34								
36								
38								
40								
42								
44								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 17360-09B.GPJ CRA_CORP.GDT 9/30/04

APPENDIX B

WELL ABANDONMENT MEMORANDUMS

CONESTOGA-ROVERS
& ASSOCIATES

14496 Sheldon Road, Suite #200
Plymouth, Michigan 48170
Telephone: (734) 453-5123 Fax: (734) 453-5201
www.CRAworld.com

MEMORANDUM

TO:	Gary Klepper/CRA	REF. NO.:	17360-09
FROM:	David C. Rivers/dcr/34/Det.	DATE:	11/09/04
C.C.:	Bryant Miller/CRA Jeni Quigley/CRA		
RE:	**July 16, 2004 - Summary of Well Abandonment GM- Grand Rapids Wyoming, Michigan**		

The purpose of this memorandum is to summarize the abandonment of 1 " diameter wells associated with the Soil Vapor Extraction (SVE) system at GM-Grand Rapids located in Wyoming, Michigan on July 16, 2004. This memorandum is presented in the following sections:

1.0 Introduction
2.0 Personnel
3.0 Well Abandonment Activities

1.0 INTRODUCTION

Field activities were conducted on July 16, 2004, in accordance with the Site-specific Scope of Work (SOW) and Conestoga-Rovers & Associates (CRA's) Standard Operating Procedures (SOPs) as outlined in the CRA Field Training Manual.

2.0 PERSONNEL

Field activities were completed by David C. Rivers from the CRA Plymouth office.

3.0 SVE WELL ABANDONMENT ACTIVITIES

On July 16, 2004, a total of seven 1" diameter wells, P1 through P7, associated with the SVE system were abandoned by CRA field personnel. The wells were abandoned using a bentonite powder and de-ionized water mixture. After removing the lid to the protective cover and the well cap, each well was abandoned incrementally on one-foot intervals by placing one foot of bentonite powder inside the well and then hydrating the powder with de-ionized water. This procedure was followed until the hydrated bentonite filled the inside of the well as well as the inside of the protective covering around the well. After abandonment the protective cover was replaced.

CONESTOGA-ROVERS
& ASSOCIATES

14496 Sheldon Road, Suite #200
Plymouth, Michigan 48170
Telephone: (734) 453-5123 Fax: (734) 453-5201
www.CRAworld.com

MEMORANDUM

TO:	Gary Klepper/CRA	REF. NO.:	17360-09
FROM:	Joe Branch/CRA/40/Kalamazoo	DATE:	12/03/04
C.C.:	Bryant Miller/CRA Jeni Quigley/CRA		
RE:	**November 23, 2004 - Summary of Well Abandonment GM- Grand Rapids Wyoming, Michigan**		

The purpose of this memorandum is to summarize the abandonment of 4 " diameter extraction well associated with the Soil Vapor Extraction (SVE) system at GM-Grand Rapids located in Wyoming, Michigan on November 23, 2004. This memorandum is presented in the following sections:

1.0 Introduction
2.0 Personnel
3.0 Well Abandonment Activities

1.0 INTRODUCTION

Field activities were conducted on November 23, 2004, in accordance with the Site-specific Scope of Work (SOW) and Conestoga-Rovers & Associates (CRA's) Standard Operating Procedures (SOPs) as outlined in the CRA Field Training Manual.

2.0 PERSONNEL

Field activities were completed by Joe Branch from the CRA Kalamazoo office.

3.0 SVE WELL ABANDONMENT ACTIVITIES

On November 23, 2004, one 4" diameter well, 87-3, associated with the SVE system was abandoned by CRA field personnel. The well was abandoned using 3 bags bentonite chips (Halliburton Holeplug) and de-ionized water mixture. After removing the wooden floor blocks and the lid to the protective vault and the well cap, the well was abandoned incrementally in one-foot intervals by placing one foot of Holeplug inside the well and then hydrating the chips with de-ionized water. This procedure was followed until the hydrated bentonite filled the inside of the well. The inside of protective well vault was filled with concrete to floor level (approx. 8"). After abandonment the wooden floor blocks were replaced.

REGISTERED COMPANY FOR
ISO 9001
ENGINEERING DESIGN

EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

APPENDIX C

LABORATORY ANALYTICAL RESULTS

REC'D CRA
BB.
JUL 30 2004
29
CRA SDG G-12

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A4G140175

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4G140175
Name: GM GRAND RAPIDS.

Description
Event: VAS Sampling
Samples: 7 waters @ DCR 071-077.
Analysis: TCL VOCs

TAT: 24 HOUR TAT
Lab: STL-NC
Checked Against Preliminary Data:
Date: N/A Init.: N/A.
Date of Validation Memo: 10/21/04
Invoice Approval Date:
Comments:

Ken Kuzia for
Amy L. McCormick
Project Manager

July 27, 2004

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL-North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM-Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 24 hr TAT	REMARKS
1	7/12/09	1550	GW-17360-071209-DCR-071	H2O	3	X	X	
2	7/13/09	740	GW-17360-071309-DCR-072		3	X	X	
3	"	745	" " " " -073		3	X	X	
4	"	1155	" " " " -074		3	X	X	
5	"	1455	" " " " -075		3	X	X	
6	"	1830	" " " " -076		3	X	X	
7	"	—	" " " " -077		1	X	X	
								CRA Contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		19			

RELINQUISHED BY: 1. _____	DATE: 7-13-09 TIME: 1930	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. ~~1482 5767~~ 8318 9665 3076

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27169

SAMPLE TEAM: David C. Rivers

RECEIVED FOR LABORATORY BY: _____
DATE: 7/14/09 TIME: 0940

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G140175

The following report contains the analytical results for seven water samples submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received July 14, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department and Paul Wiseman on July 15, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 5.8°C.

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G140175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-071204-DCR-071 07/12/04 15:50 001				
Acetone	2.6 J	25	ug/L	SW846 8260B
Benzene	0.34 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.36 J	1.0	ug/L	SW846 8260B
Carbon disulfide	0.39 J	5.0	ug/L	SW846 8260B
Chloroform	2.4	1.0	ug/L	SW846 8260B
Toluene	0.70 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.40 J	1.0	ug/L	SW846 8260B
GW-17360-071304-DCR-072 07/13/04 07:40 002				
Acetone	1.8 J	25	ug/L	SW846 8260B
Bromodichloromethane	0.44 J	1.0	ug/L	SW846 8260B
Chloroform	2.8	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	0.21 J	5.0	ug/L	SW846 8260B
Toluene	0.24 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.46 J	1.0	ug/L	SW846 8260B
GW-17360-071304-DCR-073 07/13/04 07:45 003				
Acetone	2.3 J	25	ug/L	SW846 8260B
Bromodichloromethane	0.45 J	1.0	ug/L	SW846 8260B
Chloroform	2.8	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	0.24 J	5.0	ug/L	SW846 8260B
Toluene	0.24 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.48 J	1.0	ug/L	SW846 8260B
GW-17360-071304-DCR-074 07/13/04 11:55 004				
Acetone	5.4 J	25	ug/L	SW846 8260B
Benzene	0.42 J	1.0	ug/L	SW846 8260B
2-Butanone	0.81 J	25	ug/L	SW846 8260B
Chloroform	3.4	1.0	ug/L	SW846 8260B
Ethylbenzene	0.25 J	1.0	ug/L	SW846 8260B
Toluene	0.90 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.38 J	1.0	ug/L	SW846 8260B
GW-17360-071304-DCR-075 07/13/04 14:55 005				
Acetone	3.7 J	25	ug/L	SW846 8260B
Benzene	0.31 J	1.0	ug/L	SW846 8260B
2-Butanone	0.76 J	25	ug/L	SW846 8260B
Chloroform	3.9	1.0	ug/L	SW846 8260B
Ethylbenzene	0.20 J	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G140175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-071304-DCR-075 07/13/04 14:55 005				
Toluene	0.72 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.33 J	1.0	ug/L	SW846 8260B
GW-17360-071304-DCR-076 07/13/04 18:30 006				
Acetone	1.9 J	25	ug/L	SW846 8260B
Bromodichloromethane	7.2	1.0	ug/L	SW846 8260B
Chloroform	16	1.0	ug/L	SW846 8260B
Dibromochloromethane	2.8	1.0	ug/L	SW846 8260B
Toluene	6.5	1.0	ug/L	SW846 8260B
GW-17360-071304-DCR-077 07/13/04 007				
Acetone	8.1 J	25	ug/L	SW846 8260B
Carbon disulfide	2.0 J	5.0	ug/L	SW846 8260B
Methylene chloride	4.9 J,B	5.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G140175

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL-North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM-Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 24hr TAT	REMARKS
1	7/12/09	1550	GW-17360-071209-DCR-071	H2O	3	X	X	
2	7/13/09	740	GW-17360-071309-DCR-072		3	X	X	
3	"	745	" " " " -073		3	X	X	
4	"	1155	" " " " -074		3	X	X	
5	"	1455	" " " " -075		3	X	X	
6	"	1830	" " " " -076		3	X	X	
7	"	—	" " " " -077		1	X	X	
								CRA Contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		19			

RELINQUISHED BY: 1. _____	DATE: 7-13-09 TIME: 1930	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No. ~~148-570~~ 8318 9665 3076

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27169

SAMPLE TEAM: David C. Rivers

RECEIVED FOR LABORATORY BY: _____

DATE: 7/14/09 TIME: 0940

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

STL North Canton

14

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL- North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ. No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 624 + TICs	REMARKS
1	7/12/09	1553	GW-17360-071209-DCR-071	H2O	3	X	X	
2	7/13/09	740	GW-17360-071309-DCR-072		3	X	X	
3	"	745	" " " " -073		3	X	X	
4	"	1155	" " " " -074		2	X	X	
5	"	1455	" " " " -075		3	X	X	
6	"	1830	" " " " -076		3	X	X	
7	"	—	" " " " -077		1	X	X	
								CRA Contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		19			

RELINQUISHED BY: 1. _____	DATE: 7-13-09 TIME: 1930	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. ~~148-570~~ 8318 9665 3076

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27169

SAMPLE TEAM: David C. Rivers

RECEIVED FOR LABORATORY BY: _____
DATE: 7/14/09 TIME: 0940

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

15

STL NORTH CANTON

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G140175

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GK2DN	SANDERSA	7/14/04	Yes		Storage	
GK2DW	SANDERSA	7/14/04	Yes		Storage	
GK2D0	SANDERSA	7/14/04	Yes		Storage	
GK2D1	SANDERSA	7/14/04	Yes		Storage	
GK2D2	SANDERSA	7/14/04	Yes		Storage	
GK2D5	SANDERSA	7/14/04	Yes		Storage	
GK2D7	SANDERSA	7/14/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** AHG140175
North Canton Facility

Client: CRA Project: GM-Grand Rapids Quote#:
Cooler Received on: 7/14/04 Opened on: 7/14/04 by: (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:
STL Cooler No# ____ Foam Box ☐ Client Cooler ☑ Other

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity ____
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☑
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☑ None ☐ Other: ____
6. Cooler temperature upon receipt 5.8 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O Slurry ☐
COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM ____ Date: ____ by: ____ via Voice Mail ☐ Verbal ☐ Other ☐
Concerning: ____

√	

1. CHAIN OF CUSTODY

The following discrepancies occurred:
Samples -75, -76, and -77 do not have Sample times on labels. -log per COC

2. SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired.
Sample(s) ____ were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #122603-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # 111401-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
Sample(s) ____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071204-DCR-071

GC/MS Volatiles

Lot-Sample #...: A4G140175-001 Work Order #...: GK2DN1AA Matrix.....: WG
Date Sampled...: 07/12/04 15:50 Date Received..: 07/14/04
Prep Date.....: 07/14/04 Analysis Date..: 07/14/04
Prep Batch #...: 4196578
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.6 J**	**25**	**ug/L**	**0.74**
Benzene	**0.34 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.36 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	**0.39 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.4**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071204-DCR-071

GC/MS Volatiles

Lot-Sample #...: A4G140175-001 **Work Order #...:** GK2DN1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.70 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.40 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	113	(73 - 122)
1,2-Dichloroethane-d4	109	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071304-DCR-072

GC/MS Volatiles

Lot-Sample #...: A4G140175-002	Work Order #...: GK2DW1AA	Matrix.....: WG	
Date Sampled...: 07/13/04 07:40	Date Received..: 07/14/04		
Prep Date.....: 07/14/04	Analysis Date..: 07/14/04		
Prep Batch #...: 4196578			
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol..: 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.8 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**0.44 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.8**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**0.21 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-071304-DCR-072

GC/MS Volatiles

Lot-Sample #...: A4G140175-002 **Work Order #...:** GK2DW1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.24 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.46 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	109	(73 - 122)
1,2-Dichloroethane-d4	114	(61 - 128)
Toluene-d8	84	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-071304-DCR-073

GC/MS Volatiles

Lot-Sample #...: A4G140175-003 **Work Order #...:** GK2D01AA **Matrix.....:** WG
Date Sampled...: 07/13/04 07:45 **Date Received..:** 07/14/04
Prep Date.....: 07/14/04 **Analysis Date..:** 07/14/04
Prep Batch #...: 4196578
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.3 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**0.45 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.8**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**0.24 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071304-DCR-073

GC/MS Volatiles

Lot-Sample #...: A4G140175-003 **Work Order #...:** GK2D01AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.24 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.48 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	118	(73 - 122)
1,2-Dichloroethane-d4	112	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	84	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-071304-DCR-074

GC/MS Volatiles

Lot-Sample #...: A4G140175-004 Work Order #...: GK2D11AA Matrix.....: WG
Date Sampled...: 07/13/04 11:55 Date Received..: 07/14/04
Prep Date.....: 07/14/04 Analysis Date..: 07/14/04
Prep Batch #...: 4196578
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**5.4 J**	**25**	**ug/L**	**0.74**
Benzene	**0.42 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.81 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**3.4**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.25 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071304-DCR-074

GC/MS Volatiles

Lot-Sample #...: A4G140175-004 **Work Order #...:** GK2D11AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.90 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.38 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	112	(73 - 122)
1,2-Dichloroethane-d4	114	(61 - 128)
Toluene-d8	85	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-071304-DCR-075

GC/MS Volatiles

Lot-Sample #...: A4G140175-005 **Work Order #...:** GK2D21AA **Matrix.....:** WG
Date Sampled...: 07/13/04 14:55 **Date Received..:** 07/14/04
Prep Date.....: 07/14/04 **Analysis Date..:** 07/14/04
Prep Batch #...: 4196578
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.7 J**	**25**	**ug/L**	**0.74**
Benzene	**0.31 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.76 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**3.9**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.20 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071304-DCR-075

GC/MS Volatiles

Lot-Sample #...: A4G140175-005 **Work Order #...:** GK2D21AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.72 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.33 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	112	(73 - 122)
1,2-Dichloroethane-d4	113	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-071304-DCR-076

GC/MS Volatiles

Lot-Sample #...: A4G140175-006 **Work Order #...:** GK2D51AA **Matrix.....:** WG
Date Sampled...: 07/13/04 18:30 **Date Received..:** 07/14/04
Prep Date.....: 07/14/04 **Analysis Date..:** 07/14/04
Prep Batch #...: 4196578
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.9 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**7.2**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**16**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**2.8**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071304-DCR-076

GC/MS Volatiles

Lot-Sample #...: A4G140175-006 **Work Order #...:** GK2D51AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**6.5**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	112	(73 - 122)
1,2-Dichloroethane-d4	110	(61 - 128)
Toluene-d8	82	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071304-DCR-077

GC/MS Volatiles

Lot-Sample #...: A4G140175-007	**Work Order #...:** GK2D71AA	**Matrix.....:** WG	
Date Sampled...: 07/13/04	**Date Received..:** 07/14/04		
Prep Date.....: 07/14/04	**Analysis Date..:** 07/14/04		
Prep Batch #...: 4196578			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**8.1 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	**2.0 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**4.9 J,B**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071304-DCR-077

GC/MS Volatiles

Lot-Sample #...: A4G140175-007 **Work Order #...:** GK2D71AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	120	(73 - 122)
1,2-Dichloroethane-d4	114	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G140175 **Work Order #...:** GK4G51AA **Matrix.....:** WATER
MB Lot-Sample #: A4G140000-578

Prep Date.....: 07/14/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/14/04 **Prep Batch #...:** 4196578
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	**0.42 J**	**5.0**	**ug/L**	**SW846 8260B**
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G140175 **Work Order #...:** GK4G51AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	111	(73 - 122)
1,2-Dichloroethane-d4	111	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G140175 **Work Order #...:** GK4G51AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G140000-578 GK4G51AD-LCSD
Prep Date.....: 07/14/04 **Analysis Date..:** 07/14/04
Prep Batch #...: 4196578
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**10**	**ug/L**	**103**		**SW846 8260B**
	10	**11**	**ug/L**	**108**	**4.3**	**SW846 8260B**
Chlorobenzene	**10**	**9.9**	**ug/L**	**99**		**SW846 8260B**
	10	**10**	**ug/L**	**102**	**2.8**	**SW846 8260B**
1,1-Dichloroethene	**10**	**11**	**ug/L**	**111**		**SW846 8260B**
	10	**12**	**ug/L**	**116**	**5.2**	**SW846 8260B**
Toluene	**10**	**10**	**ug/L**	**102**		**SW846 8260B**
	10	**10**	**ug/L**	**102**	**0.74**	**SW846 8260B**
Trichloroethene	**10**	**10**	**ug/L**	**101**		**SW846 8260B**
	10	**11**	**ug/L**	**108**	**6.6**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
	106	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	103	(61 - 128)
Toluene-d8	97	(76 - 110)
	94	(76 - 110)
4-Bromofluorobenzene	104	(74 - 116)
	108	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G140175 **Work Order #...:** GK4G51AC-LCS **Matrix.. .....:** WATER
LCS Lot-Sample#: A4G140000-578 GK4G51AD-LCSD
Prep Date.....: 07/14/04 **Analysis Date..:** 07/14/04
Prep Batch #...: 419578
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**103**	**(80 - 116)**			**SW846 8260B**
	108	**(80 - 116)**	**4.3**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**99**	**(76 - 117)**			**SW846 8260B**
	102	**(76 - 117)**	**2.8**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**111**	**(63 - 130)**			**SW846 8260B**
	116	**(63 - 130)**	**5.2**	**(0-20)**	**SW846 8260B**
Toluene	**102**	**(74 - 119)**			**SW846 8260B**
	102	**(74 - 119)**	**0.74**	**(0-20)**	**SW846 8260B**
Trichloroethene	**101**	**(75 - 122)**			**SW846 8260B**
	108	**(75 - 122)**	**6.6**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
	106	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	103	(61 - 128)
Toluene-d8	97	(76 - 110)
	94	(76 - 110)
4-Bromofluorobenzene	104	(74 - 116)
	108	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G140175 **Work Order #...:** GKLMA1AC-MS **Matrix. .....:** WATER
MS Lot-Sample #: A4G070213-001 GKLMA1AD-MSD
Date Sampled...: 07/06/04 15:00 **Date Received..:** 07/07/04
Prep Date.....: 07/14/04 **Analysis Date..:** 07/14/04
Prep Batch #...: 4196578
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**10**	**11**	**ug/L**	**107**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**105**	**1.6**	**SW846 8260B**
Chlorobenzene	**ND**	**10**	**9.9**	**ug/L**	**99**		**SW846 8260B**
	ND	**10**	**9.9**	**ug/L**	**99**	**0.05**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10**	**11**	**ug/L**	**111**		**SW846 8260B**
	ND	**10**	**11**	**ug/L**	**115**	**2.9**	**SW846 8260B**
Toluene	**ND**	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	ND	**10**	**9.8**	**ug/L**	**98**	**0.48**	**SW846 8260B**
Trichloroethene	**ND**	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**101**	**3.2**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
	110	(73 - 122)
1,2-Dichloroethane-d4	109	(61 - 128)
	104	(61 - 128)
Toluene-d8	94	(76 - 110)
	94	(76 - 110)
4-Bromofluorobenzene	107	(74 - 116)
	106	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G140175 **Work Order #...:** GKLMA1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G070213-001 GKLMA1AD-MSD
Date Sampled...: 07/06/04 15:00 **Date Received..:** 07/07/04
Prep Date.....: 07/14/04 **Analysis Date..:** 07/14/04
Prep Batch #...: 41965"8
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**107**	**(78 - 118)**			**SW846 8260B**
	105	**(78 - 118)**	**1.6**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**99**	**(76 - 117)**			**SW846 8260B**
	99	**(76 - 117)**	**0.05**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**111**	**(62 - 130)**			**SW846 8260B**
	115	**(62 - 130)**	**2.9**	**(0-20)**	**SW846 8260B**
Toluene	**98**	**(70 - 119)**			**SW846 8260B**
	98	**(70 - 119)**	**0.48**	**(0-20)**	**SW846 8260B**
Trichloroethene	**98**	**(62 - 130)**			**SW846 8260B**
	101	**(62 - 130)**	**3.2**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
	110	(73 - 122)
1,2-Dichloroethane-d4	109	(61 - 128)
	104	(61 - 128)
Toluene-d8	94	(76 - 110)
	94	(76 - 110)
4-Bromofluorobenzene	107	(74 - 116)
	106	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

REC'D CRA

AUG - 4 2004

CRA SDG G-[redacted]15

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A4G200170

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

ORIGINAL ANALYTICAL REPORT

Project#: 17360-09 Lab#: A4G200170

Name: GM-GRAND RAPIDS

Description

Event: VAS Sampling

Samples: 3waters DCR 133-135

Analysis: TCL VOCs.

TAT: 48 HR TAT.

Lab: STL-NC

Deborah L. Dunlap

Amy L. McCormick
Project Manager

Checked Against Preliminary Data:

Date: N/A Init.: N/A.

Date of Validation Memo: 10/1/04

Invoice Approval Date: _____

Comments: _____

July 28, 2004

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: Om- Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 48hr-TAT	REMARKS
1	7/19/04	1100	GW-17360-071904-DUP-133	H2O	3	X	X	
2	↓	1200	↓ ↓ ↓ ↓ -134	↓	3	X	X	
3	↓	—	↓ ↓ ↓ ↓ -135	↓	1	X	X	
								CRA Contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		7			

RELINQUISHED BY: 1. _____	DATE: 7-19-04 TIME: 1800	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No. 8461 7772 4184

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27175

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: Natalie J Bubler

DATE: 7-20-04 TIME: 9:35

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G200170

The following report contains the analytical results for two water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received July 20, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on July 22, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 2.2°C.

GC/MS VOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

Y:\Barb\STL headers\Qc846-Narrative_012804.doc, Revised: 01/28/04 DJL

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G200170

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-071904-DCR-133 07/19/04 11:00 001				
Acetone	1.6 J	25	ug/L	SW846 8260B
Benzene	0.32 J	1.0	ug/L	SW846 8260B
2-Butanone	0.54 J	25	ug/L	SW846 8260B
Methyl tert-butyl ether	0.22 J	5.0	ug/L	SW846 8260B
Toluene	0.59 J	1.0	ug/L	SW846 8260B
GW-17360-071904-DCR-134 07/19/04 12:00 002				
Acetone	3.4 J	25	ug/L	SW846 8260B
Bromodichloromethane	1.6	1.0	ug/L	SW846 8260B
2-Butanone	0.82 J	25	ug/L	SW846 8260B
Carbon disulfide	0.67 J	5.0	ug/L	SW846 8260B
Chloroform	4.5	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.71 J	1.0	ug/L	SW846 8260B
Toluene	1.1	1.0	ug/L	SW846 8260B
Trichloroethene	0.49 J	1.0	ug/L	SW846 8260B
GW-17360-071904-DCR-135 07/19/04 003				
Acetone	8.9 J	25	ug/L	SW846 8260B
Carbon disulfide	1.3 J	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	0.26 J	1.0	ug/L	SW846 8260B
Methylene chloride	3.7 J	5.0	ug/L	SW846 8260B
Toluene	0.27 J	1.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G200170

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G200170

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GLEM8	001	GW-17360-071904-DCR-133	07/19/04	11:00
GLENK	002	GW-17360-071904-DCR-134	07/19/04	12:00
GLENL	003	GW-17360-071904-DCR-135	07/19/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: Gm- Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 48hr STAT	REMARKS
1	7/17/04	1100	Gw-17360-071904-DCN-133	H2O	3	X	X	
2	↓	1200	↓ ↓ ↓ ↓ -134		3	X	X	
3	↓	—	↓ ↓ ↓ ↓ -135	↓	1	X	X	
								CRA Contact Paul Wisen

TOTAL NUMBER OF CONTAINERS: 7

RELINQUISHED BY 1. _____	DATE: 7-19-04 TIME: 1800	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No. 8461 7772 4184

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27175

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: Natalie J Bubler

DATE: 7-20-04 TIME: 9:35

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G200170

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returne
GLEM8	SANDERSA	7/20/04	Yes		Storage	
GLENK	SANDERSA	7/20/04	Yes		Storage	
GLENL	SANDERSA	7/20/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** A4G200170

North Canton Facility

Client: CRA Project: GW-Grand Rapids Quote#:

Cooler Received on: 7-20-04 Opened on: 7-20-04 by: Natalie J Buckler (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:

STL Cooler No# ____ Foam Box ☐ Client Cooler ☒ Other ____

1. Were custody seals on the outside of the cooler? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
   If YES, Quantity —
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☒
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☒ None ☐ Other :
6. Cooler temperature upon receipt 2.2 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☒
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐

Contacted PM ____ Date: ____ by: ____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning: ____

√	

1. CHAIN OF CUSTODY

The following discrepancies occurred:

COC = GW-17360-071904-DLR-133 ; label = -133 = 134
-134 ; = 135
-135 ;

Will log per COC

2. SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired.

Sample(s) ____ were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #122603-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # 111401-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*

Sample(s) ____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-071904-DCR-133

GC/MS Volatiles

Lot-Sample #...: A4G200170-001 **Work Order #...:** GLEM81AA **Matrix.....:** WG
Date Sampled...: 07/19/04 11:00 **Date Received..:** 07/20/04
Prep Date.....: 07/21/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203601
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.6 J**	**25**	**ug/L**	**0.74**
Benzene	**0.32 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.54 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**0.22 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071904-DCR-133

GC/MS Volatiles

Lot-Sample #...: A4G200170-001 Work Order #...: GLEM81AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.59 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
1,2-Dichloroethane-d4	105	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071904-DCR-134

GC/MS Volatiles

Lot-Sample #...: A4G200170-002	**Work Order #...:** GLENK1AA	**Matrix.....:** WG	
Date Sampled...: 07/19/04 12:00	**Date Received..:** 07/20/04		
Prep Date.....: 07/21/04	**Analysis Date..:** 07/21/04		
Prep Batch #...: 4203601			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.4 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**1.6**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.82 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	**0.67 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**4.5**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**0.71 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071904-DCR-134

GC/MS Volatiles

Lot-Sample #...: A4G200170-002 Work Order #...: GLENK1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.1**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.49 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(73 - 122)
1,2-Dichloroethane-d4	108	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-071904-DCR-135

GC/MS Volatiles

Lot-Sample #...: A4G200170-003 Work Order #...: GLENL1AA Matrix.....: WQ
Date Sampled...: 07/19/04 Date Received..: 07/20/04
Prep Date.....: 07/21/04 Analysis Date..: 07/21/04
Prep Batch #...: 4203254
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**8.9 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	**1.3 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.26 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**3.7 J**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071904-DCR-135

GC/MS Volatiles

Lot-Sample #...: A4G200170-003 Work Order #...: GLENL1AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.27 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
1,2-Dichloroethane-d4	87	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G200170 **Work Order #...:** GLHGE1AA **Matrix.....:** WATER
MB Lot-Sample #: A4G210000-254

Prep Date.....: 07/21/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/21/04 **Prep Batch #...:** 4203254
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G200170 **Work Order #...:** GLHGE1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G200170 **Work Order #...:** GLJ9E1AA **Matrix.....:** WATER
MB Lot-Sample #: A4G210000-601

Prep Date.....: 07/21/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/21/04 **Prep Batch #...:** 4203601
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	**0.31 J**	**5.0**	**ug/L**	**SW846 8260B**
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G200170 **Work Order #...:** GLJ9E1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
1,2-Dichloroethane-d4	106	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G200170 **Work Order #...:** GLHGE1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G210000-254 GLHGE1AD-LCSD
Prep Date.....: 07/21/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203254
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	10	**9.6**	**ug/L**	**96**	**1.3**	**SW846 8260B**
Chlorobenzene	**10**	**10**	**ug/L**	**100**		**SW846 8260B**
	10	**9.4**	**ug/L**	**94**	**5.9**	**SW846 8260B**
1,1-Dichloroethene	**10**	**10**	**ug/L**	**103**		**SW846 8260B**
	10	**10**	**ug/L**	**104**	**1.4**	**SW846 8260B**
Toluene	**10**	**10**	**ug/L**	**100**		**SW846 8260B**
	10	**9.4**	**ug/L**	**94**	**6.2**	**SW846 8260B**
Trichloroethene	**10**	**9.9**	**ug/L**	**99**		**SW846 8260B**
	10	**9.6**	**ug/L**	**96**	**2.9**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	91	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	95	(61 - 128)
Toluene-d8	96	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)
	84	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G200170 **Work Order #...:** GLHGE1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G210000-254 GLHGE1AD-LCSD
Prep Date.....: 07/21/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203254
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**98**	**(80 - 116)**			**SW846 8260B**
	96	**(80 - 116)**	**1.3**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**100**	**(76 - 117)**			**SW846 8260B**
	94	**(76 - 117)**	**5.9**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**103**	**(63 - 130)**			**SW846 8260B**
	104	**(63 - 130)**	**1.4**	**(0-20)**	**SW846 8260B**
Toluene	**100**	**(74 - 119)**			**SW846 8260B**
	94	**(74 - 119)**	**6.2**	**(0-20)**	**SW846 8260B**
Trichloroethene	**99**	**(75 - 122)**			**SW846 8260B**
	96	**(75 - 122)**	**2.9**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	91	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	95	(61 - 128)
Toluene-d8	96	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)
	84	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G200170 **Work Order #...:** GLJ9E1AC **Matrix.....:** WATER
LCS Lot-Sample#: A4G210000-601
Prep Date.....: 07/21/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203601
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzene	**10**	**9.4**	**ug/L**	**94**	**SW846 8260B**
Chlorobenzene	**10**	**9.3**	**ug/L**	**93**	**SW846 8260B**
1,1-Dichloroethene	**10**	**9.9**	**ug/L**	**99**	**SW846 8260B**
Toluene	**10**	**9.9**	**ug/L**	**99**	**SW846 8260B**
Trichloroethene	**10**	**8.5**	**ug/L**	**85**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G200170 **Work Order #...:** GLJ9E1AC **Matrix.....:** WATER
LCS Lot-Sample#: A4G210000-601
Prep Date.....: 07/21/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203601
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**94**	**(80 - 116)**	**SW846 8260B**
Chlorobenzene	**93**	**(76 - 117)**	**SW846 8260B**
1,1-Dichloroethene	**99**	**(63 - 130)**	**SW846 8260B**
Toluene	**99**	**(74 - 119)**	**SW846 8260B**
Trichloroethene	**85**	**(75 - 122)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G200170 **Work Order #...:** GKVR21A9-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G100208-003 GKVR21CA-MSD
Date Sampled...: 07/09/04 09:11 **Date Received..:** 07/10/04
Prep Date.....: 07/21/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203254
Dilution Factor: 10 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**100**	**86**	**ug/L**	**86**		**SW846 8260B**
	ND	**100**	**88**	**ug/L**	**88**	**1.8**	**SW846 8260B**
Chlorobenzene	**ND**	**100**	**86**	**ug/L**	**86**		**SW846 8260B**
	ND	**100**	**87**	**ug/L**	**87**	**1.3**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**100**	**95**	**ug/L**	**95**		**SW846 8260B**
	ND	**100**	**97**	**ug/L**	**97**	**2.2**	**SW846 8260B**
Toluene	**ND**	**100**	**86**	**ug/L**	**86**		**SW846 8260B**
	ND	**100**	**87**	**ug/L**	**87**	**1.6**	**SW846 8260B**
Trichloroethene	**ND**	**100**	**86**	**ug/L**	**86**		**SW846 8260B**
	ND	**100**	**89**	**ug/L**	**89**	**3.8**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	93	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
	98	(61 - 128)
Toluene-d8	91	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)
	84	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G200170 **Work Order #...:** GKVR21A9-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G100208-003 GKVR21CA-MSD
Date Sampled...: 07/09/04 09:11 **Date Received..:** 07/10/04
Prep Date.....: 07/21/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203254
Dilution Factor: 10 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**86**	**(78 - 118)**			**SW846 8260B**
	88	**(78 - 118)**	**1.8**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**86**	**(76 - 117)**			**SW846 8260B**
	87	**(76 - 117)**	**1.3**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**95**	**(62 - 130)**			**SW846 8260B**
	97	**(62 - 130)**	**2.2**	**(0-20)**	**SW846 8260B**
Toluene	**86**	**(70 - 119)**			**SW846 8260B**
	87	**(70 - 119)**	**1.6**	**(0-20)**	**SW846 8260B**
Trichloroethene	**86**	**(62 - 130)**			**SW846 8260B**
	89	**(62 - 130)**	**3.8**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	93	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
	98	(61 - 128)
Toluene-d8	91	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)
	84	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G200170 **Work Order #...:** GK42P1AQ-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G150134-004 GK42P1AR-MSD
Date Sampled...: 07/14/04 08:30 **Date Received..:** 07/15/04
Prep Date.....: 07/21/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203601
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**10**	**9.6**	**ug/L**	**96**		**SW846 8260B**
	ND	**10**	**9.7**	**ug/L**	**97**	**1.6**	**SW846 8260B**
Chlorobenzene	**ND**	**10**	**9.7**	**ug/L**	**97**		**SW846 8260B**
	ND	**10**	**9.6**	**ug/L**	**96**	**0.33**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10**	**10**	**ug/L**	**102**		**SW846 8260B**
	ND	**10**	**9.9**	**ug/L**	**99**	**3.5**	**SW846 8260B**
Toluene	**ND**	**10**	**10**	**ug/L**	**102**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**102**	**0.05**	**SW846 8260B**
Trichloroethene	**4.3**	**10**	**13**	**ug/L**	**84**		**SW846 8260B**
	4.3	**10**	**13**	**ug/L**	**84**	**0.29**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(73 - 122)
	94	(73 - 122)
1,2-Dichloroethane-d4	112	(61 - 128)
	111	(61 - 128)
Toluene-d8	101	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	102	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G200170 **Work Order #...:** GK42P1AQ-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G150134-004 GK42P1AR-MSD
Date Sampled...: 07/14/04 08:30 **Date Received..:** 07/15/04
Prep Date.....: 07/21/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203601
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**96**	**(78 - 118)**			**SW846 8260B**
	97	**(78 - 118)**	**1.6**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**97**	**(76 - 117)**			**SW846 8260B**
	96	**(76 - 117)**	**0.33**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**102**	**(62 - 130)**			**SW846 8260B**
	99	**(62 - 130)**	**3.5**	**(0-20)**	**SW846 8260B**
Toluene	**102**	**(70 - 119)**			**SW846 8260B**
	102	**(70 - 119)**	**0.05**	**(0-20)**	**SW846 8260B**
Trichloroethene	**84**	**(62 - 130)**			**SW846 8260B**
	84	**(62 - 130)**	**0.29**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(73 - 122)
	94	(73 - 122)
1,2-Dichloroethane-d4	112	(61 - 128)
	111	(61 - 128)
Toluene-d8	101	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	102	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

REC'D CRA
JUL 30 2004
CRA SDG G-16

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A4G210154

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4G210154
Name: GM GRAND RAPIDS

Description
Event: VAS Sampling
Samples: 8 waters DCR 136-143
Analysis: TCL VOC

TAT: 48 HOUR TAT
Lab: STL-NC

Amy L. McCormick
Project Manager

Checked Against Preliminary Data:
Date: N/A Init.: N/A
Date of Validation Memo: 10/1/04
Invoice Approval Date:
Comments:

July 28, 2004

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOA	PARAMETERS: 48hr TAT	REMARKS
1	7/20/04	940	GW-17360-07 2004-DCR-136	H2O	3	X	X	
2		1030	-137		3	X	X	
3		1035	-138		3	X	X	
4		1125	-139		9	X	X	MS/MSD
5		1230	-140		3	X	X	
6		1645	-141		3	X	X	
7		1730	-142		3	X	X	
8		—	-143		1	X	X	
								CRA contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		28			

RELINQUISHED BY: 1. [signature]	DATE: 7-20-04 TIME: 1800	RECEIVED BY: 1.	DATE: TIME:
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT: FEDEX AIR BILL No. 8461 7772 4232

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

SAMPLE TEAM: David C. Rivers

RECEIVED FOR LABORATORY BY: [signature]
DATE: 7/21/04 TIME: 9:40

27176

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G210154

The following report contains the analytical results for eight water samples submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received July 21, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on July 23, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 5.1°C.

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G210154

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072004-DCR-136 07/20/04 09:40 001				
Acetone	3.9 J,B	25	ug/L	SW846 8260B
Benzene	0.55 J	1.0	ug/L	SW846 8260B
2-Butanone	0.72 J	25	ug/L	SW846 8260B
Carbon disulfide	0.85 J	5.0	ug/L	SW846 8260B
Chloroform	0.17 J	1.0	ug/L	SW846 8260B
Cyclohexane	0.37 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.27 J	1.0	ug/L	SW846 8260B
Toluene	0.89 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.32 J	1.0	ug/L	SW846 8260B
GW-17360-072004-DCR-137 07/20/04 10:30 002				
Acetone	2.2 J,B	25	ug/L	SW846 8260B
Bromodichloromethane	3.1	1.0	ug/L	SW846 8260B
Chloroform	5.8	1.0	ug/L	SW846 8260B
Chloromethane	0.20 J,B	1.0	ug/L	SW846 8260B
Dibromochloromethane	1.6	1.0	ug/L	SW846 8260B
Toluene	2.6	1.0	ug/L	SW846 8260B
GW-17360-072004-DCR-138 07/20/04 10:35 003				
Acetone	2.2 J,B	25	ug/L	SW846 8260B
Bromodichloromethane	3.1	1.0	ug/L	SW846 8260B
Chloroform	5.9	1.0	ug/L	SW846 8260B
Chloromethane	0.20 J,B	1.0	ug/L	SW846 8260B
Dibromochloromethane	1.5	1.0	ug/L	SW846 8260B
Toluene	2.6	1.0	ug/L	SW846 8260B
GW-17360-072004-DCR-139 07/20/04 11:25 004				
Acetone	2.6 J,B	25	ug/L	SW846 8260B
Benzene	0.51 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.43 J	1.0	ug/L	SW846 8260B
Carbon disulfide	0.43 J	5.0	ug/L	SW846 8260B
Chloroform	0.78 J	1.0	ug/L	SW846 8260B
Chloromethane	0.18 J,B	1.0	ug/L	SW846 8260B
Cyclohexane	0.32 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.23 J	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	0.29 J	5.0	ug/L	SW846 8260B
Tetrachloroethene	0.25 J	1.0	ug/L	SW846 8260B
Toluene	1.8	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G210154

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072004-DCR-140 07/20/04 12:30 005				
Acetone	3.5 J,B	25	ug/L	SW846 8260B
Benzene	0.54 J	1.0	ug/L	SW846 8260B
2-Butanone	0.75 J	25	ug/L	SW846 8260B
Chloroform	2.0	1.0	ug/L	SW846 8260B
Chloromethane	0.22 J,B	1.0	ug/L	SW846 8260B
Cyclohexane	0.29 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.22 J	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	0.18 J	5.0	ug/L	SW846 8260B
Toluene	2.5	1.0	ug/L	SW846 8260B
GW-17360-072004-DCR-141 07/20/04 16:45 006				
Acetone	2.5 J,B	25	ug/L	SW846 8260B
Benzene	0.71 J	1.0	ug/L	SW846 8260B
2-Butanone	0.45 J	25	ug/L	SW846 8260B
Carbon disulfide	0.45 J	5.0	ug/L	SW846 8260B
Cyclohexane	0.38 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	0.28 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	0.96 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	0.38 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.27 J	1.0	ug/L	SW846 8260B
Toluene	1.1	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	12	1.0	ug/L	SW846 8260B
Trichloroethene	2.5	1.0	ug/L	SW846 8260B
GW-17360-072004-DCR-142 07/20/04 17:30 007				
Acetone	1.6 J,B	25	ug/L	SW846 8260B
Benzene	0.27 J	1.0	ug/L	SW846 8260B
Cyclohexane	0.17 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	0.41 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	1.5	1.0	ug/L	SW846 8260B
Toluene	0.45 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	16	1.0	ug/L	SW846 8260B
Trichloroethene	2.7	1.0	ug/L	SW846 8260B
GW-17360-072004-DCR-143 07/20/04 008				
Acetone	13 J,B	25	ug/L	SW846 8260B
1,1-Dichloroethene	0.51 J	1.0	ug/L	SW846 8260B
Methylene chloride	4.4 J	5.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G210154

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 48hr TAT	REMARKS
1	7/20/04	940	GW-17360-072004-DCR-136	H2O	3	X	X	
2		1030	-137		3	X	X	
3		1035	-138		3	X	X	
4		1125	-139		9	X	X	
5		1230	-140		3	X	X	MS/MSD
6		1645	-141		3	X	X	
7		1730	-142		3	X	X	
8		—	-143		1	X	X	
								CRA Contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		24			

RELINQUISHED BY: 1. _____	DATE: 7-20-04 TIME: 1800	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FEDEX AIR BILL No. 8461772 4232

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27176

SAMPLE TEAM: David C. Rivers

RECEIVED FOR LABORATORY BY: _____
DATE: 7/21/04 TIME: 9:40

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

STL North Canton

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G210154

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GLG2G	STILLERJ	7/21/04	Yes		Storage	
GLG2J	STILLERJ	7/21/04	Yes		Storage	
GLG2K	STILLERJ	7/21/04	Yes		Storage	
GLG2L	STILLERJ	7/21/04	Yes		Storage	
GLG2M	STILLERJ	7/21/04	Yes		Storage	
GLG2N	STILLERJ	7/21/04	Yes		Storage	
GLG2T	STILLERJ	7/21/04	Yes		Storage	
GLG2V	STILLERJ	7/21/04	Yes		Storage	

STL Cooler Receipt Form/Narrative Lot Number: 440210154
North Canton Facility

Client: CRA - Mich Project: GM - Grand Rapids Quote#:
Cooler Received on: 7-21-04 Opened on: 7-21-04 by: (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:
STL Cooler No# Foam Box ☐ Client Cooler ☒ Other

1. Were custody seals on the outside of the cooler? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
   If YES, Quantity
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☒
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other :
6. Cooler temperature upon receipt 5.1 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☒ Against Bottles ☐ IR ☐ ICE/$H_2$0 Slurry ☐
COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☒
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐

Contacted PM Date: by: via Voice Mail ☐ Verbal ☐ Other ☐
Concerning:

√	
	1. CHAIN OF CUSTODY
	The following discrepancies occurred:
	2. SAMPLE CONDITION
	Sample(s) were received after the recommended holding time had expired.
	Sample(s) were received in a broken container.
	3. SAMPLE PRESERVATION
	Sample(s) were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #122603-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # 111401-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	Sample(s) were received with bubble > 6 mm in diameter (cc: PM)
	4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072004-DCR-136

GC/MS Volatiles

Lot-Sample #...: A4G210154-001 Work Order #...: GLG2G1AA Matrix.....: WG
Date Sampled...: 07/20/04 09:40 Date Received..: 07/21/04
Prep Date.....: 07/22/04 Analysis Date..: 07/22/04
Prep Batch #...: 4205088
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.9 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.55 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.72 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	**0.85 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**0.17 J**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.37 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.27 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072004-DCR-136

GC/MS Volatiles

Lot-Sample #...: A4G210154-001 Work Order #...: GLG2G1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.89 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.32 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	84	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072004-DCR-137

GC/MS Volatiles

Lot-Sample #...: A4G210154-002 Work Order #...: GLG2J1AA Matrix.....: WG
Date Sampled...: 07/20/04 10:30 Date Received..: 07/21/04
Prep Date.....: 07/22/04 Analysis Date..: 07/22/04
Prep Batch #...: 4205088
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.2 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**3.1**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**5.8**	**1.0**	**ug/L**	**0.16**
Chloromethane	**0.20 J,B**	**1.0**	**ug/L**	**0.14**
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**1.6**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072004-DCR-137

GC/MS Volatiles

Lot-Sample #...: A4G210154-002 Work Order #...: GLG2J1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**2.6**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072004-DCR-138

GC/MS Volatiles

Lot-Sample #...: A4G210154-003 Work Order #...: GLG2K1AA Matrix.....: WG
Date Sampled...: 07/20/04 10:35 Date Received..: 07/21/04
Prep Date.....: 07/22/04 Analysis Date..: 07/22/04
Prep Batch #...: 4205088
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.2 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**3.1**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**5.9**	**1.0**	**ug/L**	**0.16**
Chloromethane	**0.20 J,B**	**1.0**	**ug/L**	**0.14**
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**1.5**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072004-DCR-138

GC/MS Volatiles

Lot-Sample #...: A4G210154-003 **Work Order #...:** GLG2K1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**2.6**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
1,2-Dichloroethane-d4	105	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072004-DCR-139

GC/MS Volatiles

Lot-Sample #...: A4G210154-004 Work Order #...: GLG2L1AA Matrix.....: WG
Date Sampled...: 07/20/04 11:25 Date Received..: 07/21/04
Prep Date.....: 07/22/04 Analysis Date..: 07/22/04
Prep Batch #...: 4205088
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.6 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.51 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.43 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	**0.43 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**0.78 J**	**1.0**	**ug/L**	**0.16**
Chloromethane	**0.18 J,B**	**1.0**	**ug/L**	**0.14**
Cyclohexane	**0.32 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.23 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**0.29 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072004-DCR-139

GC/MS Volatiles

Lot-Sample #...: A4G210154-004 **Work Order #...:** GLG2L1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.25 J**	**1.0**	**ug/L**	**0.19**
Toluene	**1.8**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	110	(73 - 122)
1,2-Dichloroethane-d4	105	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072004-DCR-140

GC/MS Volatiles

Lot-Sample #...:	A4G210154-005	**Work Order #...:**	GLG2M1AA	**Matrix.....:**	WG
Date Sampled...:	07/20/04 12:30	**Date Received..:**	07/21/04		
Prep Date.....:	07/22/04	**Analysis Date..:**	07/22/04		
Prep Batch #...:	4205088				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.5 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.54 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.75 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.0**	**1.0**	**ug/L**	**0.16**
Chloromethane	**0.22 J,B**	**1.0**	**ug/L**	**0.14**
Cyclohexane	**0.29 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.22 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**0.18 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072004-DCR-140

GC/MS Volatiles

Lot-Sample #...: A4G210154-005 **Work Order #...:** GLG2M1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**2.5**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072004-DCR-141

GC/MS Volatiles

Lot-Sample #...:	A4G210154-006	Work Order #...:	GLG2N1AA	Matrix.....:	WG
Date Sampled...:	07/20/04 16:45	Date Received..:	07/21/04		
Prep Date.....:	07/22/04	Analysis Date..:	07/22/04		
Prep Batch #...:	4205088				
Dilution Factor:	1	Initial Wgt/Vol:	5 mL	Final Wgt/Vol..:	5 mL
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.5 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.71 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.45 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	**0.45 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.38 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	**0.28 J**	**1.0**	**ug/L**	**0.21**
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.96 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	**0.38 J**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.27 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072004-DCR-141

GC/MS Volatiles

Lot-Sample #...: A4G210154-006 **Work Order #...:** GLG2N1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.1**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**12**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**2.5**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	111	(73 - 122)
1,2-Dichloroethane-d4	105	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072004-DCR-142

GC/MS Volatiles

Lot-Sample #...: A4G210154-007	**Work Order #...:** GLG2T1AA	**Matrix.....:** WG	
Date Sampled...: 07/20/04 17:30	**Date Received..:** 07/21/04		
Prep Date.....: 07/22/04	**Analysis Date..:** 07/22/04		
Prep Batch #...: 4205088			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.6 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.27 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.17 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	**0.41 J**	**1.0**	**ug/L**	**0.21**
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**1.5**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072004-DCR-142

GC/MS Volatiles

Lot-Sample #...: A4G210154-007 **Work Order #...:** GLG2T1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.45 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**16**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**2.7**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	113	(73 - 122)
1,2-Dichloroethane-d4	108	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072004-DCR-143

GC/MS Volatiles

Lot-Sample #...: A4G210154-008
Date Sampled...: 07/20/04
Prep Date.....: 07/22/04
Prep Batch #...: 4205088
Dilution Factor: 1

Work Order #...: GLG2V1AA
Date Received..: 07/21/04
Analysis Date..: 07/22/04

Initial Wgt/Vol: 5 mL
Method.....: SW846 8260B

Matrix.....: WQ

Final Wgt/Vol..: 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**13 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.51 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**4.4 J**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072004-DCR-143

GC/MS Volatiles

Lot-Sample #...: A4G210154-008 **Work Order #...:** GLG2V1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	114	(73 - 122)
1,2-Dichloroethane-d4	109	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G210154 **Work Order #...:** GLM7X1AA **Matrix.....:** WATER
MB Lot-Sample #: A4G230000-088

Prep Date.....: 07/22/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/22/04 **Prep Batch #...:** 4205088
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	**1.2 J**	**25**	**ug/L**	**SW846 8260B**
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	**0.16 J**	**1.0**	**ug/L**	**SW846 8260B**
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G210154 **Work Order #...:** GLM7X1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	**0.19 J**	**5.0**	**ug/L**	**SW846 8260B**
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	112	(73 - 122)
1,2-Dichloroethane-d4	106	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G210154 **Work Order #...:** GLM7X1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G230000-088 GLM7X1AD-LCSD
Prep Date.....: 07/22/04 **Analysis Date..:** 07/22/04
Prep Batch #...: 4205088
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	10	10	ug/L	101		SW846 8260B
	10	10	ug/L	100	1.4	SW846 8260B
Chlorobenzene	10	9.8	ug/L	98		SW846 8260B
	10	10	ug/L	100	2.0	SW846 8260B
1,1-Dichloroethene	10	10	ug/L	105		SW846 8260B
	10	11	ug/L	105	0.44	SW846 8260B
Toluene	10	9.9	ug/L	99		SW846 8260B
	10	10	ug/L	103	3.5	SW846 8260B
Trichloroethene	10	9.9	ug/L	99		SW846 8260B
	10	9.9	ug/L	99	0.72	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
	94	(61 - 128)
Toluene-d8	91	(76 - 110)
	94	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)
	92	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G210154 **Work Order #...:** GLM7X1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G230000-088 GLM7X1AD-LCSD
Prep Date.....: 07/22/04 **Analysis Date..:** 07/22/04
Prep Batch #...: 4205088
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**101**	**(80 - 116)**			**SW846 8260B**
	100	**(80 - 116)**	**1.4**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**98**	**(76 - 117)**			**SW846 8260B**
	100	**(76 - 117)**	**2.0**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**105**	**(63 - 130)**			**SW846 8260B**
	105	**(63 - 130)**	**0.44**	**(0-20)**	**SW846 8260B**
Toluene	**99**	**(74 - 119)**			**SW846 8260B**
	103	**(74 - 119)**	**3.5**	**(0-20)**	**SW846 8260B**
Trichloroethene	**99**	**(75 - 122)**			**SW846 8260B**
	99	**(75 - 122)**	**0.72**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
	94	(61 - 128)
Toluene-d8	91	(76 - 110)
	94	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)
	92	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G210154 **Work Order #...:** GLG2L1AC-MS **Matrix.....:** WG
MS Lot-Sample #: A4G210154-004 GLG2L1AD-MSD
Date Sampled...: 07/20/04 11:25 **Date Received..:** 07/21/04
Prep Date.....: 07/22/04 **Analysis Date..:** 07/22/04
Prep Batch #...: 4205088
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**0.51**	**10**	**10**	**ug/L**	**96**		**SW846 8260B**
	0.51	**10**	**10**	**ug/L**	**95**	**0.92**	**SW846 8260B**
Chlorobenzene	**ND**	**10**	**9.5**	**ug/L**	**95**		**SW846 8260B**
	ND	**10**	**9.4**	**ug/L**	**94**	**0.78**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10**	**10**	**ug/L**	**104**		**SW846 8260B**
	ND	**10**	**11**	**ug/L**	**106**	**2.2**	**SW846 8260B**
Toluene	**1.8**	**10**	**12**	**ug/L**	**99**		**SW846 8260B**
	1.8	**10**	**12**	**ug/L**	**97**	**1.9**	**SW846 8260B**
Trichloroethene	**ND**	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**100**	**1.9**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
	99	(61 - 128)
Toluene-d8	95	(76 - 110)
	95	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)
	94	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G210154 **Work Order #...:** GLG2L1AC-MS **Matrix.....:** WG
MS Lot-Sample #: A4G210154-004 GLG2L1AD-MSD
Date Sampled...: 07/20/04 11:25 **Date Received..:** 07/21/04
Prep Date.....: 07/22/04 **Analysis Date..:** 07/22/04
Prep Batch #...: 4205088
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**96**	**(78 - 118)**			**SW846 8260B**
	95	**(78 - 118)**	**0.92**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**95**	**(76 - 117)**			**SW846 8260B**
	94	**(76 - 117)**	**0.78**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**104**	**(62 - 130)**			**SW846 8260B**
	106	**(62 - 130)**	**2.2**	**(0-20)**	**SW846 8260B**
Toluene	**99**	**(70 - 119)**			**SW846 8260B**
	97	**(70 - 119)**	**1.9**	**(0-20)**	**SW846 8260B**
Trichloroethene	**98**	**(62 - 130)**			**SW846 8260B**
	100	**(62 - 130)**	**1.9**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
	99	(61 - 128)
Toluene-d8	95	(76 - 110)
	95	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)
	94	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

REC'D CRA
AUG - 4 2004
CRA SDG G-17.

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM GRAND RAPIDS

Lot #: A4G220188

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4G220188
Name: GM GRAND RAPIDS.

Description
Event: VAS Sampling
Samples: 6 waters BM 144-149.
Analysis: TCL VOCs.

TAT: 72 HR TAT
Lab: STL-NC

SEVERN TRENT LABORATORIES, INC.

Kim Kuyoa for
Amy L. McCormick
Project Manager

Checked Against Preliminary Data:
Date: N/A Init.: N/A
Date of Validation Memo: 10/21/04
Invoice Approval Date:
Comments:

August 2, 2004

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL NORTH CANTON

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM GRAND RAPIDS

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: BRYANT MILLER

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOC	REMARKS
1	07/21/04	08:30	GW-17360-072104-BM-144	WATER	3	X	72-HR TAT
2	"	09:30	" -145	WATER	3	X	
3	"	11:12	" -146	WATER	3	X	CRA CONTACT
4	"	12:40	" -147	WATER	3	X	KATHY SHAW
5	"	14:00	" -148	WATER	3	X	734-453-5123
6	"	15:30	" -149	WATER	3	X	
~~7~~			~~TRIP BLANK~~	~~WATER~~	~~1~~	~~X~~	
7	"		GW-17360-072104-BM-150	WATER	1	X	TRIP BLANK

TOTAL NUMBER OF CONTAINERS: 19

RELINQUISHED BY: 1. [signature] BRYANT MILLER	DATE: 07-21-04 TIME: 16:15	RECEIVED BY: 1.	DATE: TIME:
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT: FEDEX AIR BILL No.

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27177

SAMPLE TEAM: BRYANT MILLER

RECEIVED FOR LABORATORY BY: [signature]
DATE: 7/22/04 TIME: 10:40

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G220188

The following report contains the analytical results for six water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM Grand Rapids Site, project number 17360-09. The samples were received July 22, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on July 27, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 4.6°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The pH of the sample GW-173600-072104-BM-149 was greater than 2. The sample(s) was analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G220188

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072104-BM-144 07/21/04 08:30 001				
Acetone	2.1 J	25	ug/L	SW846 8260B
Benzene	0.22 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.36 J	1.0	ug/L	SW846 8260B
Carbon disulfide	0.28 J	5.0	ug/L	SW846 8260B
Chloroform	0.85 J	1.0	ug/L	SW846 8260B
Cyclohexane	0.23 J	1.0	ug/L	SW846 8260B
Toluene	1.1	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	6.5	1.0	ug/L	SW846 8260B
Trichloroethene	0.52 J	1.0	ug/L	SW846 8260B
GW-17360-072104-BM-145 07/21/04 09:30 002				
Acetone	1.3 J	25	ug/L	SW846 8260B
Benzene	0.25 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	0.58 J	1.0	ug/L	SW846 8260B
Toluene	0.64 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	18	1.0	ug/L	SW846 8260B
Trichloroethene	0.76 J	1.0	ug/L	SW846 8260B
GW-17360-072104-BM-146 07/21/04 11:12 003				
Acetone	2.5 J	25	ug/L	SW846 8260B
Benzene	0.25 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	3.5	1.0	ug/L	SW846 8260B
2-Butanone	0.52 J	25	ug/L	SW846 8260B
Chloroform	8.7	1.0	ug/L	SW846 8260B
Dibromochloromethane	1.4	1.0	ug/L	SW846 8260B
Toluene	6.3	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	4.0	1.0	ug/L	SW846 8260B
GW-17360-072104-BM-147 07/21/04 12:40 004				
Acetone	1.7 J	25	ug/L	SW846 8260B
Benzene	0.33 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	1.5	1.0	ug/L	SW846 8260B
Chloroform	3.1	1.0	ug/L	SW846 8260B
Cyclohexane	0.19 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.49 J	1.0	ug/L	SW846 8260B
Toluene	2.1	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.23 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.30 J	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G220188

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072104-BM-148 07/21/04 14:00 005				
Acetone	2.5 J	25	ug/L	SW846 8260B
Benzene	0.25 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	1.4	1.0	ug/L	SW846 8260B
Chloroform	4.1	1.0	ug/L	SW846 8260B
Cyclohexane	0.17 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.46 J	1.0	ug/L	SW846 8260B
Toluene	2.7	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.52 J	1.0	ug/L	SW846 8260B
GW-17360-072104-BM-149 07/21/04 15:30 006				
Acetone	3.1 J	25	ug/L	SW846 8260B
2-Butanone	0.58 J	25	ug/L	SW846 8260B
Chloroform	2.7	1.0	ug/L	SW846 8260B
Toluene	2.0	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.39 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.58 J	1.0	ug/L	SW846 8260B
W-17360-072104-BM-150 07/21/04 007				
Acetone	2.8 J	25	ug/L	SW846 8260B
2-Butanone	0.51 J	25	ug/L	SW846 8260B
Methylene chloride	0.68 J	5.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G220188

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G220188

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GLK29	001	GW-17360-072104-BM-144	07/21/04	08:30
GLK3J	002	GW-17360-072104-BM-145	07/21/04	09:30
GLK3K	003	GW-17360-072104-BM-146	07/21/04	11:12
GLK3L	004	GW-17360-072104-BM-147	07/21/04	12:40
GLK3N	005	GW-17360-072104-BM-148	07/21/04	14:00
GLK3P	006	GW-17360-072104-BM-149	07/21/04	15:30
GLK3Q	007	W-17360-072104-BM-150	07/21/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL NORTH CANTON

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM GRAND RAPIDS

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: BRYANT MILLER

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	REMARKS
1	07/21/04	08:30	GW-17360-072104-BM-144	WATER	3	X	72-HR TAT
2	"	09:30	" -145	WATER	3	X	
3	"	11:12	" -146	WATER	3	X	CRA CONTACT
4	"	12:46	" -147	WATER	3	X	KATHY SHAW
5	"	14:00	" -148	WATER	3	X	734-453-5123
6	"	15:30	" -149	WATER	3	X	
7			TRIP BLANK	WATER	1	X	
7	"		GW-17360-072104-BM-150	WATER	1	X	TRIP BLANK

TOTAL NUMBER OF CONTAINERS: 19

RELINQUISHED BY: 1. [signature] BRYANT MILLER	DATE: 07-21-04 TIME: 16:15	RECEIVED BY: 1.	DATE: TIME:
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT: FEDEX AIR BILL No.

White -Fully Executed Copy Yellow -Receiving Laboratory Copy Pink -Shipper Copy Goldenrod -Sampler Copy

27177

SAMPLE TEAM: BRYANT MILLER

RECEIVED FOR LABORATORY BY: [signature] DATE: 7/22/04 TIME: 10:40

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

15

STL North Canton

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G220188

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GLK29	EARLES	7/22/04	Yes		Storage	
GLK3J	EARLES	7/22/04	Yes		Storage	
GLK3K	EARLES	7/22/04	Yes		Storage	
GLK3L	EARLES	7/22/04	Yes		Storage	
GLK3N	EARLES	7/22/04	Yes		Storage	
GLK3P	EARLES	7/22/04	Yes		Storage	
GLK3Q	EARLES	7/22/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** A4622018B

North Canton Facility

Client: GLA Project: GM Grand Rapids Quote#:

Cooler Received on: 7-22-04 Opened on: 7-22-04 by: (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☑ Other:

STL Cooler No# Foam Box ☐ Client Cooler ☑ Other

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☑
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☑ None ☐ Other :
6. Cooler temperature upon receipt 4.1c °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM Date: by: via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

√		

1. CHAIN OF CUSTODY

The following discrepancies occurred:

2. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #122603-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # 111401-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*

Sample(s) were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072104-BM-144

GC/MS Volatiles

Lot-Sample #...:	A4G220188-001	**Work Order #...:**	GLK291AA	**Matrix.....:**	WG
Date Sampled...:	07/21/04 08:30	**Date Received..:**	07/22/04		
Prep Date.....:	07/26/04	**Analysis Date..:**	07/26/04		
Prep Batch #...:	4207075				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.1 J**	**25**	**ug/L**	**0.74**
Benzene	**0.22 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.36 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	**0.28 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**0.85 J**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.23 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-144

GC/MS Volatiles

Lot-Sample #...: A4G220188-001 **Work Order #...:** GLK291AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.1**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**6.5**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.52 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-145

GC/MS Volatiles

Lot-Sample #...: A4G220188-002 **Work Order #...:** GLK3J1AA **Matrix.....:** WG
Date Sampled...: 07/21/04 09:30 **Date Received..:** 07/22/04
Prep Date.....: 07/26/04 **Analysis Date..:** 07/26/04
Prep Batch #...: 4207075
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.3 J**	**25**	**ug/L**	**0.74**
Benzene	**0.25 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.58 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-145

GC/MS Volatiles

Lot-Sample #...: A4G220188-002 **Work Order #...:** GLK3J1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.64 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**18**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.76 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072104-BM-146

GC/MS Volatiles

Lot-Sample #...: A4G220188-003 **Work Order #...:** GLK3K1AA **Matrix.....:** WG
Date Sampled...: 07/21/04 11:12 **Date Received..:** 07/22/04
Prep Date.....: 07/26/04 **Analysis Date..:** 07/26/04
Prep Batch #...: 4207075
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.5 J**	**25**	**ug/L**	**0.74**
Benzene	**0.25 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**3.5**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.52 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**8.7**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**1.4**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-146

GC/MS Volatiles

Lot-Sample #...: A4G220188-003 Work Order #...: GLK3K1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**6.3**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**4.0**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072104-BM-147

GC/MS Volatiles

Lot-Sample #...: A4G220188-004 **Work Order #...:** GLK3L1AA **Matrix.....:** WG
Date Sampled...: 07/21/04 12:40 **Date Received..:** 07/22/04
Prep Date.....: 07/26/04 **Analysis Date..:** 07/26/04
Prep Batch #...: 4207075
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.7 J**	**25**	**ug/L**	**0.74**
Benzene	**0.33 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.5**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**3.1**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.19 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**0.49 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-147

GC/MS Volatiles

Lot-Sample #...: A4G220188-004 **Work Order #...:** GLK3L1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**2.1**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.23 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.30 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-148

GC/MS Volatiles

Lot-Sample #...: A4G220188-005 **Work Order #...:** GLK3N1AA **Matrix.....:** WG
Date Sampled...: 07/21/04 14:00 **Date Received..:** 07/22/04
Prep Date.....: 07/26/04 **Analysis Date..:** 07/26/04
Prep Batch #...: 4207075
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.5 J**	**25**	**ug/L**	**0.74**
Benzene	**0.25 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.4**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**4.1**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.17 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**0.46 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-148

GC/MS Volatiles

Lot-Sample #...: A4G220188-005 Work Order #...: GLK3N1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**2.7**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.52 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072104-BM-149

GC/MS Volatiles

Lot-Sample #...: A4G220188-006 **Work Order #...:** GLK3P1AA **Matrix.....:** WG
Date Sampled...: 07/21/04 15:30 **Date Received..:** 07/22/04
Prep Date.....: 07/26/04 **Analysis Date..:** 07/26/04
Prep Batch #...: 4207075
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.1 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.58 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.7**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-149

GC/MS Volatiles

Lot-Sample #...: A4G220188-006 Work Order #...: GLK3P1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**2.0**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.39 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.58 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-17360-072104-BM-150

GC/MS Volatiles

Lot-Sample #...: A4G220188-007	**Work Order #...:** GLK3Q1AA	**Matrix.....:** WQ	
Date Sampled...: 07/21/04	**Date Received..:** 07/22/04		
Prep Date.....: 07/26/04	**Analysis Date..:** 07/26/04		
Prep Batch #...: 4207075			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.8 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.51 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**0.68 J**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-17360-072104-BM-150

GC/MS Volatiles

Lot-Sample #...: A4G220188-007 **Work Order #...:** GLK3Q1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G220188 **Work Order #...:** GLTK81AA **Matrix.....:** WATER
MB Lot-Sample #: A4G250000-075

Prep Date.....: 07/25/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/25/04 **Prep Batch #...:** 4207075
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G220188 **Work Order #...:** GLTK81AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G220188 **Work Order #...:** GLTK81AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G250000-075 GLTK81AD-LCSD
Prep Date.....: 07/25/04 **Analysis Date..:** 07/25/04
Prep Batch #...: 4207075
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	10	9.2	ug/L	92		**SW846 8260B**
	10	9.4	ug/L	94	2.4	**SW846 8260B**
Chlorobenzene	10	9.1	ug/L	91		**SW846 8260B**
	10	9.3	ug/L	93	2.2	**SW846 8260B**
1,1-Dichloroethene	10	9.7	ug/L	97		**SW846 8260B**
	10	9.8	ug/L	98	1.1	**SW846 8260B**
Toluene	10	9.1	ug/L	91		**SW846 8260B**
	10	9.2	ug/L	92	0.67	**SW846 8260B**
Trichloroethene	10	9.3	ug/L	93		**SW846 8260B**
	10	9.4	ug/L	94	1.7	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
	93	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	100	(61 - 128)
Toluene-d8	92	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	81	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G220188 **Work Order #...:** GLTK81AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G250000-075 GLTK81AD-LCSD
Prep Date.....: 07/25/04 **Analysis Date..:** 07/25/04
Prep Batch #...: 4207075
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**92**	**(80 - 116)**			**SW846 8260B**
	94	**(80 - 116)**	**2.4**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**91**	**(76 - 117)**			**SW846 8260B**
	93	**(76 - 117)**	**2.2**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**97**	**(63 - 130)**			**SW846 8260B**
	98	**(63 - 130)**	**1.1**	**(0-20)**	**SW846 8260B**
Toluene	**91**	**(74 - 119)**			**SW846 8260B**
	92	**(74 - 119)**	**0.67**	**(0-20)**	**SW846 8260B**
Trichloroethene	**93**	**(75 - 122)**			**SW846 8260B**
	94	**(75 - 122)**	**1.7**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
	93	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	100	(61 - 128)
Toluene-d8	92	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	81	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G220188 **Work Order #...:** GLKJN1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G220119-003 GLKJN1AD-MSD
Date Sampled...: 07/20/04 18:00 **Date Received..:** 07/22/04
Prep Date.....: 07/25/04 **Analysis Date..:** 07/25/04
Prep Batch #...: 4207075
Dilution Factor: 3333.33 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**33000**	**32000**	**ug/L**	**95**		**SW846 8260B**
	ND	**33000**	**32000**	**ug/L**	**95**	**0.01**	**SW846 8260B**
Chlorobenzene	**ND**	**33000**	**31000**	**ug/L**	**93**		**SW846 8260B**
	ND	**33000**	**30000**	**ug/L**	**91**	**2.3**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**33000**	**33000**	**ug/L**	**98**		**SW846 8260B**
	ND	**33000**	**33000**	**ug/L**	**99**	**0.87**	**SW846 8260B**
Toluene	**ND**	**33000**	**31000**	**ug/L**	**92**		**SW846 8260B**
	ND	**33000**	**30000**	**ug/L**	**91**	**1.8**	**SW846 8260B**
Trichloroethene	**99000**	**33000**	**140000**	**ug/L**	**108**		**SW846 8260B**
	99000	**33000**	**140000**	**ug/L**	**107**	**0.22**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	97	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	99	(61 - 128)
Toluene-d8	93	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)
	84	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A4G220188	**Work Order #...:**	GLKJN1AC-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A4G220119-003		GLKJN1AD-MSD		
Date Sampled...:	07/20/04 18:00	**Date Received..:**	07/22/04		
Prep Date.....:	07/25/04	**Analysis Date..:**	07/25/04		
Prep Batch #...:	4207075				
Dilution Factor:	3333.33	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**95**	**(78 - 118)**			**SW846 8260B**
	95	**(78 - 118)**	**0.01**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**93**	**(76 - 117)**			**SW846 8260B**
	91	**(76 - 117)**	**2.3**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**98**	**(62 - 130)**			**SW846 8260B**
	99	**(62 - 130)**	**0.87**	**(0-20)**	**SW846 8260B**
Toluene	**92**	**(70 - 119)**			**SW846 8260B**
	91	**(70 - 119)**	**1.8**	**(0-20)**	**SW846 8260B**
Trichloroethene	**108**	**(62 - 130)**			**SW846 8260B**
	107	**(62 - 130)**	**0.22**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	97	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	99	(61 - 128)
Toluene-d8	93	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)
	84	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

RECD CRA
AUG - 4
CRA SDG G-18.

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A4G230184

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4G230184
Name: GM-GRAND RAPIDS

Description
SEVERN TRENT LABORATORIES, INC. Event: VAS Sampling
Samples: 6 waters DCR 151-156.
Analysis: TCL VOCs.

TAT: 48 HOUR TAT.
Ken Keyser for Lab: STL-NC
Amy L. McCormick Checked Against Preliminary Data:
Project Manager Date: N/A Init.: N/A.
Date of Validation Memo: 10/21/04
Invoice Approval Date:
August 2, 2004 Comments:

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL- North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM-Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 48-hr TAT	REMARKS
1	7/22/04	1000	GW-17360-072204-DCR-151	Ht20	3	X	X	
2		1050	-152		3	X	X	
3		1053	-153		3	X	X	
4		1145	-154		3	X	X	
5		1305	-155		3	X	X	
6		—	-156		1	X	X	
								CRA contact Paul Wiseman
TOTAL NUMBER OF CONTAINERS					16			

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
1. _____	7-22-04	1830	1. _____		
2. _____			2. _____		
3. _____			1. _____		

METHOD OF SHIPMENT: FED EX

AIR BILL No. 8393 5582 8886

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27179

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: _____

DATE: 7/23/04 TIME: 9:40

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G230184

The following report contains the analytical results for five water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received July 23, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on July 27, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 2.4°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for batch(es) 4209406 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G230184

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072204-DCR-151 07/22/04 10:00 001				
Acetone	2.5 J,B	25	ug/L	SW846 8260B
Carbon disulfide	1.1 J	5.0	ug/L	SW846 8260B
Toluene	0.37 J	1.0	ug/L	SW846 8260B
GW-17360-072204-DCR-152 07/22/04 10:50 002				
Acetone	2.8 J,B	25	ug/L	SW846 8260B
Benzene	0.38 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	1.9	1.0	ug/L	SW846 8260B
Chloroform	13	1.0	ug/L	SW846 8260B
Cyclohexane	0.31 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.35 J	1.0	ug/L	SW846 8260B
Toluene	0.85 J	1.0	ug/L	SW846 8260B
Trichloroethene	2.0	1.0	ug/L	SW846 8260B
GW-17360-072204-DCR-153 07/22/04 10:55 003				
Acetone	2.8 J,B	25	ug/L	SW846 8260B
Benzene	0.35 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	1.9	1.0	ug/L	SW846 8260B
Chloroform	13	1.0	ug/L	SW846 8260B
Cyclohexane	0.25 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.39 J	1.0	ug/L	SW846 8260B
Toluene	0.75 J	1.0	ug/L	SW846 8260B
Trichloroethene	2.1	1.0	ug/L	SW846 8260B
GW-17360-072204-DCR-154 07/22/04 11:45 004				
Acetone	2.3 J,B	25	ug/L	SW846 8260B
Benzene	0.22 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	1.5	1.0	ug/L	SW846 8260B
Chloroform	3.9	1.0	ug/L	SW846 8260B
Cyclohexane	0.16 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.74 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	0.56 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	1.4	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	0.24 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.58 J	1.0	ug/L	SW846 8260B
Toluene	0.53 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.91 J	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G230184

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072204-DCR-155 07/22/04 13:05 005				
Acetone	2.3 J,B	25	ug/L	SW846 8260B
Benzene	0.22 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	6.1	1.0	ug/L	SW846 8260B
Chloroform	13	1.0	ug/L	SW846 8260B
Dibromochloromethane	2.1	1.0	ug/L	SW846 8260B
Toluene	2.3	1.0	ug/L	SW846 8260B
GW-17360-072204-DCR-156 07/22/04 006				
Acetone	6.2 J,B	25	ug/L	SW846 8260B
2-Butanone	0.81 J	25	ug/L	SW846 8260B
Methylene chloride	3.1 J	5.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G230184

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G230184

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GLNWJ	001	GW-17360-072204-DCR-151	07/22/04	10:0(
GLNWK	002	GW-17360-072204-DCR-152	07/22/04	10:5(
GLNWL	003	GW-17360-072204-DCR-153	07/22/04	10:5!
GLNWN	004	GW-17360-072204-DCR-154	07/22/04	11:4!
GLNWP	005	GW-17360-072204-DCR-155	07/22/04	13:0!
GLNWQ	006	GW-17360-072204-DCR-156	07/22/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL- North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM-Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 48 hr TAT	REMARKS
1	7/22/04	1000	GW-17360-072204-DCR-151	H2O	3	X	X	
2		1050	-152		3	X	X	
3		1055	-153		3	X	X	
4		1145	-154		3	X	X	
5		1305	-155		3	X	X	
6		—	-156		1	X	X	
								CRA contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		16			

RELINQUISHED BY: 1. _____	DATE: 7-22-04 TIME: 1830	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No. 8393 5580 8886

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27179

SAMPLE TEAM: David C. Rivers

RECEIVED FOR LABORATORY BY: _____

DATE: 7/23/04 TIME: 9:40

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

15

STL North Canton

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G230184

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GLNWJ	SANDERSA	7/23/04	Yes		Storage	
GLNWK	SANDERSA	7/23/04	Yes		Storage	
GLNWL	SANDERSA	7/23/04	Yes		Storage	
GLNWN	SANDERSA	7/23/04	Yes		Storage	
GLNWP	SANDERSA	7/23/04	Yes		Storage	
GLNWQ	SANDERSA	7/23/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** A4G230184
North Canton Facility

Client: ECRA - MCL Project: GM - Ground Rapids Quote#:
Cooler Received on: 7-23-04 Opened on: 7-23-04 by: (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:
STL Cooler No# Foam Box ☐ Client Cooler ☒ Other

1. Were custody seals on the outside of the cooler? Yes ☐ No ☒ Intact? Yes ☐ ~~No~~ ☒ NA ☒
   If YES, Quantity
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☒
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☒ None ☐ Other:
6. Cooler temperature upon receipt 2.4 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☒ Against Bottles ☐ IR ☐ ICE/H_2O Slurry ☐
COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☒
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐

Contacted PM Date: by: via Voice Mail ☐ Verbal ☐ Other ☐
Concerning:

√	
	1. CHAIN OF CUSTODY
	The following discrepancies occurred:
	2. SAMPLE CONDITION
	Sample(s) were received after the recommended holding time had expired.
	Sample(s) were received in a broken container.
	3. SAMPLE PRESERVATION
	Sample(s) were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	Sample(s) were received with bubble > 6 mm in diameter (cc: PM)
	4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072204-DCR-151

GC/MS Volatiles

Lot-Sample #...: A4G230184-001 **Work Order #...:** GLNWJ1AA **Matrix.....:** WG
Date Sampled...: 07/22/04 10:00 **Date Received..:** 07/23/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.5 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	**1.1 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072204-DCR-151

GC/MS Volatiles

Lot-Sample #...: A4G230184-001 Work Order #...: GLNWJ1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.37 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	74	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072204-DCR-152

GC/MS Volatiles

Lot-Sample #...: A4G230184-002 **Work Order #...:** GLNWK1AA **Matrix.....:** WG
Date Sampled...: 07/22/04 10:50 **Date Received..:** 07/23/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.8 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.38 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.9**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**13**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.31 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072204-DCR-152

GC/MS Volatiles

Lot-Sample #...: A4G230184-002 **Work Order #...:** GLNWK1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.35 J**	**1.0**	**ug/L**	**0.19**
Toluene	**0.85 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**2.0**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072204-DCR-153

GC/MS Volatiles

Lot-Sample #...: A4G230184-003 Work Order #...: GLNWL1AA Matrix.....: WG
Date Sampled...: 07/22/04 10:55 Date Received..: 07/23/04
Prep Date.....: 07/27/04 Analysis Date..: 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.8 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.35 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.9**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**13**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.25 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072204-DCR-153

GC/MS Volatiles

Lot-Sample #...: A4G230184-003 Work Order #...: GLNWL1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.39 J**	**1.0**	**ug/L**	**0.19**
Toluene	**0.75 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**2.1**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072204-DCR-154

GC/MS Volatiles

Lot-Sample #...: A4G230184-004	**Work Order #...:** GLNWN1AA	**Matrix.....:** WG	
Date Sampled...: 07/22/04 11:45	**Date Received..:** 07/23/04		
Prep Date.....: 07/27/04	**Analysis Date..:** 07/27/04		
Prep Batch #...: 4209406			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.3 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.22 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.5**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**3.9**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.16 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**0.74 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	**0.56 J**	**1.0**	**ug/L**	**0.21**
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**1.4**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	**0.24 J**	**1.0**	**ug/L**	**0.16**
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072204-DCR-154

GC/MS Volatiles

Lot-Sample #...: A4G230184-004 Work Order #...: GLNWN1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.58 J**	**1.0**	**ug/L**	**0.19**
Toluene	**0.53 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.91 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072204-DCR-155

GC/MS Volatiles

Lot-Sample #...: A4G230184-005 **Work Order #...:** GLNWP1AA **Matrix.....:** WG
Date Sampled...: 07/22/04 13:05 **Date Received..:** 07/23/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.3 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.22 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**6.1**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**13**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**2.1**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072204-DCR-155

GC/MS Volatiles

Lot-Sample #...: A4G230184-005 **Work Order #...:** GLNWP1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**2.3**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	74	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072204-DCR-156

GC/MS Volatiles

Lot-Sample #...: A4G230184-006	**Work Order #...:** GLNWQ1AA	**Matrix.....:** WQ	
Date Sampled...: 07/22/04	**Date Received..:** 07/23/04		
Prep Date.....: 07/27/04	**Analysis Date..:** 07/27/04		
Prep Batch #...: 4209406			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**6.2 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.81 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**3.1 J**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072204-DCR-156

GC/MS Volatiles

Lot-Sample #...: A4G230184-006 **Work Order #...:** GLNWQ1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G230184
MB Lot-Sample #: A4G270000-406

Work Order #...: GLXV81AA

Prep Date.....: 07/27/04
Prep Batch #...: 4209406
Initial Wgt/Vol: 5 mL

Matrix.....: WATER

Final Wgt/Vol..: 5 mL

Analysis Date..: 07/27/04
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	**1.1 J**	**25**	**ug/L**	**SW846 8260B**
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G230184 **Work Order #...:** GLXV81AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G230184 **Work Order #...:** GLXV81AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G270000-406 GLXV81AD-LCSD
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	10	9.3	ug/L	93		SW846 8260B
	10	9.7	ug/L	97	4.5	SW846 8260B
Chlorobenzene	10	9.0	ug/L	90		SW846 8260B
	10	9.4	ug/L	94	4.5	SW846 8260B
1,1-Dichloroethene	10	9.5	ug/L	95		SW846 8260B
	10	10	ug/L	104	9.0	SW846 8260B
Toluene	10	8.8	ug/L	88		SW846 8260B
	10	9.3	ug/L	93	5.3	SW846 8260B
Trichloroethene	10	9.0	ug/L	90		SW846 8260B
	10	9.7	ug/L	97	7.0	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	103	(61 - 128)
Toluene-d8	91	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	83	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G230184 **Work Order #...:** GLXV81AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G270000-406 GLXV81AD-LCSD
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**93**	**(80 - 116)**			**SW846 8260B**
	97	**(80 - 116)**	**4.5**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**90**	**(76 - 117)**			**SW846 8260B**
	94	**(76 - 117)**	**4.5**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**95**	**(63 - 130)**			**SW846 8260B**
	104	**(63 - 130)**	**9.0**	**(0-20)**	**SW846 8260B**
Toluene	**88**	**(74 - 119)**			**SW846 8260B**
	93	**(74 - 119)**	**5.3**	**(0-20)**	**SW846 8260B**
Trichloroethene	**90**	**(75 - 122)**			**SW846 8260B**
	97	**(75 - 122)**	**7.0**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	103	(61 - 128)
Toluene-d8	91	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	83	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G230184 **Work Order #...:** GLL2A1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G220306-011 GLL2A1AD-MSD
Date Sampled...: 07/19/04 19:21 **Date Received..:** 07/21/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	10	6.8	ug/L	68 a		SW846 8260B
	ND	10	7.9	ug/L	79	15	SW846 8260B
Chlorobenzene	ND	10	6.6	ug/L	66 a		SW846 8260B
	ND	10	7.5	ug/L	75 a	12	SW846 8260B
1,1-Dichloroethene	ND	10	7.1	ug/L	71		SW846 8260B
	ND	10	8.6	ug/L	86	19	SW846 8260B
Toluene	ND	10	6.5	ug/L	65 a		SW846 8260B
	ND	10	7.4	ug/L	74	14	SW846 8260B
Trichloroethene	ND	10	6.6	ug/L	66		SW846 8260B
	ND	10	7.7	ug/L	77	15	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
	101	(61 - 128)
Toluene-d8	90	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	82	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G230184 **Work Order #...:** GLL2A1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G220306-011 GLL2A1AD-MSD
Date Sampled...: 07/19/04 19:21 **Date Received..:** 07/21/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**68 a**	**(78 - 118)**			**SW846 8260B**
	79	**(78 - 118)**	**15**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**66 a**	**(76 - 117)**			**SW846 8260B**
	75 a	**(76 - 117)**	**12**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**71**	**(62 - 130)**			**SW846 8260B**
	86	**(62 - 130)**	**19**	**(0-20)**	**SW846 8260B**
Toluene	**65 a**	**(70 - 119)**			**SW846 8260B**
	74	**(70 - 119)**	**14**	**(0-20)**	**SW846 8260B**
Trichloroethene	**66**	**(62 - 130)**			**SW846 8260B**
	77	**(62 - 130)**	**15**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
	101	(61 - 128)
Toluene-d8	90	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	82	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

SEVERN TRENT STL

END OF REPORT

REC'D CRA

AUG - 9 2004

CRA SDG G-19.

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A4G240144

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

Amy L. McCormick
Project Manager

August 4, 2004

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4G240144.
Name: GM GRAND RAPIDS.
Description
Event: VAS Sampling
Samples: 5 waters DCR 157-162
Analysis: TCL VOCs.

TAT: 48 HOUR TAT
Lab: STL-NC
Checked Against Preliminary Data:
Date: N/A Init.: N/A.
Date of Validation Memo: 10/21/04
Invoice Approval Date:
Comments:

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 48hr TAT	REMARKS
1	7/23/04	925	GW-17360-072304-DCR-157	ltw	2	X	X	
2		1015	-158		3	X	X	
3		1105	-155		3	X	X	
4		1215	-160		3	X	X	
5		1355	-161		3	X	X	
6	↓	—	-162	↓	1	X	X	
								CRA contact Paul Wiseman

TOTAL NUMBER OF CONTAINERS: 15

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
1. _____	7-23-04	1930	1. _____		
2. _____			2. _____		
3. _____			1. _____		

METHOD OF SHIPMENT: FED EX

AIR BILL No. 8936 7994 4248

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27158

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: _____

DATE: 7/24/04 TIME: 1000

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G240144

The following report contains the analytical results for five water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received July 24, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on July 28, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 4.1°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for batch(es) 4209406 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

The pH of the sample GW-17360-072304-DCR-157 was greater than 2. The sample(s) was analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G240144

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072304-DCR-157 07/23/04 09:25 001				
Acetone	8.9 J,B	25	ug/L	SW846 8260B
Benzene	0.34 J	1.0	ug/L	SW846 8260B
Chloroform	2.3	1.0	ug/L	SW846 8260B
Chloromethane	0.33 J	1.0	ug/L	SW846 8260B
Toluene	0.68 J	1.0	ug/L	SW846 8260B
GW-17360-072304-DCR-158 07/23/04 10:15 002				
Acetone	1.6 J	25	ug/L	SW846 8260B
Benzene	0.31 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.71 J	1.0	ug/L	SW846 8260B
Chloroform	4.9	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.28 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	0.37 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	0.75 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.26 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.45 J	1.0	ug/L	SW846 8260B
Toluene	0.84 J	1.0	ug/L	SW846 8260B
Trichloroethene	1.6	1.0	ug/L	SW846 8260B
GW-17360-072304-DCR-159 07/23/04 11:05 003				
Acetone	1.5 J	25	ug/L	SW846 8260B
Benzene	0.52 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.22 J	1.0	ug/L	SW846 8260B
2-Butanone	0.44 J	25	ug/L	SW846 8260B
Chloroform	1.5	1.0	ug/L	SW846 8260B
Cyclohexane	0.40 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	0.50 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	1.2	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	0.33 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.34 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.58 J	1.0	ug/L	SW846 8260B
Toluene	1.2	1.0	ug/L	SW846 8260B
Trichloroethene	2.7	1.0	ug/L	SW846 8260B
GW-17360-072304-DCR-160 07/23/04 12:15 004				
Acetone	3.0 J,B	25	ug/L	SW846 8260B
Bromodichloromethane	3.4	1.0	ug/L	SW846 8260B
2-Butanone	0.54 J	25	ug/L	SW846 8260B
Chloroform	16	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.92 J	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G240144

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072304-DCR-160 07/23/04 12:15 004				
Tetrachloroethene	0.47 J	1.0	ug/L	SW846 8260B
Toluene	1.3	1.0	ug/L	SW846 8260B
Trichloroethene	0.46 J	1.0	ug/L	SW846 8260B
GW-17360-072304-DCR-161 07/23/04 13:55 005				
Acetone	3.3 J,B	25	ug/L	SW846 8260B
Bromodichloromethane	5.7	1.0	ug/L	SW846 8260B
Chloroform	16	1.0	ug/L	SW846 8260B
Dibromochloromethane	1.9	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	0.67 J	50	ug/L	SW846 8260B
Toluene	1.4	1.0	ug/L	SW846 8260B
GW-17360-072304-DCR-162 07/23/04 006				
Acetone	6.2 J,B	25	ug/L	SW846 8260B
2-Butanone	3.7 J	25	ug/L	SW846 8260B
1,1-Dichloroethene	0.50 J	1.0	ug/L	SW846 8260B
Methylene chloride	0.58 J	5.0	ug/L	SW846 8260B
Toluene	0.24 J	1.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G240144

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G240144

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GLRMD	001	GW-17360-072304-DCR-157	07/23/04	09:25
GLRMG	002	GW-17360-072304-DCR-158	07/23/04	10:15
GLRMH	003	GW-17360-072304-DCR-159	07/23/04	11:05
GLRMJ	004	GW-17360-072304-DCR-160	07/23/04	12:15
GLRMK	005	GW-17360-072304-DCR-161	07/23/04	13:55
GLRMM	006	GW-17360-072304-DCR-162	07/23/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL North Canton

REFERENCE NUMBER: 17360-07

PROJECT NAME: Gm - Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ. No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOC	48hr TAT	REMARKS
1	7/23/04	925	GW-17360-072304-DXR-157	H2O	2	X	X	
2		1015	-158		3	X	X	
3		1105	-155		3	X	X	
4		1215	-160		3	X	X	
5		1355	-161		3	X	X	
6		—	-162		1	X	X	
								CRA contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		15			

RELINQUISHED BY: 1. _____	DATE: 7-23-04 TIME: 1930	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 8936 7994 4248

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27158

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: _____
DATE: 7/24/04 TIME: 1000

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

15

STL North Canton

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G240144

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GLRMD	SANDERSA	7/24/04	Yes		Storage	
GLRMG	SANDERSA	7/24/04	Yes		Storage	
GLRMH	SANDERSA	7/24/04	Yes		Storage	
GLRMJ	SANDERSA	7/24/04	Yes		Storage	
GLRMK	SANDERSA	7/24/04	Yes		Storage	
GLRMM	SANDERSA	7/24/04	Yes		Storage	

STL Cooler Receipt Form/Narrative — Lot Number: 240144

North Canton Facility

Client: CT+ Project: GW Cond Comp Quote#:

Cooler Received on: 7/24/04 Opened on: 7/24/04 by: (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:

STL Cooler No#_____ Foam Box ☐ Client Cooler ☑ Other ☐

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity_____
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☑
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☑ None ☐ Other :_____
6. Cooler temperature upon receipt 4.1 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☑ No ☐ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM _____ Date:_____ by:_____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

√	

1. CHAIN OF CUSTODY

The following discrepancies occurred:

No Sample times on any of the labels - log per COC

2. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*

Sample(s) 1x -157 were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072304-DCR-157

GC/MS Volatiles

Lot-Sample #...: A4G240144-001 **Work Order #...:** GLRMD1AA **Matrix.....:** WG
Date Sampled...: 07/23/04 09:25 **Date Received..:** 07/24/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**8.9 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.34 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.3**	**1.0**	**ug/L**	**0.16**
Chloromethane	**0.33 J**	**1.0**	**ug/L**	**0.14**
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072304-DCR-157

GC/MS Volatiles

Lot-Sample #...: A4G240144-001 Work Order #...: GLRMD1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.68 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072304-DCR-158

GC/MS Volatiles

Lot-Sample #...: A4G240144-002 **Work Order #...:** GLRMG1AA **Matrix.....:** WG
Date Sampled...: 07/23/04 10:15 **Date Received..:** 07/24/04
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210204
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.6 J**	**25**	**ug/L**	**0.74**
Benzene	**0.31 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.71 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**4.9**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**0.28 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	**0.37 J**	**1.0**	**ug/L**	**0.21**
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**0.75 J**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.26 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072304-DCR-158

GC/MS Volatiles

Lot-Sample #...: A4G240144-002 **Work Order #...:** GLRMG1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.45 J**	**1.0**	**ug/L**	**0.19**
Toluene	**0.84 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**1.6**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072304-DCR-159

GC/MS Volatiles

Lot-Sample #...: A4G240144-003 **Work Order #...:** GLRMH1AA **Matrix.....:** WG
Date Sampled...: 07/23/04 11:05 **Date Received..:** 07/24/04
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210204
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.5 J**	**25**	**ug/L**	**0.74**
Benzene	**0.52 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.22 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.44 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.5**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.40 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	**0.50 J**	**1.0**	**ug/L**	**0.21**
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**1.2**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	**0.33 J**	**1.0**	**ug/L**	**0.16**
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.34 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072304-DCR-159

GC/MS Volatiles

Lot-Sample #...: A4G240144-003 **Work Order #...:** GLRMH1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.58 J**	**1.0**	**ug/L**	**0.19**
Toluene	**1.2**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**2.7**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072304-DCR-160

GC/MS Volatiles

Lot-Sample #...: A4G240144-004 **Work Order #...:** GLRMJ1AA **Matrix.....:** WG
Date Sampled...: 07/23/04 12:15 **Date Received..:** 07/24/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.0 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**3.4**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.54 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**16**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**0.92 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072304-DCR-160

GC/MS Volatiles

Lot-Sample #...: A4G240144-004 **Work Order #...:** GLRMJ1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.47 J**	**1.0**	**ug/L**	**0.19**
Toluene	**1.3**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.46 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072304-DCR-161

GC/MS Volatiles

Lot-Sample #...: A4G240144-005 **Work Order #...:** GLRMK1AA **Matrix.....:** WG
Date Sampled...: 07/23/04 13:55 **Date Received..:** 07/24/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.3 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**5.7**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**16**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**1.9**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	**0.67 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072304-DCR-161

GC/MS Volatiles

Lot-Sample #...: A4G240144-005 Work Order #...: GLRMK1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.4**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072304-DCR-162

GC/MS Volatiles

Lot-Sample #...: A4G240144-006 **Work Order #...:** GLRMM1AA **Matrix.....:** WQ
Date Sampled...: 07/23/04 **Date Received..:** 07/24/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**6.2 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**3.7 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.50 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**0.58 J**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072304-DCR-162

GC/MS Volatiles

Lot-Sample #...: A4G240144-006 **Work Order #...:** GLRMM1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.24 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	74	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GLXV81AA **Matrix.....:** WATER
MB Lot-Sample #: A4G270000-406

Prep Date.....: 07/27/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/27/04 **Prep Batch #...:** 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	**1.1 J**	**25**	**ug/L**	**SW846 8260B**
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GLXV81AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GL1NG1AA **Matrix.....:** WATER
MB Lot-Sample #: A4G280000-204

Prep Date.....: 07/28/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/28/04 **Prep Batch #...:** 4210204
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GL1NG1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GLXV81AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G270000-406 GLXV81AD-LCSD
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**9.3**	**ug/L**	**93**		**SW846 8260B**
	10	**9.7**	**ug/L**	**97**	**4.5**	**SW846 8260B**
Chlorobenzene	**10**	**9.0**	**ug/L**	**90**		**SW846 8260B**
	10	**9.4**	**ug/L**	**94**	**4.5**	**SW846 8260B**
1,1-Dichloroethene	**10**	**9.5**	**ug/L**	**95**		**SW846 8260B**
	10	**10**	**ug/L**	**104**	**9.0**	**SW846 8260B**
Toluene	**10**	**8.8**	**ug/L**	**88**		**SW846 8260B**
	10	**9.3**	**ug/L**	**93**	**5.3**	**SW846 8260B**
Trichloroethene	**10**	**9.0**	**ug/L**	**90**		**SW846 8260B**
	10	**9.7**	**ug/L**	**97**	**7.0**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	103	(61 - 128)
Toluene-d8	91	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	83	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GLXV81AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G270000-406 GLXV81AD-LCSD
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**93**	**(80 - 116)**			**SW846 8260B**
	97	**(80 - 116)**	**4.5**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**90**	**(76 - 117)**			**SW846 8260B**
	94	**(76 - 117)**	**4.5**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**95**	**(63 - 130)**			**SW846 8260B**
	104	**(63 - 130)**	**9.0**	**(0-20)**	**SW846 8260B**
Toluene	**88**	**(74 - 119)**			**SW846 8260B**
	93	**(74 - 119)**	**5.3**	**(0-20)**	**SW846 8260B**
Trichloroethene	**90**	**(75 - 122)**			**SW846 8260B**
	97	**(75 - 122)**	**7.0**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	103	(61 - 128)
Toluene-d8	91	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	83	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GL1NG1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G280000-204 GL1NG1AD-LCSD
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210204
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	10	**9.9**	**ug/L**	**99**	**0.40**	**SW846 8260B**
Chlorobenzene	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	10	**9.7**	**ug/L**	**97**	**0.57**	**SW846 8260B**
1,1-Dichloroethene	**10**	**10**	**ug/L**	**101**		**SW846 8260B**
	10	**9.7**	**ug/L**	**97**	**3.4**	**SW846 8260B**
Toluene	**10**	**9.6**	**ug/L**	**96**		**SW846 8260B**
	10	**9.8**	**ug/L**	**98**	**1.1**	**SW846 8260B**
Trichloroethene	**10**	**9.7**	**ug/L**	**97**		**SW846 8260B**
	10	**10**	**ug/L**	**101**	**4.8**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
	94	(61 - 128)
Toluene-d8	99	(76 - 110)
	100	(76 - 110)
4-Bromofluorobenzene	103	(74 - 116)
	100	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GL1NG1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G280000-204 GL1NG1AD-LCSD
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210204
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**98**	**(80 - 116)**			**SW846 8260B**
	99	**(80 - 116)**	**0.40**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**98**	**(76 - 117)**			**SW846 8260B**
	97	**(76 - 117)**	**0.57**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**101**	**(63 - 130)**			**SW846 8260B**
	97	**(63 - 130)**	**3.4**	**(0-20)**	**SW846 8260B**
Toluene	**96**	**(74 - 119)**			**SW846 8260B**
	98	**(74 - 119)**	**1.1**	**(0-20)**	**SW846 8260B**
Trichloroethene	**97**	**(75 - 122)**			**SW846 8260B**
	101	**(75 - 122)**	**4.8**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
	94	(61 - 128)
Toluene-d8	99	(76 - 110)
	100	(76 - 110)
4-Bromofluorobenzene	103	(74 - 116)
	100	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GLL2A1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G220306-011 GLL2A1AD-MSD
Date Sampled...: 07/19/04 19:21 **Date Received..:** 07/21/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**10**	**6.8**	**ug/L**	**68 a**		**SW846 8260B**
	ND	**10**	**7.9**	**ug/L**	**79**	**15**	**SW846 8260B**
Chlorobenzene	**ND**	**10**	**6.6**	**ug/L**	**66 a**		**SW846 8260B**
	ND	**10**	**7.5**	**ug/L**	**75 a**	**12**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10**	**7.1**	**ug/L**	**71**		**SW846 8260B**
	ND	**10**	**8.6**	**ug/L**	**86**	**19**	**SW846 8260B**
Toluene	**ND**	**10**	**6.5**	**ug/L**	**65 a**		**SW846 8260B**
	ND	**10**	**7.4**	**ug/L**	**74**	**14**	**SW846 8260B**
Trichloroethene	**ND**	**10**	**6.6**	**ug/L**	**66**		**SW846 8260B**
	ND	**10**	**7.7**	**ug/L**	**77**	**15**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
	101	(61 - 128)
Toluene-d8	90	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	82	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GLL2A1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G220306-011 GLL2A1AD-MSD
Date Sampled...: 07/19/04 19:21 **Date Received..:** 07/21/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**68 a**	**(78 - 118)**			**SW846 8260B**
	79	**(78 - 118)**	**15**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**66 a**	**(76 - 117)**			**SW846 8260B**
	75 a	**(76 - 117)**	**12**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**71**	**(62 - 130)**			**SW846 8260B**
	86	**(62 - 130)**	**19**	**(0-20)**	**SW846 8260B**
Toluene	**65 a**	**(70 - 119)**			**SW846 8260B**
	74	**(70 - 119)**	**14**	**(0-20)**	**SW846 8260B**
Trichloroethene	**66**	**(62 - 130)**			**SW846 8260B**
	77	**(62 - 130)**	**15**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
	101	(61 - 128)
Toluene-d8	90	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	82	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GLTVG1AE-MS **Matrix.....:** WATER
GLTVG1AF-MSD
MS Lot-Sample #: A4G260107-001
Date Sampled...: 07/22/04 12:00 **Date Received..:** 07/24/04
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210204
Dilution Factor: 1000 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**470**	**10000**	**9900**	**ug/L**	**94**		**SW846 8260B**
	470	**10000**	**10000**	**ug/L**	**98**	**4.0**	**SW846 8260B**
Chlorobenzene	**ND**	**10000**	**9800**	**ug/L**	**98**		**SW846 8260B**
	ND	**10000**	**9700**	**ug/L**	**97**	**0.70**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10000**	**9200**	**ug/L**	**92**		**SW846 8260B**
	ND	**10000**	**8800**	**ug/L**	**88**	**4.5**	**SW846 8260B**
Toluene	**1200**	**10000**	**10000**	**ug/L**	**93**		**SW846 8260B**
	1200	**10000**	**11000**	**ug/L**	**96**	**3.4**	**SW846 8260B**
Trichloroethene	**ND**	**10000**	**9800**	**ug/L**	**98**		**SW846 8260B**
	ND	**10000**	**10000**	**ug/L**	**100**	**1.3**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	94	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
	92	(61 - 128)
Toluene-d8	98	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)
	101	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A4G240144	**Work Order #...:**	GLTVG1AE-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A4G260107-001		GLTVG1AF-MSD		
Date Sampled...:	07/22/04 12:00	**Date Received..:**	07/24/04		
Prep Date.....:	07/28/04	**Analysis Date..:**	07/28/04		
Prep Batch #...:	4210204				
Dilution Factor:	1000	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**94**	**(78 - 118)**			**SW846 8260B**
	98	**(78 - 118)**	**4.0**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**98**	**(76 - 117)**			**SW846 8260B**
	97	**(76 - 117)**	**0.70**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**92**	**(62 - 130)**			**SW846 8260B**
	88	**(62 - 130)**	**4.5**	**(0-20)**	**SW846 8260B**
Toluene	**93**	**(70 - 119)**			**SW846 8260B**
	96	**(70 - 119)**	**3.4**	**(0-20)**	**SW846 8260B**
Trichloroethene	**98**	**(62 - 130)**			**SW846 8260B**
	100	**(62 - 130)**	**1.3**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	94	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
	92	(61 - 128)
Toluene-d8	98	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)
	101	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

REC'D CRA
AUG 19 2004
G-20

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A4G270183

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: 4G270183
Name: GM GR
Description
Event: Quarterly GW
Samples: 8 water
Analysis: Tcl voc

TAT: 2 day
Lab: STL
Checked Against Preliminary Data:
Date: — Init.: KAK
Date of Validation Memo: 10/11/04
Invoice Approval Date: _____
Comments: _____

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

for: Rebecca Stutt
Amy L. McCormick
Project Manager

August 17, 2004

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 48hr TAT	REMARKS
1	7/26/04	1030	GW-17360-072604-DCR-163	H2O	3	X	X	
2		1120	-164		3	X	X	
3		1215	-165		3	X	X	
4		1315	-166		9	X	X	MS/MSD
5		1445	-167		3	X	X	
6		1645	-168		3	X	X	
7		1750	-169		3	X	X	
8		—	-170		1	X	X	
								CRA Contact Paul Wiseman
TOTAL NUMBER OF CONTAINERS					28			

RELINQUISHED BY: 1. [signature]	DATE: 7-26-04 TIME: 1930	RECEIVED BY: 1.	DATE: TIME:
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No. 839355888875

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

25941

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: Brandi Slate

DATE: 7/27/04 TIME: 9:45

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G270183

The following report contains the analytical results for eight water samples submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received July 27, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on July 29, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 4.5°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The pH of the sample GW-17360-072604-DCR-164 was greater than 2. The sample(s) was analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G270183

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072604-DCR-163 07/26/04 10:30 001				
Acetone	1.5 J	25	ug/L	SW846 8260B
Benzene	0.49 J	1.0	ug/L	SW846 8260B
2-Butanone	0.78 J	25	ug/L	SW846 8260B
Carbon disulfide	1.3 J	5.0	ug/L	SW846 8260B
Cyclohexane	0.39 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.36 J	1.0	ug/L	SW846 8260B
Isopropylbenzene	0.46 J,B	5.0	ug/L	SW846 8260B
Methylcyclohexane	0.50 J	1.0	ug/L	SW846 8260B
Toluene	1.1	1.0	ug/L	SW846 8260B
GW-17360-072604-DCR-164 07/26/04 11:20 002				
Acetone	6.9 J	25	ug/L	SW846 8260B
Benzene	0.57 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	1.3	1.0	ug/L	SW846 8260B
2-Butanone	2.1 J	25	ug/L	SW846 8260B
Chloroform	4.2	1.0	ug/L	SW846 8260B
Cyclohexane	0.43 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.53 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.44 J	1.0	ug/L	SW846 8260B
Isopropylbenzene	0.46 J,B	5.0	ug/L	SW846 8260B
Methylcyclohexane	0.53 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	1.5 J	50	ug/L	SW846 8260B
Toluene	4.6	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.45 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.53 J	1.0	ug/L	SW846 8260B
Xylenes (total)	0.85 J	3.0	ug/L	SW846 8260B
GW-17360-072604-DCR-165 07/26/04 12:15 003				
Benzene	0.45 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.20 J	1.0	ug/L	SW846 8260B
2-Butanone	0.41 J	25	ug/L	SW846 8260B
Chloroform	1.2	1.0	ug/L	SW846 8260B
Chloromethane	0.16 J	1.0	ug/L	SW846 8260B
Cyclohexane	0.30 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	0.46 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.28 J	1.0	ug/L	SW846 8260B
Isopropylbenzene	0.46 J,B	5.0	ug/L	SW846 8260B
Methylcyclohexane	0.57 J	1.0	ug/L	SW846 8260B
Toluene	1.3	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	5.4	1.0	ug/L	SW846 8260B
Trichloroethene	11	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G270183

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072604-DCR-166 07/26/04 13:15 004				
Bromodichloromethane	0.23 J	1.0	ug/L	SW846 8260B
Chloroform	1.4	1.0	ug/L	SW846 8260B
Toluene	0.23 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	2.7	1.0	ug/L	SW846 8260B
Trichloroethene	0.90 J	1.0	ug/L	SW846 8260B
GW-17360-072604-DCR-167 07/26/04 14:45 005				
Acetone	0.94 J	25	ug/L	SW846 8260B
Benzene	0.31 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	1.0	1.0	ug/L	SW846 8260B
2-Butanone	0.62 J	25	ug/L	SW846 8260B
Chloroform	2.7	1.0	ug/L	SW846 8260B
Cyclohexane	0.18 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.39 J	1.0	ug/L	SW846 8260B
Isopropylbenzene	0.46 J,B	5.0	ug/L	SW846 8260B
Toluene	3.8	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	0.91 J,B	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.96 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.86 J	1.0	ug/L	SW846 8260B
GW-17360-072604-DCR-168 07/26/04 16:45 006				
Acetone	0.90 J	25	ug/L	SW846 8260B
Benzene	0.28 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.76 J	1.0	ug/L	SW846 8260B
2-Butanone	0.58 J	25	ug/L	SW846 8260B
Chloroform	3.2	1.0	ug/L	SW846 8260B
Chloromethane	0.14 J	1.0	ug/L	SW846 8260B
Cyclohexane	0.14 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	0.35 J	50	ug/L	SW846 8260B
Toluene	3.8	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	1.0	1.0	ug/L	SW846 8260B
Trichloroethene	0.73 J	1.0	ug/L	SW846 8260B
GW-17360-072604-DCR-169 07/26/04 17:50 007				
Acetone	1.5 J	25	ug/L	SW846 8260B
Benzene	0.31 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.69 J	1.0	ug/L	SW846 8260B
2-Butanone	0.77 J	25	ug/L	SW846 8260B
Chloroform	4.3	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G270183

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072604-DCR-169 07/26/04 17:50 007				
Cyclohexane	0.18 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	0.39 J	50	ug/L	SW846 8260B
Toluene	4.4	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.68 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.79 J	1.0	ug/L	SW846 8260B
GW-17360-072604-DCR-170 07/26/04 008				
Acetone	1.5 J	25	ug/L	SW846 8260B
2-Butanone	1.4 J	25	ug/L	SW846 8260B
Carbon disulfide	0.48 J	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	0.64 J	1.0	ug/L	SW846 8260B
Toluene	0.21 J	1.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G270183

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G270183

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GLW82	001	GW-17360-072604-DCR-163	07/26/04	10:30
GLW84	002	GW-17360-072604-DCR-164	07/26/04	11:20
GLW85	003	GW-17360-072604-DCR-165	07/26/04	12:15
GLW86	004	GW-17360-072604-DCR-166	07/26/04	13:15
GLW88	005	GW-17360-072604-DCR-167	07/26/04	14:45
GLW89	006	GW-17360-072604-DCR-168	07/26/04	16:45
GLW9A	007	GW-17360-072604-DCR-169	07/26/04	17:50
GLW9C	008	GW-17360-072604-DCR-170	07/26/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ. No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 4 Nat. TAL	REMARKS
1	7/26/04	1030	GW-17360-072604-DCR-163	H2O	3	X	X	
2		1120	-164		3	X	X	
3		1215	-165		3	X	X	
4		1305	-166		9	X	X	
5		1495	-167		3	X	X	MS/MSD
6		1645	-168		3	X	X	
7		1750	-169		3	X	X	
8		—	-170		1	X	X	
								CRA Contact Paul Eibsen
TOTAL NUMBER OF CONTAINERS					28			

RELINQUISHED BY: 1. _____	DATE: 7-26-04 TIME: 1930	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 839355988875

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

25941

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: Brandi Stitt
DATE: 7/27/04 TIME: 9:45

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

STL North Canton

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G270183

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GLW82	STILLERJ	7/27/04	Yes		Storage	
GLW84	STILLERJ	7/27/04	Yes		Storage	
GLW85	STILLERJ	7/27/04	Yes		Storage	
GLW86	STILLERJ	7/27/04	Yes		Storage	
GLW88	STILLERJ	7/27/04	Yes		Storage	
GLW89	STILLERJ	7/27/04	Yes		Storage	
GLW9A	STILLERJ	7/27/04	Yes		Storage	
GLW9C	STILLERJ	7/27/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** 446270183

North Canton Facility

Client: C2A Project: GM-Grand Rapids Quote#:

Cooler Received on: 7/27/04 Opened on: 7/27/04 by: (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:

STL Cooler No# M1-235 Foam Box ☐ Client Cooler ☐ Other

1. Were custody seals on the outside of the cooler? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☑
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other :
6. Cooler temperature upon receipt 4.5 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☒
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☒
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

√	
	1. CHAIN OF CUSTODY
	The following discrepancies occurred:
	2. SAMPLE CONDITION
	Sample(s) were received after the recommended holding time had expired.
	Sample(s) were received in a broken container.
	3. SAMPLE PRESERVATION
	Sample(s) were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	Sample(s) were received with bubble > 6 mm in diameter (cc: PM)
	4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072604-DCR-163

GC/MS Volatiles

Lot-Sample #...: A4G270183-001 Work Order #...: GLW821AA Matrix.....: WG
Date Sampled...: 07/26/04 10:30 Date Received..: 07/27/04
Prep Date.....: 07/28/04 Analysis Date..: 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.5 J**	**25**	**ug/L**	**0.74**
Benzene	**0.49 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.78 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	**1.3 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.39 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.36 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	**0.46 J,B**	**5.0**	**ug/L**	**0.15**
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.50 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072604-DCR-163

GC/MS Volatiles

Lot-Sample #...: A4G270183-001 **Work Order #...:** GLW821AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.1**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-164

GC/MS Volatiles

Lot-Sample #...: A4G270183-002 Work Order #...: GLW841AA Matrix.....: WG
Date Sampled...: 07/26/04 11:20 Date Received..: 07/27/04
Prep Date.....: 07/28/04 Analysis Date..: 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**6.9 J**	**25**	**ug/L**	**0.74**
Benzene	**0.57 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.3**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**2.1 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**4.2**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.43 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**0.53 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.44 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	**0.46 J,B**	**5.0**	**ug/L**	**0.15**
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.53 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	**1.5 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072604-DCR-164

GC/MS Volatiles

Lot-Sample #...: A4G270183-002 **Work Order #...:** GLW841AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**4.6**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.45 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.53 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	**0.85 J**	**3.0**	**ug/L**	**0.44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-165

GC/MS Volatiles

Lot-Sample #...: A4G270183-003 **Work Order #...:** GLW851AA **Matrix.....:** WG
Date Sampled...: 07/26/04 12:15 **Date Received..:** 07/27/04
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	**0.45 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.20 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.41 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.2**	**1.0**	**ug/L**	**0.16**
Chloromethane	**0.16 J**	**1.0**	**ug/L**	**0.14**
Cyclohexane	**0.30 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.46 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.28 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	**0.46 J,B**	**5.0**	**ug/L**	**0.15**
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.57 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-165

GC/MS Volatiles

Lot-Sample #...: A4G270183-003 **Work Order #...:** GLW851AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.3**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**5.4**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**11**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-166

GC/MS Volatiles

Lot-Sample #...: A4G270183-004 **Work Order #...:** GLW861AA **Matrix.....:** WG
Date Sampled...: 07/26/04 13:15 **Date Received..:** 07/27/04
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**0.23 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.4**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072604-DCR-166

GC/MS Volatiles

Lot-Sample #...: A4G270183-004 **Work Order #...:** GLW861AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.23 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**2.7**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.90 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-167

GC/MS Volatiles

Lot-Sample #...: A4G270183-005 Work Order #...: GLW881AA Matrix.....: WG
Date Sampled...: 07/26/04 14:45 Date Received..: 07/27/04
Prep Date.....: 07/28/04 Analysis Date..: 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**0.94 J**	**25**	**ug/L**	**0.74**
Benzene	**0.31 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.0**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.62 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.7**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.18 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**0.39 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	**0.46 J,B**	**5.0**	**ug/L**	**0.15**
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072604-DCR-167

GC/MS Volatiles

Lot-Sample #...: A4G270183-005 Work Order #...: GLW881AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**3.8**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	**0.91 J,B**	**5.0**	**ug/L**	**0.19**
1,1,1-Trichloroethane	**0.96 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.86 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072604-DCR-168

GC/MS Volatiles

Lot-Sample #...: A4G270183-006 Work Order #...: GLW891AA Matrix.....: WG
Date Sampled...: 07/26/04 16:45 Date Received..: 07/27/04
Prep Date.....: 07/28/04 Analysis Date..: 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**0.90 J**	**25**	**ug/L**	**0.74**
Benzene	**0.28 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.76 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.58 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**3.2**	**1.0**	**ug/L**	**0.16**
Chloromethane	**0.14 J**	**1.0**	**ug/L**	**0.14**
Cyclohexane	**0.14 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	**0.35 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-168

GC/MS Volatiles

Lot-Sample #...: A4G270183-006 **Work Order #...:** GLW891AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**3.8**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**1.0**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.73 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072604-DCR-169

GC/MS Volatiles

Lot-Sample #...: A4G270183-007 Work Order #...: GLW9A1AA Matrix.....: WG
Date Sampled...: 07/26/04 17:50 Date Received..: 07/27/04
Prep Date.....: 07/28/04 Analysis Date..: 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.5 J**	**25**	**ug/L**	**0.74**
Benzene	**0.31 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.69 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.77 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**4.3**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.18 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	**0.39 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-169

GC/MS Volatiles

Lot-Sample #...: A4G270183-007 **Work Order #...:** GLW9A1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**4.4**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.68 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.79 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-170

GC/MS Volatiles

Lot-Sample #...: A4G270183-008 Work Order #...: GLW9C1AA Matrix.....: WG
Date Sampled...: 07/26/04 Date Received..: 07/27/04
Prep Date.....: 07/28/04 Analysis Date..: 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.5 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**1.4 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	**0.48 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.64 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-170

GC/MS Volatiles

Lot-Sample #...: A4G270183-008 **Work Order #...:** GLW9C1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.21 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G270183 **Work Order #...:** GL1901AA **Matrix.....:** WATER
MB Lot-Sample #: A4G280000-345

Prep Date.....: 07/28/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/28/04 **Prep Batch #...:** 4210345
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	**0.44 J**	**5.0**	**ug/L**	**SW846 8260B**
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G270183 **Work Order #...:** GL1901AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	**0.92 J**	**5.0**	**ug/L**	**SW846 8260B**
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G270183 **Work Order #...:** GL1901AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G280000-345 GL1901AD-LCSD
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	10	**9.9**	**ug/L**	**99**	**0.76**	**SW846 8260B**
Chlorobenzene	**10**	**9.7**	**ug/L**	**97**		**SW846 8260B**
	10	**10**	**ug/L**	**101**	**3.2**	**SW846 8260B**
1,1-Dichloroethene	**10**	**10**	**ug/L**	**104**		**SW846 8260B**
	10	**11**	**ug/L**	**106**	**2.2**	**SW846 8260B**
Toluene	**10**	**10**	**ug/L**	**103**		**SW846 8260B**
	10	**10**	**ug/L**	**104**	**1.2**	**SW846 8260B**
Trichloroethene	**10**	**10**	**ug/L**	**101**		**SW846 8260B**
	10	**10**	**ug/L**	**100**	**1.5**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	86	(73 - 122)
1,2-Dichloroethane-d4	87	(61 - 128)
	86	(61 - 128)
Toluene-d8	92	(76 - 110)
	93	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)
	96	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G270183 **Work Order #...:** GL1901AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G280000-345 GL1901AD-LCSD
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**98**	**(80 - 116)**			**SW846 8260B**
	99	**(80 - 116)**	**0.76**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**97**	**(76 - 117)**			**SW846 8260B**
	101	**(76 - 117)**	**3.2**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**104**	**(63 - 130)**			**SW846 8260B**
	106	**(63 - 130)**	**2.2**	**(0-20)**	**SW846 8260B**
Toluene	**103**	**(74 - 119)**			**SW846 8260B**
	104	**(74 - 119)**	**1.2**	**(0-20)**	**SW846 8260B**
Trichloroethene	**101**	**(75 - 122)**			**SW846 8260B**
	100	**(75 - 122)**	**1.5**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	86	(73 - 122)
1,2-Dichloroethane-d4	87	(61 - 128)
	86	(61 - 128)
Toluene-d8	92	(76 - 110)
	93	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)
	96	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G270183 **Work Order #...:** GLW861AC-MS **Matrix.....:** WG
MS Lot-Sample #: A4G270183-004 GLW861AD-MSD
Date Sampled...: 07/26/04 13:15 **Date Received..:** 07/27/04
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**10**	**9.5**	**ug/L**	**95**		**SW846 8260B**
	ND	**10**	**9.5**	**ug/L**	**95**	**0.64**	**SW846 8260B**
Chlorobenzene	**ND**	**10**	**9.5**	**ug/L**	**95**		**SW846 8260B**
	ND	**10**	**9.5**	**ug/L**	**95**	**0.49**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10**	**11**	**ug/L**	**105**		**SW846 8260B**
	ND	**10**	**11**	**ug/L**	**105**	**0.06**	**SW846 8260B**
Toluene	**0.23**	**10**	**10**	**ug/L**	**98**		**SW846 8260B**
	0.23	**10**	**10**	**ug/L**	**100**	**1.4**	**SW846 8260B**
Trichloroethene	**0.90**	**10**	**10**	**ug/L**	**95**		**SW846 8260B**
	0.90	**10**	**11**	**ug/L**	**97**	**2.2**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	94	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
	87	(61 - 128)
Toluene-d8	94	(76 - 110)
	93	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)
	97	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G270183 **Work Order #...:** GLW861AC-MS **Matrix.....:** WG
MS Lot-Sample #: A4G270183-004 GLW861AD-MSD
Date Sampled...: 07/26/04 13:15 **Date Received..:** 07/27/04
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**95**	**(78 - 118)**			**SW846 8260B**
	95	**(78 - 118)**	**0.64**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**95**	**(76 - 117)**			**SW846 8260B**
	95	**(76 - 117)**	**0.49**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**105**	**(62 - 130)**			**SW846 8260B**
	105	**(62 - 130)**	**0.06**	**(0-20)**	**SW846 8260B**
Toluene	**98**	**(70 - 119)**			**SW846 8260B**
	100	**(70 - 119)**	**1.4**	**(0-20)**	**SW846 8260B**
Trichloroethene	**95**	**(62 - 130)**			**SW846 8260B**
	97	**(62 - 130)**	**2.2**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	94	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
	87	(61 - 128)
Toluene-d8	94	(76 - 110)
	93	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)
	97	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

REC'D CRA
AUG 19 2004
G-20
G-21

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM GRAND RAPIDS

Lot #: A4G280151

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4G280151
Name: GM - GR
Description
Event: Quarterly GW
Samples: 8 water
Analysis: TCL VOC
TAT: 2 day
Lab: STL
Checked Against Preliminary Data:
Date: _____ Init.: KAK
Date of Validation Memo: 10/21/04
Invoice Approval Date: _____
Comments: _____

for: Rebecca Stuart
Amy L. McCormick
Project Manager

August 17, 2004

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL -North Canton

REFERENCE NUMBER: 173600-09

PROJECT NAME: GM Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 48 hr TAT	REMARKS
1	7/27/04	845	GW-17360-072704-DCR-171	H2O	3	X	X	
2		1425	-172		2	X	X	
3		1510	-173		2	X	X	
4		1605	-174		2	X	X	
5		1655	-175		2	X	X	
6		1700	-176		2	X	X	
7		1755	-177		2	X	X	
8		—	-178		1	X	X	
								CRA Contact Paul Wiseman

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY: 1. _____	DATE: 7-27-04 TIME: 1900	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No. 8393 5588 8864

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27159

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: _____

DATE: 7/28/04 TIME: 9:35

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G280151

The following report contains the analytical results for eight water samples submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM Grand Rapids Site, project number 17360-09. The samples were received July 28, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on July 30, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 5.4°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The pH of the sample GW-17360-072704-DCR-177 was greater than 2. The sample(s) was analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

Y:\Barb\STL headers\Qc846-Narrative_012804.doc, Revised: 01/28/04 DJL

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G280151

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072704-DCR-171 07/27/04 08:45 001				
Acetone	4.9 J,B	25	ug/L	SW846 8260B
Benzene	0.54 J	1.0	ug/L	SW846 8260B
2-Butanone	1.1 J	25	ug/L	SW846 8260B
Chloroform	3.8	1.0	ug/L	SW846 8260B
Ethylbenzene	0.28 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	0.43 J	50	ug/L	SW846 8260B
Toluene	4.1	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.51 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.72 J	1.0	ug/L	SW846 8260B
GW-17360-072704-DCR-172 07/27/04 14:25 002				
Acetone	1.0 J,B	25	ug/L	SW846 8260B
Benzene	0.48 J	1.0	ug/L	SW846 8260B
Cyclohexane	0.36 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.25 J	1.0	ug/L	SW846 8260B
Toluene	1.0	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.73 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.93 J	1.0	ug/L	SW846 8260B
GW-17360-072704-DCR-173 07/27/04 15:10 003				
cis-1,2-Dichloroethene	0.82 J	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	2.7 J	5.0	ug/L	SW846 8260B
Toluene	0.24 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.21 J	1.0	ug/L	SW846 8260B
Trichloroethene	4.5	1.0	ug/L	SW846 8260B
GW-17360-072704-DCR-174 07/27/04 16:05 004				
Acetone	2.0 J,B	50	ug/L	SW846 8260B
Benzene	0.45 J	2.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	57	2.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	4.9	2.0	ug/L	SW846 8260B
Methyl tert-butyl ether	2.3 J	10	ug/L	SW846 8260B
Toluene	0.92 J	2.0	ug/L	SW846 8260B
Trichloroethene	23	2.0	ug/L	SW846 8260B
GW-17360-072704-DCR-175 07/27/04 16:55 005				
Acetone	2.1 J,B	42	ug/L	SW846 8260B
Chloroform	0.42 J	1.7	ug/L	SW846 8260B
cis-1,2-Dichloroethene	38	1.7	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G280151

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072704-DCR-175 07/27/04 16:55 005				
trans-1,2-Dichloroethene	4.4	1.7	ug/L	SW846 8260B
Methyl tert-butyl ether	1.9 J	8.4	ug/L	SW846 8260B
Tetrachloroethene	17	1.7	ug/L	SW846 8260B
Toluene	0.61 J	1.7	ug/L	SW846 8260B
Trichloroethene	34	1.7	ug/L	SW846 8260B
GW-17360-072704-DCR-176 07/27/04 17:00 006				
Acetone	2.5 J,B	42	ug/L	SW846 8260B
Chloroform	0.44 J	1.7	ug/L	SW846 8260B
cis-1,2-Dichloroethene	39	1.7	ug/L	SW846 8260B
trans-1,2-Dichloroethene	4.9	1.7	ug/L	SW846 8260B
Methyl tert-butyl ether	2.9 J	8.4	ug/L	SW846 8260B
Tetrachloroethene	15	1.7	ug/L	SW846 8260B
Toluene	0.59 J	1.7	ug/L	SW846 8260B
Trichloroethene	33	1.7	ug/L	SW846 8260B
GW-17360-072704-DCR-177 07/27/04 17:55 007				
Acetone	3.5 J,B	42	ug/L	SW846 8260B
Benzene	0.41 J	1.7	ug/L	SW846 8260B
Bromodichloromethane	0.36 J	1.7	ug/L	SW846 8260B
Chloroform	1.5 J	1.7	ug/L	SW846 8260B
cis-1,2-Dichloroethene	37	1.7	ug/L	SW846 8260B
trans-1,2-Dichloroethene	2.9	1.7	ug/L	SW846 8260B
Methyl tert-butyl ether	1.3 J	8.4	ug/L	SW846 8260B
Tetrachloroethene	15	1.7	ug/L	SW846 8260B
Toluene	1.8	1.7	ug/L	SW846 8260B
Trichloroethene	19	1.7	ug/L	SW846 8260B
GW-17360-072704-DCR-178 07/27/04 008				
Acetone	1.6 J,B	25	ug/L	SW846 8260B
Carbon disulfide	0.37 J	5.0	ug/L	SW846 8260B
Methylene chloride	0.80 J	5.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G280151

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G280151

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GL1HT	001	GW-17360-072704-DCR-171	07/27/04	08:45
GL1H0	002	GW-17360-072704-DCR-172	07/27/04	14:25
GL1H1	003	GW-17360-072704-DCR-173	07/27/04	15:10
GL1H2	004	GW-17360-072704-DCR-174	07/27/04	16:05
GL1H3	005	GW-17360-072704-DCR-175	07/27/04	16:55
GL1H5	006	GW-17360-072704-DCR-176	07/27/04	17:00
GL1H7	007	GW-17360-072704-DCR-177	07/27/04	17:55
GL1H8	008	GW-17360-072704-DCR-178	07/27/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 48 hr TAT	REMARKS
1	7/27/04	845	GW-17360-072704-DCR-171	H2O	3	X	X	
2		1425	-172		2	X	X	
3		1510	-173		2	X	X	
4		1605	-174		2	X	X	
5		1655	-175		2	X	X	
6		1700	-176		2	X	X	
7		1755	-177		2	X	X	
8		—	-178		1	X	X	
								CRA Contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS					

RELINQUISHED BY: 1. _____	DATE: 7-27-04 TIME: 1900	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 8393 5588 8864

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27159

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: _____
DATE: 7/28/04 TIME: 9:35

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G280151

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GL1HT	STILLERJ	7/28/04	Yes		Storage	
GL1H0	STILLERJ	7/28/04	Yes		Storage	
GL1H1	STILLERJ	7/28/04	Yes		Storage	
GL1H2	STILLERJ	7/28/04	Yes		Storage	
GL1H3	STILLERJ	7/28/04	Yes		Storage	
GL1H5	STILLERJ	7/28/04	Yes		Storage	
GL1H7	STILLERJ	7/28/04	Yes		Storage	
GL1H8	STILLERJ	7/28/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** 440280151

North Canton Facility

Client: CRA Project: GM Grand Rapids Quote#: _____

Cooler Received on: 4/28/04 Opened on: 4/28/04 by: _____ (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other: _____

STL Cooler No# _____ Foam Box ☐ Client Cooler ☑ Other _____

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity _____
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☑
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☑ None ☐ Other: _____
6. Cooler temperature upon receipt 5.4 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

√	

1. CHAIN OF CUSTODY

The following discrepancies occurred:

_____

_____

_____

_____

2. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*

Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

48hr test OK Rec. AM 4/28/04

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-171

GC/MS Volatiles

Lot-Sample #...: A4G280151-001 **Work Order #...:** GL1HT1AA **Matrix.....:** WG
Date Sampled...: 07/27/04 08:45 **Date Received..:** 07/28/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**4.9 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.54 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**1.1 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**3.8**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.28 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	**0.43 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072704-DCR-171

GC/MS Volatiles

Lot-Sample #...: A4G280151-001 Work Order #...: GL1HT1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**4.1**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.51 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.72 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-172

GC/MS Volatiles

Lot-Sample #...: A4G280151-002 **Work Order #...:** GL1H01AA **Matrix.....:** WG
Date Sampled...: 07/27/04 14:25 **Date Received..:** 07/28/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.0 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.48 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.36 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.25 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072704-DCR-172

GC/MS Volatiles

Lot-Sample #...: A4G280151-002 Work Order #...: GL1H01AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.0**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.73 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.93 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-173

GC/MS Volatiles

Lot-Sample #...: A4G280151-003 **Work Order #...:** GL1H11AA **Matrix.....:** WG
Date Sampled...: 07/27/04 15:10 **Date Received..:** 07/28/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**0.82 J**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**2.7 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-173

GC/MS Volatiles

Lot-Sample #...: A4G280151-003 **Work Order #...:** GL1H11AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.24 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.21 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**4.5**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-174

GC/MS Volatiles

Lot-Sample #...: A4G280151-004 **Work Order #...:** GL1H21AA **Matrix.....:** WG
Date Sampled...: 07/27/04 16:05 **Date Received..:** 07/28/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 2 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.0 J,B**	**50**	**ug/L**	**1.5**
Benzene	**0.45 J**	**2.0**	**ug/L**	**0.44**
Bromodichloromethane	ND	2.0	ug/L	0.28
Bromoform	ND	2.0	ug/L	0.34
Bromomethane	ND	2.0	ug/L	0.72
2-Butanone	ND	50	ug/L	0.78
Carbon disulfide	ND	10	ug/L	0.56
Carbon tetrachloride	ND	2.0	ug/L	0.38
Chlorobenzene	ND	2.0	ug/L	0.40
Chloroethane	ND	2.0	ug/L	0.48
Chloroform	ND	2.0	ug/L	0.32
Chloromethane	ND	2.0	ug/L	0.28
Cyclohexane	ND	2.0	ug/L	0.24
Dibromochloromethane	ND	2.0	ug/L	0.38
1,2-Dibromo-3-chloro-propane	ND	2.0	ug/L	0.56
1,2-Dibromoethane	ND	2.0	ug/L	0.48
1,2-Dichlorobenzene	ND	2.0	ug/L	0.40
1,3-Dichlorobenzene	ND	2.0	ug/L	0.36
1,4-Dichlorobenzene	ND	2.0	ug/L	0.44
Dichlorodifluoromethane	ND	2.0	ug/L	0.50
1,1-Dichloroethane	ND	2.0	ug/L	0.42
1,2-Dichloroethane	ND	2.0	ug/L	0.32
1,1-Dichloroethene	ND	2.0	ug/L	0.36
cis-1,2-Dichloroethene	**57**	**2.0**	**ug/L**	**0.42**
trans-1,2-Dichloroethene	**4.9**	**2.0**	**ug/L**	**0.32**
1,2-Dichloropropane	ND	2.0	ug/L	0.30
cis-1,3-Dichloropropene	ND	2.0	ug/L	0.24
trans-1,3-Dichloropropene	ND	2.0	ug/L	0.34
Ethylbenzene	ND	2.0	ug/L	0.38
2-Hexanone	ND	100	ug/L	0.70
Isopropylbenzene	ND	10	ug/L	0.30
Methyl acetate	ND	20	ug/L	1.0
Methylene chloride	ND	10	ug/L	0.38
Methylcyclohexane	ND	2.0	ug/L	1.0
4-Methyl-2-pentanone	ND	100	ug/L	0.64
Methyl tert-butyl ether	**2.3 J**	**10**	**ug/L**	**0.36**
Styrene	ND	2.0	ug/L	0.26

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072704-DCR-174

GC/MS Volatiles

Lot-Sample #...: A4G280151-004 **Work Order #...:** GL1H21AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	0.44
Tetrachloroethene	ND	2.0	ug/L	0.38
Toluene	**0.92 J**	**2.0**	**ug/L**	**0.34**
1,2,4-Trichloro-benzene	ND	10	ug/L	0.38
1,1,1-Trichloroethane	ND	2.0	ug/L	0.42
1,1,2-Trichloroethane	ND	2.0	ug/L	0.44
Trichloroethene	**23**	**2.0**	**ug/L**	**0.56**
Trichlorofluoromethane	ND	2.0	ug/L	0.32
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ug/L	0.52
Vinyl chloride	ND	2.0	ug/L	0.42
Xylenes (total)	ND	6.0	ug/L	0.88

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-175

GC/MS Volatiles

Lot-Sample #...: A4G280151-005 **Work Order #...:** GL1H31AA **Matrix.....:** WG
Date Sampled...: 07/27/04 16:55 **Date Received..:** 07/28/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1.67 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.1 J,B**	**42**	**ug/L**	**1.2**
Benzene	ND	1.7	ug/L	0.37
Bromodichloromethane	ND	1.7	ug/L	0.23
Bromoform	ND	1.7	ug/L	0.28
Bromomethane	ND	1.7	ug/L	0.60
2-Butanone	ND	42	ug/L	0.65
Carbon disulfide	ND	8.4	ug/L	0.47
Carbon tetrachloride	ND	1.7	ug/L	0.32
Chlorobenzene	ND	1.7	ug/L	0.33
Chloroethane	ND	1.7	ug/L	0.40
Chloroform	**0.42 J**	**1.7**	**ug/L**	**0.27**
Chloromethane	ND	1.7	ug/L	0.23
Cyclohexane	ND	1.7	ug/L	0.20
Dibromochloromethane	ND	1.7	ug/L	0.32
1,2-Dibromo-3-chloro-propane	ND	1.7	ug/L	0.47
1,2-Dibromoethane	ND	1.7	ug/L	0.40
1,2-Dichlorobenzene	ND	1.7	ug/L	0.33
1,3-Dichlorobenzene	ND	1.7	ug/L	0.30
1,4-Dichlorobenzene	ND	1.7	ug/L	0.37
Dichlorodifluoromethane	ND	1.7	ug/L	0.42
1,1-Dichloroethane	ND	1.7	ug/L	0.35
1,2-Dichloroethane	ND	1.7	ug/L	0.27
1,1-Dichloroethene	ND	1.7	ug/L	0.30
cis-1,2-Dichloroethene	**38**	**1.7**	**ug/L**	**0.35**
trans-1,2-Dichloroethene	**4.4**	**1.7**	**ug/L**	**0.27**
1,2-Dichloropropane	ND	1.7	ug/L	0.25
cis-1,3-Dichloropropene	ND	1.7	ug/L	0.20
trans-1,3-Dichloropropene	ND	1.7	ug/L	0.28
Ethylbenzene	ND	1.7	ug/L	0.32
2-Hexanone	ND	84	ug/L	0.58
Isopropylbenzene	ND	8.4	ug/L	0.25
Methyl acetate	ND	17	ug/L	0.87
Methylene chloride	ND	8.4	ug/L	0.32
Methylcyclohexane	ND	1.7	ug/L	0.84
4-Methyl-2-pentanone	ND	84	ug/L	0.53
Methyl tert-butyl ether	**1.9 J**	**8.4**	**ug/L**	**0.30**
Styrene	ND	1.7	ug/L	0.22

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-175

GC/MS Volatiles

Lot-Sample #...: A4G280151-005 Work Order #...: GL1H31AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.7	ug/L	0.37
Tetrachloroethene	**17**	**1.7**	**ug/L**	**0.32**
Toluene	**0.61 J**	**1.7**	**ug/L**	**0.28**
1,2,4-Trichloro-benzene	ND	8.4	ug/L	0.32
1,1,1-Trichloroethane	ND	1.7	ug/L	0.35
1,1,2-Trichloroethane	ND	1.7	ug/L	0.37
Trichloroethene	**34**	**1.7**	**ug/L**	**0.47**
Trichlorofluoromethane	ND	1.7	ug/L	0.27
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.7	ug/L	0.43
Vinyl chloride	ND	1.7	ug/L	0.35
Xylenes (total)	ND	5.0	ug/L	0.73

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072704-DCR-176

GC/MS Volatiles

Lot-Sample #...: A4G280151-006 **Work Order #...:** GL1H51AA **Matrix.....:** WG
Date Sampled...: 07/27/04 17:00 **Date Received..:** 07/28/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1.67 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.5 J,B**	**42**	**ug/L**	**1.2**
Benzene	ND	1.7	ug/L	0.37
Bromodichloromethane	ND	1.7	ug/L	0.23
Bromoform	ND	1.7	ug/L	0.28
Bromomethane	ND	1.7	ug/L	0.60
2-Butanone	ND	42	ug/L	0.65
Carbon disulfide	ND	8.4	ug/L	0.47
Carbon tetrachloride	ND	1.7	ug/L	0.32
Chlorobenzene	ND	1.7	ug/L	0.33
Chloroethane	ND	1.7	ug/L	0.40
Chloroform	**0.44 J**	**1.7**	**ug/L**	**0.27**
Chloromethane	ND	1.7	ug/L	0.23
Cyclohexane	ND	1.7	ug/L	0.20
Dibromochloromethane	ND	1.7	ug/L	0.32
1,2-Dibromo-3-chloro-propane	ND	1.7	ug/L	0.47
1,2-Dibromoethane	ND	1.7	ug/L	0.40
1,2-Dichlorobenzene	ND	1.7	ug/L	0.33
1,3-Dichlorobenzene	ND	1.7	ug/L	0.30
1,4-Dichlorobenzene	ND	1.7	ug/L	0.37
Dichlorodifluoromethane	ND	1.7	ug/L	0.42
1,1-Dichloroethane	ND	1.7	ug/L	0.35
1,2-Dichloroethane	ND	1.7	ug/L	0.27
1,1-Dichloroethene	ND	1.7	ug/L	0.30
cis-1,2-Dichloroethene	**39**	**1.7**	**ug/L**	**0.35**
trans-1,2-Dichloroethene	**4.9**	**1.7**	**ug/L**	**0.27**
1,2-Dichloropropane	ND	1.7	ug/L	0.25
cis-1,3-Dichloropropene	ND	1.7	ug/L	0.20
trans-1,3-Dichloropropene	ND	1.7	ug/L	0.28
Ethylbenzene	ND	1.7	ug/L	0.32
2-Hexanone	ND	84	ug/L	0.58
Isopropylbenzene	ND	8.4	ug/L	0.25
Methyl acetate	ND	17	ug/L	0.87
Methylene chloride	ND	8.4	ug/L	0.32
Methylcyclohexane	ND	1.7	ug/L	0.84
4-Methyl-2-pentanone	ND	84	ug/L	0.53
Methyl tert-butyl ether	**2.9 J**	**8.4**	**ug/L**	**0.30**
Styrene	ND	1.7	ug/L	0.22

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072704-DCR-176

GC/MS Volatiles

Lot-Sample #...: A4G280151-006 Work Order #...: GL1H51AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.7	ug/L	0.37
Tetrachloroethene	**15**	**1.7**	**ug/L**	**0.32**
Toluene	**0.59 J**	**1.7**	**ug/L**	**0.28**
1,2,4-Trichloro-benzene	ND	8.4	ug/L	0.32
1,1,1-Trichloroethane	ND	1.7	ug/L	0.35
1,1,2-Trichloroethane	ND	1.7	ug/L	0.37
Trichloroethene	**33**	**1.7**	**ug/L**	**0.47**
Trichlorofluoromethane	ND	1.7	ug/L	0.27
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.7	ug/L	0.43
Vinyl chloride	ND	1.7	ug/L	0.35
Xylenes (total)	ND	5.0	ug/L	0.73

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-177

GC/MS Volatiles

Lot-Sample #...: A4G280151-007 **Work Order #...:** GL1H71AA **Matrix.....:** WG
Date Sampled...: 07/27/04 17:55 **Date Received..:** 07/28/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1.67 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.5 J,B**	**42**	**ug/L**	**1.2**
Benzene	**0.41 J**	**1.7**	**ug/L**	**0.37**
Bromodichloromethane	**0.36 J**	**1.7**	**ug/L**	**0.23**
Bromoform	ND	1.7	ug/L	0.28
Bromomethane	ND	1.7	ug/L	0.60
2-Butanone	ND	42	ug/L	0.65
Carbon disulfide	ND	8.4	ug/L	0.47
Carbon tetrachloride	ND	1.7	ug/L	0.32
Chlorobenzene	ND	1.7	ug/L	0.33
Chloroethane	ND	1.7	ug/L	0.40
Chloroform	**1.5 J**	**1.7**	**ug/L**	**0.27**
Chloromethane	ND	1.7	ug/L	0.23
Cyclohexane	ND	1.7	ug/L	0.20
Dibromochloromethane	ND	1.7	ug/L	0.32
1,2-Dibromo-3-chloro-propane	ND	1.7	ug/L	0.47
1,2-Dibromoethane	ND	1.7	ug/L	0.40
1,2-Dichlorobenzene	ND	1.7	ug/L	0.33
1,3-Dichlorobenzene	ND	1.7	ug/L	0.30
1,4-Dichlorobenzene	ND	1.7	ug/L	0.37
Dichlorodifluoromethane	ND	1.7	ug/L	0.42
1,1-Dichloroethane	ND	1.7	ug/L	0.35
1,2-Dichloroethane	ND	1.7	ug/L	0.27
1,1-Dichloroethene	ND	1.7	ug/L	0.30
cis-1,2-Dichloroethene	**37**	**1.7**	**ug/L**	**0.35**
trans-1,2-Dichloroethene	**2.9**	**1.7**	**ug/L**	**0.27**
1,2-Dichloropropane	ND	1.7	ug/L	0.25
cis-1,3-Dichloropropene	ND	1.7	ug/L	0.20
trans-1,3-Dichloropropene	ND	1.7	ug/L	0.28
Ethylbenzene	ND	1.7	ug/L	0.32
2-Hexanone	ND	84	ug/L	0.58
Isopropylbenzene	ND	8.4	ug/L	0.25
Methyl acetate	ND	17	ug/L	0.87
Methylene chloride	ND	8.4	ug/L	0.32
Methylcyclohexane	ND	1.7	ug/L	0.84
4-Methyl-2-pentanone	ND	84	ug/L	0.53
Methyl tert-butyl ether	**1.3 J**	**8.4**	**ug/L**	**0.30**
Styrene	ND	1.7	ug/L	0.22

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072704-DCR-177

GC/MS Volatiles

Lot-Sample #...: A4G280151-007 **Work Order #...:** GL1H71AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.7	ug/L	0.37
Tetrachloroethene	**15**	**1.7**	**ug/L**	**0.32**
Toluene	**1.8**	**1.7**	**ug/L**	**0.28**
1,2,4-Trichloro-benzene	ND	8.4	ug/L	0.32
1,1,1-Trichloroethane	ND	1.7	ug/L	0.35
1,1,2-Trichloroethane	ND	1.7	ug/L	0.37
Trichloroethene	**19**	**1.7**	**ug/L**	**0.47**
Trichlorofluoromethane	ND	1.7	ug/L	0.27
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.7	ug/L	0.43
Vinyl chloride	ND	1.7	ug/L	0.35
Xylenes (total)	ND	5.0	ug/L	0.73

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-178

GC/MS Volatiles

Lot-Sample #...: A4G280151-008 **Work Order #...:** GL1H81AA **Matrix.....:** WG
Date Sampled...: 07/27/04 **Date Received..:** 07/28/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.6 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	**0.37 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**0.80 J**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-178

GC/MS Volatiles

Lot-Sample #...: A4G280151-008 **Work Order #...:** GL1H81AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G280151
MB Lot-Sample #: A4G300000-184

Work Order #...: GL60N1AA

Prep Date.....: 07/29/04
Prep Batch #...: 4212184
Initial Wgt/Vol: 5 mL

Matrix.....: WATER

Final Wgt/Vol..: 5 mL

Analysis Date..: 07/29/04
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	**0.75 J**	**25**	**ug/L**	**SW846 8260B**
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G280151 **Work Order #...:** GL60N1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G280151 **Work Order #...:** GL60N1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G300000-184 GL60N1AD-LCSD
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	10	9.6	ug/L	96		SW846 8260B
	10	10	ug/L	100	4.1	SW846 8260B
Chlorobenzene	10	9.3	ug/L	93		SW846 8260B
	10	9.6	ug/L	96	3.3	SW846 8260B
1,1-Dichloroethene	10	8.8	ug/L	88		SW846 8260B
	10	8.2	ug/L	82	7.1	SW846 8260B
Toluene	10	9.1	ug/L	91		SW846 8260B
	10	9.7	ug/L	97	6.2	SW846 8260B
Trichloroethene	10	9.6	ug/L	96		SW846 8260B
	10	9.9	ug/L	99	3.1	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
	96	(61 - 128)
Toluene-d8	98	(76 - 110)
	100	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)
	99	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G280151 **Work Order #...:** GL60N1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G300000-184 GL60N1AD-LCSD
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**96**	**(80 - 116)**			**SW846 8260B**
	100	**(80 - 116)**	**4.1**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**93**	**(76 - 117)**			**SW846 8260B**
	96	**(76 - 117)**	**3.3**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**88**	**(63 - 130)**			**SW846 8260B**
	82	**(63 - 130)**	**7.1**	**(0-20)**	**SW846 8260B**
Toluene	**91**	**(74 - 119)**			**SW846 8260B**
	97	**(74 - 119)**	**6.2**	**(0-20)**	**SW846 8260B**
Trichloroethene	**96**	**(75 - 122)**			**SW846 8260B**
	99	**(75 - 122)**	**3.1**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
	96	(61 - 128)
Toluene-d8	98	(76 - 110)
	100	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)
	99	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G280151 **Work Order #...:** GLQNH1AC-MS GLQNH1AD-MSD **Matrix.....:** WATER
MS Lot-Sample #: A4G230398-004
Date Sampled...: 07/20/04 09:59 **Date Received..:** 07/22/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	10	9.6	ug/L	96		SW846 8260B
	ND	10	9.6	ug/L	96	0.21	SW846 8260B
Chlorobenzene	ND	10	9.0	ug/L	90		SW846 8260B
	ND	10	9.1	ug/L	91	1.0	SW846 8260B
1,1-Dichloroethene	0.82	10	9.8	ug/L	89		SW846 8260B
	0.82	10	10	ug/L	92	2.4	SW846 8260B
Toluene	0.27	10	9.5	ug/L	92		SW846 8260B
	0.27	10	9.6	ug/L	93	1.1	SW846 8260B
Trichloroethene	13	10	22	ug/L	93		SW846 8260B
	13	10	23	ug/L	100	3.0	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	99	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
	96	(61 - 128)
Toluene-d8	100	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G280151 **Work Order #...:** GLQNH1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G230398-004 GLQNH1AD-MSD
Date Sampled...: 07/20/04 09:59 **Date Received..:** 07/22/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**96**	**(78 - 118)**			**SW846 8260B**
	96	**(78 - 118)**	**0.21**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**90**	**(76 - 117)**			**SW846 8260B**
	91	**(76 - 117)**	**1.0**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**89**	**(62 - 130)**			**SW846 8260B**
	92	**(62 - 130)**	**2.4**	**(0-20)**	**SW846 8260B**
Toluene	**92**	**(70 - 119)**			**SW846 8260B**
	93	**(70 - 119)**	**1.1**	**(0-20)**	**SW846 8260B**
Trichloroethene	**93**	**(62 - 130)**			**SW846 8260B**
	100	**(62 - 130)**	**3.0**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	99	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
	96	(61 - 128)
Toluene-d8	100	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

REC'D CRA
AUG 26 2004
G-22

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM GRAND RAPIDS

Lot #: A4G290136

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4G290136
Name: GM - GR
Description
Event: GW Monitoring
Samples: 4 water
Analysis: VOC
TAT: 2 day
Lab: STL
Checked Against Preliminary Data:
Date: 8/27/04 Init.: KK
Date of Validation Memo: 10/24/04
Invoice Approval Date:
Comments:

Ken Kuyper for
Amy L. McCormick
Project Manager

August 24, 2004

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOC	PARAMETERS: 48hr TAT	REMARKS
1	7/28/04	825	GW-17360-072804-DCR-179	H2O	2	X	X	
2	↓	1030	-180	↓	2	X	X	
3	↓	1655	-181	↓	2	X	X	
4	↓	—	-182	↓	1	X	X	
								CRA Contact Paul Wiseman
TOTAL NUMBER OF CONTAINERS					7			

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
1. _____	7/28/04	1830	1. _____		
2. _____			2. _____		
3. _____			1. _____		

METHOD OF SHIPMENT: FED EX AIR BILL No. 8393 5588 8853

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27160

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: _____
DATE: 7/29/04 TIME: 945

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G290136

The following report contains the analytical results for three water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM Grand Rapids Site, project number 17360-09. The samples were received July 29, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on August 02, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.9°C.

See STL's Cooler Receipt Form for additional information.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The pH of the sample GW-17360-072804-DCR-181 was greater than 2. The sample(s) was analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G290136

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072804-DCR-179 07/28/04 08:25 001				
Acetone	4.5 J	25	ug/L	SW846 8260B
Benzene	0.34 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.47 J	1.0	ug/L	SW846 8260B
Carbon disulfide	0.58 J	5.0	ug/L	SW846 8260B
Chloroform	1.9	1.0	ug/L	SW846 8260B
Chloromethane	0.16 J	1.0	ug/L	SW846 8260B
Cyclohexane	0.20 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	11	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	1.3	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	1.7 J	5.0	ug/L	SW846 8260B
Tetrachloroethene	1.2	1.0	ug/L	SW846 8260B
Toluene	1.4	1.0	ug/L	SW846 8260B
Trichloroethene	7.4	1.0	ug/L	SW846 8260B
GW-17360-072804-DCR-180 07/28/04 10:30 002				
Acetone	2.3 J	25	ug/L	SW846 8260B
Benzene	0.38 J	1.0	ug/L	SW846 8260B
Chloroform	2.3	1.0	ug/L	SW846 8260B
Cyclohexane	0.23 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	25	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	3.0	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	2.5 J	5.0	ug/L	SW846 8260B
Tetrachloroethene	3.3	1.0	ug/L	SW846 8260B
Toluene	2.0	1.0	ug/L	SW846 8260B
Trichloroethene	17	1.0	ug/L	SW846 8260B
GW-17360-072804-DCR-181 07/28/04 16:55 003				
Acetone	5.6 J	25	ug/L	SW846 8260B
Benzene	0.42 J	1.0	ug/L	SW846 8260B
2-Butanone	1.8 J	25	ug/L	SW846 8260B
Cyclohexane	0.25 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	2.0	1.0	ug/L	SW846 8260B
Ethylbenzene	0.19 J	1.0	ug/L	SW846 8260B
Toluene	0.91 J	1.0	ug/L	SW846 8260B
Trichloroethene	6.5	1.0	ug/L	SW846 8260B
Vinyl chloride	1.2	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G290136

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072804-DCR-182 07/28/04 004				
Acetone	1.6 J	25	ug/L	SW846 8260B
2-Butanone	0.66 J	25	ug/L	SW846 8260B
Carbon disulfide	0.66 J	5.0	ug/L	SW846 8260B
Methylene chloride	1.5 J	5.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G290136

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G290136

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GL346	001	GW-17360-072804-DCR-179	07/28/04	08:25
GL35H	002	GW-17360-072804-DCR-180	07/28/04	10:30
GL35J	003	GW-17360-072804-DCR-181	07/28/04	16:55
GL35L	004	GW-17360-072804-DCR-182	07/28/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM Grand Rapids

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: David C Rivers

SEQ. No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOC	PARAMETERS: 48hr TAT	REMARKS
1	7/29/04	825	GW-17360-072804-DCR-179	H2O	2	X	X	
2	↓	1030	↓ ↓ ↓ ↓ -180	↓	2	X	X	
3		1633	-181		2	X	X	
4		—	-182		1	X	X	
								CRA Contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		7			

RELINQUISHED BY: 1. [signature]	DATE: 7/29/04 TIME: 1830	RECEIVED BY: 1.	DATE: TIME:
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 8393 5588 8853

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27160

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: [signature]
DATE: 7/29/04 TIME: 945

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

15

STL North Canton

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G290136

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GL346	EARLES	7/29/04	Yes		Storage	
GL35H	EARLES	7/29/04	Yes		Storage	
GL35J	EARLES	7/29/04	Yes		Storage	
GL35J,	EARLES	7/29/04	Yes		Storage	

STL Cooler Receipt Form/Narrative

Lot Number: A4L1031

North Canton Facility

Client: GCA Project: GM Grand Rapids Quote#:

Cooler Received on: 4/29/04 Opened on: 4/29/04 by: Anna Sanders (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:

STL Cooler No#_____ Foam Box ☐ Client Cooler ☑ Other

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity_____
   Were the custody seals signed and dated? Yes ☑ No ☐ NA ☑
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☑ None ☐ Other :_____
6. Cooler temperature upon receipt 1.9 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM _____ Date:_____ by:_____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

√	
	1. CHAIN OF CUSTODY
	The following discrepancies occurred:
✓	Sample ID #'s complete on vials - log Rec. COC
	2. SAMPLE CONDITION
	Sample(s) _____ were received after the recommended holding time had expired.
	Sample(s) _____ were received in a broken container.
	3. SAMPLE PRESERVATION
	Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
	4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072804-DCR-179

GC/MS Volatiles

Lot-Sample #...: A4G290136-001 Work Order #...: GL3461AA Matrix.....: WG
Date Sampled...: 07/28/04 08:25 Date Received..: 07/29/04
Prep Date.....: 07/30/04 Analysis Date..: 07/30/04
Prep Batch #...: 4215204
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**4.5 J**	**25**	**ug/L**	**0.74**
Benzene	**0.34 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.47 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	**0.58 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.9**	**1.0**	**ug/L**	**0.16**
Chloromethane	**0.16 J**	**1.0**	**ug/L**	**0.14**
Cyclohexane	**0.20 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**11**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	**1.3**	**1.0**	**ug/L**	**0.16**
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**1.7 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072804-DCR-179

GC/MS Volatiles

Lot-Sample #...: A4G290136-001 Work Order #...: GL3461AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**1.2**	**1.0**	**ug/L**	**0.19**
Toluene	**1.4**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**7.4**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072804-DCR-180

GC/MS Volatiles

Lot-Sample #...:	A4G290136-002	**Work Order #...:**	GL35H1AA	**Matrix.....:**	WG
Date Sampled...:	07/28/04 10:30	**Date Received..:**	07/29/04		
Prep Date.....:	07/30/04	**Analysis Date..:**	07/30/04		
Prep Batch #...:	4215204				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.3 J**	**25**	**ug/L**	**0.74**
Benzene	**0.38 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.3**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.23 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**25**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	**3.0**	**1.0**	**ug/L**	**0.16**
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**2.5 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072804-DCR-180

GC/MS Volatiles

Lot-Sample #...: A4G290136-002 Work Order #...: GL35H1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**3.3**	**1.0**	**ug/L**	**0.19**
Toluene	**2.0**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**17**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072804-DCR-181

GC/MS Volatiles

Lot-Sample #...:	A4G290136-003	**Work Order #...:**	GL35J1AA	**Matrix.....:**	WG
Date Sampled...:	07/28/04 16:55	**Date Received..:**	07/29/04		
Prep Date.....:	07/30/04	**Analysis Date..:**	07/30/04		
Prep Batch #...:	4215204				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**5.6 J**	**25**	**ug/L**	**0.74**
Benzene	**0.42 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**1.8 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.25 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**2.0**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.19 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072804-DCR-181

GC/MS Volatiles

Lot-Sample #...: A4G290136-003 Work Order #...: GL35J1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.91 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**6.5**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	**1.2**	**1.0**	**ug/L**	**0.21**
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072804-DCR-182

GC/MS Volatiles

Lot-Sample #...:	A4G290136-004	**Work Order #...:**	GL35L1AA	**Matrix.....:**	WQ
Date Sampled...:	07/28/04	**Date Received..:**	07/29/04		
Prep Date.....:	07/30/04	**Analysis Date..:**	07/30/04		
Prep Batch #...:	4215204				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.6 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.66 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	**0.66 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**1.5 J**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072804-DCR-182

GC/MS Volatiles

Lot-Sample #...: A4G290136-004 Work Order #...: GL35L1AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G290136 **Work Order #...:** GMAJ21AA **Matrix.....:** WATER
MB Lot-Sample #: A4H020000-204

Prep Date.....: 07/30/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/30/04 **Prep Batch #...:** 4215204
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	**0.45 J**	**5.0**	**ug/L**	**SW846 8260B**
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G290136 **Work Order #...:** GMAJ21AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G290136 **Work Order #...:** GMAJ21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H020000-204 GMAJ21AD-LCSD
Prep Date.....: 07/30/04 **Analysis Date..:** 07/30/04
Prep Batch #...: 4215204
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**9.3**	**ug/L**	**93**		**SW846 8260B**
	10	**9.5**	**ug/L**	**95**	**2.9**	**SW846 8260B**
Chlorobenzene	**10**	**10**	**ug/L**	**101**		**SW846 8260B**
	10	**10**	**ug/L**	**100**	**0.90**	**SW846 8260B**
1,1-Dichloroethene	**10**	**10**	**ug/L**	**103**		**SW846 8260B**
	10	**10**	**ug/L**	**103**	**0.030**	**SW846 8260B**
Toluene	**10**	**11**	**ug/L**	**106**		**SW846 8260B**
	10	**10**	**ug/L**	**104**	**2.5**	**SW846 8260B**
Trichloroethene	**10**	**9.5**	**ug/L**	**95**		**SW846 8260B**
	10	**9.5**	**ug/L**	**95**	**0.52**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
	92	(73 - 122)
1,2-Dichloroethane-d4	83	(61 - 128)
	87	(61 - 128)
Toluene-d8	97	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G290136 **Work Order #...:** GMAJ21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H020000-204 GMAJ21AD-LCSD
Prep Date.....: 07/30/04 **Analysis Date..:** 07/30/04
Prep Batch #...: 4215204
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**93**	**(80 - 116)**			**SW846 8260B**
	95	**(80 - 116)**	**2.9**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**101**	**(76 - 117)**			**SW846 8260B**
	100	**(76 - 117)**	**0.90**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**103**	**(63 - 130)**			**SW846 8260B**
	103	**(63 - 130)**	**0.030**	**(0-20)**	**SW846 8260B**
Toluene	**106**	**(74 - 119)**			**SW846 8260B**
	104	**(74 - 119)**	**2.5**	**(0-20)**	**SW846 8260B**
Trichloroethene	**95**	**(75 - 122)**			**SW846 8260B**
	95	**(75 - 122)**	**0.52**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
	92	(73 - 122)
1,2-Dichloroethane-d4	83	(61 - 128)
	87	(61 - 128)
Toluene-d8	97	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	A4G290136	**Work Order #...:**	GLQNX1AD-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A4G230398-010		GLQNX1AE-MSD		
Date Sampled...:	07/22/04 08:00	**Date Received..:**	07/22/04		
Prep Date.....:	07/30/04	**Analysis Date..:**	07/30/04		
Prep Batch #...:	4215204				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**0.24**	**10**	**9.2**	**ug/L**	**89**		**SW846 8260B**
	0.24	**10**	**9.3**	**ug/L**	**91**	**1.5**	**SW846 8260B**
Chlorobenzene	**ND**	**10**	**9.6**	**ug/L**	**96**		**SW846 8260B**
	ND	**10**	**9.5**	**ug/L**	**95**	**1.2**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10**	**9.7**	**ug/L**	**97**		**SW846 8260B**
	ND	**10**	**9.8**	**ug/L**	**98**	**0.49**	**SW846 8260B**
Toluene	**0.78**	**10**	**11**	**ug/L**	**100**		**SW846 8260B**
	0.78	**10**	**11**	**ug/L**	**98**	**2.0**	**SW846 8260B**
Trichloroethene	**ND**	**10**	**9.0**	**ug/L**	**90**		**SW846 8260B**
	ND	**10**	**9.2**	**ug/L**	**92**	**2.4**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	90	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
	87	(61 - 128)
Toluene-d8	96	(76 - 110)
	94	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G290136 **Work Order #...:** GLQNX1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G230398-010 GLQNX1AE-MSD
Date Sampled...: 07/22/04 08:00 **Date Received..:** 07/22/04
Prep Date.....: 07/30/04 **Analysis Date..:** 07/30/04
Prep Batch #...: 4215204
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**89**	**(78 - 118)**			**SW846 8260B**
	91	**(78 - 118)**	**1.5**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**96**	**(76 - 117)**			**SW846 8260B**
	95	**(76 - 117)**	**1.2**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**97**	**(62 - 130)**			**SW846 8260B**
	98	**(62 - 130)**	**0.49**	**(0-20)**	**SW846 8260B**
Toluene	**100**	**(70 - 119)**			**SW846 8260B**
	98	**(70 - 119)**	**2.0**	**(0-20)**	**SW846 8260B**
Trichloroethene	**90**	**(62 - 130)**			**SW846 8260B**
	92	**(62 - 130)**	**2.4**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	90	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
	87	(61 - 128)
Toluene-d8	96	(76 - 110)
	94	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

REC'D CRA
AUG 3 0
CRA SDG G-23

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM GRAND RAPIDS

Lot #: A4G300129

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4G300129
Name: GM GRAND RAPIDS.

Description
Event: GW MONITORING
Samples: 8 waters DCR 183-190
Analysis: TCL VOCs.

TAT: 24 HOUR TAT
Lab: STL-NC.
Checked Against Preliminary Data:
Date: N/A Init.: N/A.
Date of Validation Memo: 10/21/04
Invoice Approval Date:
Comments:

SEVERN TRENT LABORATORIES, IN

FOR Amy L. McCormick
Project Manager

August 25, 2004

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 24hr TAT	REMARKS
1	7/29/04	850	GW-17360-072904-DCR-183	H2O	2	X	X	
2		855	-184		2	X	X	
3		930	-185		3	X	X	
4		1030	-186		3	X	X	
5		1240	-187		3	X	X	
6		1330	-188		6	X	X	MS/MSD
7		1445	-189		3	X	X	
8		1600	-190		3	X	X	
								CRA Contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		25			

RELINQUISHED BY 1. _____	DATE: 7-29-04 TIME: 1930	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 8393 5588 8842

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27161

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: Natalie J Buhler
DATE: 7-30-04 TIME: 9:45

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G300129

The following report contains the analytical results for eight water samples submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM Grand Rapids Site, project number 17360-09. The samples were received July 30, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on August 02, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 3.3°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G300129

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072904-DCR-183 07/29/04 08:50 001				
Benzene	0.26 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.76 J	1.0	ug/L	SW846 8260B
Chloroform	1.4	1.0	ug/L	SW846 8260B
Cyclohexane	0.52 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.76 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.61 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	0.68 J	1.0	ug/L	SW846 8260B
Toluene	1.2 B	1.0	ug/L	SW846 8260B
Xylenes (total)	1.8 J	3.0	ug/L	SW846 8260B
GW-17360-072904-DCR-184 07/29/04 08:55 002				
Benzene	0.26 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.84 J	1.0	ug/L	SW846 8260B
Chloroform	1.3	1.0	ug/L	SW846 8260B
Cyclohexane	0.52 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.73 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.63 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	0.72 J	1.0	ug/L	SW846 8260B
Toluene	1.2 B	1.0	ug/L	SW846 8260B
Xylenes (total)	1.8 J	3.0	ug/L	SW846 8260B
GW-17360-072904-DCR-185 07/29/04 09:30 003				
Bromodichloromethane	5.5	1.0	ug/L	SW846 8260B
Chloroform	8.2	1.0	ug/L	SW846 8260B
Dibromochloromethane	2.9	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	0.87 J	50	ug/L	SW846 8260B
Toluene	2.9 B	1.0	ug/L	SW846 8260B
GW-17360-072904-DCR-186 07/29/04 10:30 004				
Benzene	0.24 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	1.7	1.0	ug/L	SW846 8260B
Chloroform	2.5	1.0	ug/L	SW846 8260B
Cyclohexane	0.47 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	1.1	1.0	ug/L	SW846 8260B
Ethylbenzene	0.56 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	0.62 J	1.0	ug/L	SW846 8260B
Toluene	1.7 B	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.22 J	1.0	ug/L	SW846 8260B
Xylenes (total)	1.6 J	3.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G300129

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072904-DCR-187 07/29/04 12:10 005				
Benzene	0.24 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	3.7	1.0	ug/L	SW846 8260B
Chloroform	6.0	1.0	ug/L	SW846 8260B
Cyclohexane	0.46 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	1.9	1.0	ug/L	SW846 8260B
Ethylbenzene	0.54 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	0.64 J	1.0	ug/L	SW846 8260B
Toluene	3.5 B	1.0	ug/L	SW846 8260B
Xylenes (total)	1.6 J	3.0	ug/L	SW846 8260B
GW-17360-072904-DCR-188 07/29/04 13:30 006				
Benzene	0.41 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	2.1	1.0	ug/L	SW846 8260B
Chloroform	4.0	1.0	ug/L	SW846 8260B
Cyclohexane	0.65 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	1.2	1.0	ug/L	SW846 8260B
Ethylbenzene	0.60 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	0.76 J	1.0	ug/L	SW846 8260B
Toluene	2.7 B	1.0	ug/L	SW846 8260B
Xylenes (total)	1.7 J	3.0	ug/L	SW846 8260B
GW-17360-072904-DCR-189 07/29/04 14:45 007				
Acetone	1.0 J	25	ug/L	SW846 8260B
Benzene	0.35 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	3.0	1.0	ug/L	SW846 8260B
2-Butanone	0.53 J	25	ug/L	SW846 8260B
Chloroform	6.4	1.0	ug/L	SW846 8260B
Cyclohexane	0.52 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	1.7	1.0	ug/L	SW846 8260B
Ethylbenzene	0.59 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	0.71 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	0.92 J	50	ug/L	SW846 8260B
Toluene	4.5 B	1.0	ug/L	SW846 8260B
Xylenes (total)	1.7 J	3.0	ug/L	SW846 8260B
GW-17360-072904-DCR-190 07/29/04 16:00 008				
Acetone	1.0 J	25	ug/L	SW846 8260B
Benzene	0.32 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	3.1	1.0	ug/L	SW846 8260B
2-Butanone	0.56 J	25	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G300129

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072904-DCR-190 07/29/04 16:00 008				
Chloroform	6.0	1.0	ug/L	SW846 8260B
Cyclohexane	0.47 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	1.7	1.0	ug/L	SW846 8260B
Ethylbenzene	0.57 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	0.71 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	0.90 J	50	ug/L	SW846 8260B
Toluene	4.8 B	1.0	ug/L	SW846 8260B
Xylenes (total)	1.7 J	3.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G300129

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G300129

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GL6LF	001	GW-17360-072904-DCR-183	07/29/04	08:50
GL6LH	002	GW-17360-072904-DCR-184	07/29/04	08:55
GL6LJ	003	GW-17360-072904-DCR-185	07/29/04	09:30
GL6LL	004	GW-17360-072904-DCR-186	07/29/04	10:30
GL6LR	005	GW-17360-072904-DCR-187	07/29/04	12:10
GL6LV	006	GW-17360-072904-DCR-188	07/29/04	13:30
GL6LX	007	GW-17360-072904-DCR-189	07/29/04	14:45
GL6L1	008	GW-17360-072904-DCR-190	07/29/04	16:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	24hr TAT	REMARKS
1	7/29/04	850	GW-17360-072904-DCR-183	H2O	2	X	X	
2		855	-184		2	X	X	
3		930	-185		3	X	X	
4		1030	-186		3	X	X	
5		1240	-187		3	X	X	
6		1330	-188		6	X	X	MS/MSD
7		1445	-189		3	X	X	
8		1600	-190		3	X	X	
								CRA Contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		25			

RELINQUISHED BY: 1. [signature]	DATE: 7-29-04 TIME: 1930	RECEIVED BY: 1.	DATE: TIME:
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 8393 5588 8842

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27161

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: Natalie J Buhler
DATE: 7-30-04 TIME: 9:45

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

16

STL North Canton

RSR280

Client: 57787

Lot #: A4G300129

Case Number/SDG: 17360-09

Storage Location: MS

Severn Trent Laboratories, Inc.
Sample Control Record

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GL6LF	SANDERSA	7/30/04	Yes		Storage	
GL6LH	SANDERSA	7/30/04	Yes		Storage	
GL6LJ	SANDERSA	7/30/04	Yes		Storage	
GL6LL	SANDERSA	7/30/04	Yes		Storage	
GL6LR	SANDERSA	7/30/04	Yes		Storage	
GL6LV	SANDERSA	7/30/04	Yes		Storage	
GL6LX	SANDERSA	7/30/04	Yes		Storage	
GL6L1	SANDERSA	7/30/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** 17360729

North Canton Facility

Client: CRA Project: GW Grand Rapids Quote#:

Cooler Received on: 7-30-04 Opened on: 7-30-04 by: Natalie J Buhler (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:

STL Cooler No#_____ Foam Box ☐ Client Cooler ☒ Other

1. Were custody seals on the outside of the cooler? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
   If YES, Quantity —
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☒
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☒ None ☐ Other :
6. Cooler temperature upon receipt 3.3 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☒
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐

Contacted PM _____ Date:_____ by:_____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

√	

1. CHAIN OF CUSTODY

The following discrepancies occurred:

COC = GW-17360-072904-DCR-183. labels = 183, 184, 185, 186, 187, 188, √thru 190 — will log 190 per COC per DCR.

2. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*

Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-183

GC/MS Volatiles

Lot-Sample #...: A4G300129-001 Work Order #...: GL6LF1AA Matrix.....: WG
Date Sampled...: 07/29/04 08:50 Date Received..: 07/30/04
Prep Date.....: 07/31/04 Analysis Date..: 07/31/04
Prep Batch #...: 4213117
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	**0.26 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.76 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.4**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.52 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**0.76 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.61 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.68 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072904-DCR-183

GC/MS Volatiles

Lot-Sample #...: A4G300129-001 Work Order #...: GL6LF1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.2 B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	**1.8 J**	**3.0**	**ug/L**	**0.44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(73 - 122)
1,2-Dichloroethane-d4	85	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072904-DCR-184

GC/MS Volatiles

Lot-Sample #...: A4G300129-002	**Work Order #...:** GL6LH1AA	**Matrix.....:** WG	
Date Sampled...: 07/29/04 08:55	**Date Received..:** 07/30/04		
Prep Date.....: 07/31/04	**Analysis Date..:** 07/31/04		
Prep Batch #...: 4213117			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	**0.26 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.84 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.3**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.52 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**0.73 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.63 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.72 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-184

GC/MS Volatiles

Lot-Sample #...: A4G300129-002 **Work Order #...:** GL6LH1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.2 B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	**1.8 J**	**3.0**	**ug/L**	**0.44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
1,2-Dichloroethane-d4	86	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-185

GC/MS Volatiles

Lot-Sample #...: A4G300129-003 **Work Order #...:** GL6LJ1AA **Matrix.....:** WG
Date Sampled...: 07/29/04 09:30 **Date Received..:** 07/30/04
Prep Date.....: 08/01/04 **Analysis Date..:** 08/01/04
Prep Batch #...: 4213117
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**5.5**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**8.2**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**2.9**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	**0.87 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072904-DCR-185

GC/MS Volatiles

Lot-Sample #...: A4G300129-003 Work Order #...: GL6LJ1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**2.9 B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072904-DCR-186

GC/MS Volatiles

Lot-Sample #...: A4G300129-004	**Work Order #...:** GL6LL1AA	**Matrix.....:** WG	
Date Sampled...: 07/29/04 10:30	**Date Received..:** 07/30/04		
Prep Date.....: 07/31/04	**Analysis Date..:** 07/31/04		
Prep Batch #...: 4213117			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	**0.24 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.7**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.5**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.47 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**1.1**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.56 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.62 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072904-DCR-186

GC/MS Volatiles

Lot-Sample #...: A4G300129-004 Work Order #...: GL6LL1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.7 B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.22 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	**1.6 J**	**3.0**	**ug/L**	**0.44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
1,2-Dichloroethane-d4	87	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-187

GC/MS Volatiles

Lot-Sample #...: A4G300129-005	**Work Order #...:** GL6LR1AA	**Matrix.....:** WG	
Date Sampled...: 07/29/04 12:10	**Date Received..:** 07/30/04		
Prep Date.....: 07/31/04	**Analysis Date..:** 07/31/04		
Prep Batch #...: 4213117			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	**0.24 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**3.7**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**6.0**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.46 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**1.9**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.54 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.64 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-187

GC/MS Volatiles

Lot-Sample #...: A4G300129-005 **Work Order #...:** GL6LR1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**3.5 B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	**1.6 J**	**3.0**	**ug/L**	**0.44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
1,2-Dichloroethane-d4	86	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-188

GC/MS Volatiles

Lot-Sample #...: A4G300129-006 **Work Order #...:** GL6LV1AA **Matrix.....:** WG
Date Sampled...: 07/29/04 13:30 **Date Received..:** 07/30/04
Prep Date.....: 07/31/04 **Analysis Date..:** 07/31/04
Prep Batch #...: 4213117
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	**0.41 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**2.1**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**4.0**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.65 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**1.2**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.60 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.76 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072904-DCR-188

GC/MS Volatiles

Lot-Sample #...: A4G300129-006 Work Order #...: GL6LV1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**2.7 B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	**1.7 J**	**3.0**	**ug/L**	**0.44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-189

GC/MS Volatiles

Lot-Sample #...: A4G300129-007 **Work Order #...:** GL6LX1AA **Matrix.....:** WG
Date Sampled...: 07/29/04 14:45 **Date Received..:** 07/30/04
Prep Date.....: 07/31/04 **Analysis Date..:** 07/31/04
Prep Batch #...: 4213117
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.0 J**	**25**	**ug/L**	**0.74**
Benzene	**0.35 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**3.0**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.53 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**6.4**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.52 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**1.7**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.59 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.71 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	**0.92 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072904-DCR-189

GC/MS Volatiles

Lot-Sample #...: A4G300129-007 **Work Order #...:** GL6LX1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**4.5 B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	**1.7 J**	**3.0**	**ug/L**	**0.44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-190

GC/MS Volatiles

Lot-Sample #...: A4G300129-008	**Work Order #...:** GL6L11AA	**Matrix.....:** WG	
Date Sampled...: 07/29/04 16:00	**Date Received..:** 07/30/04		
Prep Date.....: 07/31/04	**Analysis Date..:** 07/31/04		
Prep Batch #...: 4213117			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.0 J**	**25**	**ug/L**	**0.74**
Benzene	**0.32 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**3.1**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.56 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**6.0**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.47 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**1.7**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.57 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.71 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	**0.90 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G220188

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GLK29	001	GW-17360-072104-BM-144	07/21/04	08:30
GLK3J	002	GW-17360-072104-BM-145	07/21/04	09:30
GLK3K	003	GW-17360-072104-BM-146	07/21/04	11:12
GLK3L	004	GW-17360-072104-BM-147	07/21/04	12:40
GLK3N	005	GW-17360-072104-BM-148	07/21/04	14:00
GLK3P	006	GW-17360-072104-BM-149	07/21/04	15:30
GLK3Q	007	W-17360-072104-BM-150	07/21/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL NORTH CANTON

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM GRAND RAPIDS

SAMPLER'S SIGNATURE: _____ PRINTED NAME: BRYANT MILLER

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	REMARKS
1	07/21/04	08:30	GW-17360-072104-BM-144	WATER	3	X	72-HR TAT
2	"	09:30	" -145	WATER	3	X	
3	"	11:12	" -146	WATER	3	X	CRA CONTACT
4	"	12:46	" -147	WATER	3	X	KATHY SHAW
5	"	14:00	" -148	WATER	3	X	734-453-5123
6	"	15:30	" -149	WATER	3	X	
~~7~~			~~TRIP BLANK~~	~~WATER~~	~~1~~	~~X~~	
7	"		GW-17360-072104-BM-150	WATER	1	X	TRIP BLANK

TOTAL NUMBER OF CONTAINERS: 19

RELINQUISHED BY: 1. BRYANT MILLER	DATE: 07-21-04 TIME: 16:15	RECEIVED BY: 1.	DATE: TIME:
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT: FEDEX AIR BILL No.

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27177

SAMPLE TEAM: BRYANT MILLER

RECEIVED FOR LABORATORY BY: _____
DATE: 7/22/04 TIME: 10:40

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

15

STL North Canton

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G220188

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GLK29	EARLES	7/22/04	Yes		Storage	
GLK3J	EARLES	7/22/04	Yes		Storage	
GLK3K	EARLES	7/22/04	Yes		Storage	
GLK3L	EARLES	7/22/04	Yes		Storage	
GLK3N	EARLES	7/22/04	Yes		Storage	
GLK3P	EARLES	7/22/04	Yes		Storage	
GLK3Q	EARLES	7/22/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** A4622088

North Canton Facility

Client: CLA Project: GM Grand Rapids Quote#:

Cooler Received on: 7-22-04 Opened on: 7-22-04 by: (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☑ Other:

STL Cooler No# Foam Box ☐ Client Cooler ☑ Other

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☑
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☑ None ☐ Other :
6. Cooler temperature upon receipt 4.1 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/$H_2$0 Slurry ☐

COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM Date: by: via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

√	

1. CHAIN OF CUSTODY

The following discrepancies occurred:

2. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #122603-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # 111401-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*

Sample(s) were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072104-BM-144

GC/MS Volatiles

Lot-Sample #...:	A4G220188-001	**Work Order #...:**	GLK291AA	**Matrix.....:**	WG
Date Sampled...:	07/21/04 08:30	**Date Received..:**	07/22/04		
Prep Date.....:	07/26/04	**Analysis Date..:**	07/26/04		
Prep Batch #...:	4207075				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.1 J**	**25**	**ug/L**	**0.74**
Benzene	**0.22 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.36 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	**0.28 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**0.85 J**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.23 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-144

GC/MS Volatiles

Lot-Sample #...: A4G220188-001 **Work Order #...:** GLK291AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.1**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**6.5**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.52 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072104-BM-145

GC/MS Volatiles

Lot-Sample #...: A4G220188-002 **Work Order #...:** GLK3J1AA **Matrix.....:** WG
Date Sampled...: 07/21/04 09:30 **Date Received..:** 07/22/04
Prep Date.....: 07/26/04 **Analysis Date..:** 07/26/04
Prep Batch #...: 4207075
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.3 J**	**25**	**ug/L**	**0.74**
Benzene	**0.25 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.58 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072104-BM-145

GC/MS Volatiles

Lot-Sample #...: A4G220188-002 **Work Order #...:** GLK3J1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.64 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**18**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.76 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-146

GC/MS Volatiles

Lot-Sample #...: A4G220188-003	**Work Order #...:** GLK3K1AA	**Matrix.....:** WG	
Date Sampled...: 07/21/04 11:12	**Date Received..:** 07/22/04		
Prep Date.....: 07/26/04	**Analysis Date..:** 07/26/04		
Prep Batch #...: 4207075			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.5 J**	**25**	**ug/L**	**0.74**
Benzene	**0.25 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**3.5**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.52 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**8.7**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**1.4**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-146

GC/MS Volatiles

Lot-Sample #...: A4G220188-003 Work Order #...: GLK3K1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**6.3**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**4.0**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-147

GC/MS Volatiles

Lot-Sample #...: A4G220188-004 **Work Order #...:** GLK3L1AA **Matrix.....:** WG
Date Sampled...: 07/21/04 12:40 **Date Received..:** 07/22/04
Prep Date.....: 07/26/04 **Analysis Date..:** 07/26/04
Prep Batch #...: 4207075
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.7 J**	**25**	**ug/L**	**0.74**
Benzene	**0.33 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.5**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**3.1**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.19 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**0.49 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-147

GC/MS Volatiles

Lot-Sample #...: A4G220188-004 Work Order #...: GLK3L1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**2.1**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.23 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.30 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-148

GC/MS Volatiles

Lot-Sample #...: A4G220188-005	**Work Order #...:** GLK3N1AA	**Matrix.....:** WG	
Date Sampled...: 07/21/04 14:00	**Date Received..:** 07/22/04		
Prep Date.....: 07/26/04	**Analysis Date..:** 07/26/04		
Prep Batch #...: 4207075			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.5 J**	**25**	**ug/L**	**0.74**
Benzene	**0.25 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.4**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**4.1**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.17 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**0.46 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-148

GC/MS Volatiles

Lot-Sample #...: A4G220188-005 Work Order #...: GLK3N1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**2.7**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.52 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-149

GC/MS Volatiles

Lot-Sample #...: A4G220188-006 **Work Order #...:** GLK3P1AA **Matrix.....:** WG
Date Sampled...: 07/21/04 15:30 **Date Received..:** 07/22/04
Prep Date.....: 07/26/04 **Analysis Date..:** 07/26/04
Prep Batch #...: 4207075
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.1 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.58 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.7**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072104-BM-149

GC/MS Volatiles

Lot-Sample #...: A4G220188-006 **Work Order #...:** GLK3P1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**2.0**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.39 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.58 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-17360-072104-BM-150

GC/MS Volatiles

Lot-Sample #...: A4G220188-007	**Work Order #...:** GLK3Q1AA	**Matrix.....:** WQ	
Date Sampled...: 07/21/04	**Date Received..:** 07/22/04		
Prep Date.....: 07/26/04	**Analysis Date..:** 07/26/04		
Prep Batch #...: 4207075			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.8 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.51 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**0.68 J**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-17360-072104-BM-150

GC/MS Volatiles

Lot-Sample #...: A4G220188-007 Work Order #...: GLK3Q1AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G220188 **Work Order #...:** GLTK81AA **Matrix.....:** WATER
MB Lot-Sample #: A4G250000-075

Prep Date.....: 07/25/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/25/04 **Prep Batch #...:** 4207075
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G220188 **Work Order #...:** GLTK81AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G220188 **Work Order #...:** GLTK81AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G250000-075 GLTK81AD-LCSD
Prep Date.....: 07/25/04 **Analysis Date..:** 07/25/04
Prep Batch #...: 4207075
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	10	9.2	ug/L	92		**SW846 8260B**
	10	9.4	ug/L	94	2.4	**SW846 8260B**
Chlorobenzene	10	9.1	ug/L	91		**SW846 8260B**
	10	9.3	ug/L	93	2.2	**SW846 8260B**
1,1-Dichloroethene	10	9.7	ug/L	97		**SW846 8260B**
	10	9.8	ug/L	98	1.1	**SW846 8260B**
Toluene	10	9.1	ug/L	91		**SW846 8260B**
	10	9.2	ug/L	92	0.67	**SW846 8260B**
Trichloroethene	10	9.3	ug/L	93		**SW846 8260B**
	10	9.4	ug/L	94	1.7	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
	93	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	100	(61 - 128)
Toluene-d8	92	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	81	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G220188 **Work Order #...:** GLTK81AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G250000-075 GLTK81AD-LCSD
Prep Date.....: 07/25/04 **Analysis Date..:** 07/25/04
Prep Batch #...: 4207075
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**92**	**(80 - 116)**			**SW846 8260B**
	94	**(80 - 116)**	**2.4**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**91**	**(76 - 117)**			**SW846 8260B**
	93	**(76 - 117)**	**2.2**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**97**	**(63 - 130)**			**SW846 8260B**
	98	**(63 - 130)**	**1.1**	**(0-20)**	**SW846 8260B**
Toluene	**91**	**(74 - 119)**			**SW846 8260B**
	92	**(74 - 119)**	**0.67**	**(0-20)**	**SW846 8260B**
Trichloroethene	**93**	**(75 - 122)**			**SW846 8260B**
	94	**(75 - 122)**	**1.7**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
	93	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	100	(61 - 128)
Toluene-d8	92	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	81	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G220188 **Work Order #...:** GLKJN1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G220119-003 GLKJN1AD-MSD
Date Sampled...: 07/20/04 18:00 **Date Received..:** 07/22/04
Prep Date.....: 07/25/04 **Analysis Date..:** 07/25/04
Prep Batch #...: 4207075
Dilution Factor: 3333.33 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**33000**	**32000**	**ug/L**	**95**		**SW846 8260B**
	ND	**33000**	**32000**	**ug/L**	**95**	**0.01**	**SW846 8260B**
Chlorobenzene	**ND**	**33000**	**31000**	**ug/L**	**93**		**SW846 8260B**
	ND	**33000**	**30000**	**ug/L**	**91**	**2.3**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**33000**	**33000**	**ug/L**	**98**		**SW846 8260B**
	ND	**33000**	**33000**	**ug/L**	**99**	**0.87**	**SW846 8260B**
Toluene	**ND**	**33000**	**31000**	**ug/L**	**92**		**SW846 8260B**
	ND	**33000**	**30000**	**ug/L**	**91**	**1.8**	**SW846 8260B**
Trichloroethene	**99000**	**33000**	**140000**	**ug/L**	**108**		**SW846 8260B**
	99000	**33000**	**140000**	**ug/L**	**107**	**0.22**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	97	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	99	(61 - 128)
Toluene-d8	93	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)
	84	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G220188 **Work Order #...:** GLKJN1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G220119-003 GLKJN1AD-MSD
Date Sampled...: 07/20/04 18:00 **Date Received..:** 07/22/04
Prep Date.....: 07/25/04 **Analysis Date..:** 07/25/04
Prep Batch #...: 4207075
Dilution Factor: 3333.33 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**95**	**(78 - 118)**			**SW846 8260B**
	95	**(78 - 118)**	**0.01**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**93**	**(76 - 117)**			**SW846 8260B**
	91	**(76 - 117)**	**2.3**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**98**	**(62 - 130)**			**SW846 8260B**
	99	**(62 - 130)**	**0.87**	**(0-20)**	**SW846 8260B**
Toluene	**92**	**(70 - 119)**			**SW846 8260B**
	91	**(70 - 119)**	**1.8**	**(0-20)**	**SW846 8260B**
Trichloroethene	**108**	**(62 - 130)**			**SW846 8260B**
	107	**(62 - 130)**	**0.22**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	97	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	99	(61 - 128)
Toluene-d8	93	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)
	84	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

REC'D CRA
AUG - 4
CRA SDG G-18.

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A4G230184

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4G230184
Name: GM-GRAND RAPIDS

Description
SEVERN TRENT LABORATORIES, INC.: VAS Sampling
Samples: 6 waters DCR 151-156.
Analysis: TCL VOCs.

TAT: 48 HOUR TAT.
Kim Kuyer for Lab: STL-NC
Amy L. McCormick Checked Against Preliminary Data:
Project Manager Date: N/A Init.: N/A.
Date of Validation Memo: 10/21/04
Invoice Approval Date:
August 2, 2004 Comments:

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL- North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM-Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: Tot VOCs	PARAMETERS: 48-hr TAT	REMARKS
1	7/22/04	1000	GW-17360-072204-DCR-151	Ht20	3	X	X	
2		1050	-152		3	X	X	
3		1055	-153		3	X	X	
4		1145	-154		3	X	X	
5		1305	-155		3	X	X	
6		—	-156		1	X	X	
								CRA contact Paul Wiseman

TOTAL NUMBER OF CONTAINERS: 16

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
1. _____	7-22-04	1830	1. _____		
2. _____			2. _____		
3. _____			1. _____		

METHOD OF SHIPMENT: FED EX

AIR BILL No. 8393 5588 8886

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: _____

DATE: 7/23/04 TIME: 9:40

27179

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G230184

The following report contains the analytical results for five water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received July 23, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on July 27, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 2.4°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for batch(es) 4209406 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G230184

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072204-DCR-151 07/22/04 10:00 001				
Acetone	2.5 J,B	25	ug/L	SW846 8260B
Carbon disulfide	1.1 J	5.0	ug/L	SW846 8260B
Toluene	0.37 J	1.0	ug/L	SW846 8260B
GW-17360-072204-DCR-152 07/22/04 10:50 002				
Acetone	2.8 J,B	25	ug/L	SW846 8260B
Benzene	0.38 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	1.9	1.0	ug/L	SW846 8260B
Chloroform	13	1.0	ug/L	SW846 8260B
Cyclohexane	0.31 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.35 J	1.0	ug/L	SW846 8260B
Toluene	0.85 J	1.0	ug/L	SW846 8260B
Trichloroethene	2.0	1.0	ug/L	SW846 8260B
GW-17360-072204-DCR-153 07/22/04 10:55 003				
Acetone	2.8 J,B	25	ug/L	SW846 8260B
Benzene	0.35 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	1.9	1.0	ug/L	SW846 8260B
Chloroform	13	1.0	ug/L	SW846 8260B
Cyclohexane	0.25 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.39 J	1.0	ug/L	SW846 8260B
Toluene	0.75 J	1.0	ug/L	SW846 8260B
Trichloroethene	2.1	1.0	ug/L	SW846 8260B
GW-17360-072204-DCR-154 07/22/04 11:45 004				
Acetone	2.3 J,B	25	ug/L	SW846 8260B
Benzene	0.22 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	1.5	1.0	ug/L	SW846 8260B
Chloroform	3.9	1.0	ug/L	SW846 8260B
Cyclohexane	0.16 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.74 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	0.56 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	1.4	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	0.24 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.58 J	1.0	ug/L	SW846 8260B
Toluene	0.53 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.91 J	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G230184

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072204-DCR-155 07/22/04 13:05 005				
Acetone	2.3 J,B	25	ug/L	SW846 8260B
Benzene	0.22 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	6.1	1.0	ug/L	SW846 8260B
Chloroform	13	1.0	ug/L	SW846 8260B
Dibromochloromethane	2.1	1.0	ug/L	SW846 8260B
Toluene	2.3	1.0	ug/L	SW846 8260B
GW-17360-072204-DCR-156 07/22/04 006				
Acetone	6.2 J,B	25	ug/L	SW846 8260B
2-Butanone	0.81 J	25	ug/L	SW846 8260B
Methylene chloride	3.1 J	5.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G230184

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G230184

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GLNWJ	001	GW-17360-072204-DCR-151	07/22/04	10:0(
GLNWK	002	GW-17360-072204-DCR-152	07/22/04	10:5(
GLNWL	003	GW-17360-072204-DCR-153	07/22/04	10:5!
GLNWN	004	GW-17360-072204-DCR-154	07/22/04	11:4!
GLNWP	005	GW-17360-072204-DCR-155	07/22/04	13:0!
GLNWQ	006	GW-17360-072204-DCR-156	07/22/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL- North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM-Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: Tot VOCs	PARAMETERS: 48 hr TAT	REMARKS
1	7/22/04	1000	GW-17360-072204-DCR-151	H2O	3	X	X	
2		1050	-152		3	X	X	
3		1055	-153		3	X	X	
4		1145	-154		3	X	X	
5		1305	-155		3	X	X	
6		—	-156		1	X	X	
								CRA contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		16			

RELINQUISHED BY: 1. _____	DATE: 7-22-04 TIME: 1830	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No. 8393 5580 6886

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27179

SAMPLE TEAM: David C. Rivers

RECEIVED FOR LABORATORY BY: _____

DATE: 7/23/04 TIME: 9:40

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

STL North Canton

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G230184

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GLNWJ	SANDERSA	7/23/04	Yes		Storage	
GLNWK	SANDERSA	7/23/04	Yes		Storage	
GLNWL	SANDERSA	7/23/04	Yes		Storage	
GLNWN	SANDERSA	7/23/04	Yes		Storage	
GLNWP	SANDERSA	7/23/04	Yes		Storage	
GLNWQ	SANDERSA	7/23/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** AHC1030184
North Canton Facility

Client: GLCRA - MCL Project: GM - Ground Liquids Quote#:
Cooler Received on: 7-23-04 Opened on: 7-23-04 by: (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:
STL Cooler No# Foam Box ☐ Client Cooler ☒ Other

1. Were custody seals on the outside of the cooler? Yes ☐ No ☒ Intact? Yes ☐ ~~No~~ ☒ NA ☒
   If YES, Quantity
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☒
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☒ None ☐ Other:
6. Cooler temperature upon receipt 2.4 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☒ Against Bottles ☐ IR ☐ ICE/$H_2$0 Slurry ☐
COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☒
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐

Contacted PM Date: by: via Voice Mail ☐ Verbal ☐ Other ☐
Concerning:

√	
	1. CHAIN OF CUSTODY
	The following discrepancies occurred:
	2. SAMPLE CONDITION
	Sample(s) were received after the recommended holding time had expired.
	Sample(s) were received in a broken container.
	3. SAMPLE PRESERVATION
	Sample(s) were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-HZSO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO1ZN/NaOH*
	Sample(s) were received with bubble > 6 mm in diameter (cc: PM)
	4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072204-DCR-151

GC/MS Volatiles

Lot-Sample #...: A4G230184-001 **Work Order #...:** GLNWJ1AA **Matrix.....:** WG
Date Sampled...: 07/22/04 10:00 **Date Received..:** 07/23/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.5 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	**1.1 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072204-DCR-151

GC/MS Volatiles

Lot-Sample #...: A4G230184-001 Work Order #...: GLNWJ1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.37 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	74	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072204-DCR-152

GC/MS Volatiles

Lot-Sample #...: A4G230184-002	**Work Order #...:** GLNWK1AA	**Matrix.....:** WG	
Date Sampled...: 07/22/04 10:50	**Date Received..:** 07/23/04		
Prep Date.....: 07/27/04	**Analysis Date..:** 07/27/04		
Prep Batch #...: 4209406			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.8 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.38 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.9**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**13**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.31 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072204-DCR-152

GC/MS Volatiles

Lot-Sample #...: A4G230184-002 **Work Order #...:** GLNWK1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.35 J**	**1.0**	**ug/L**	**0.19**
Toluene	**0.85 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**2.0**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072204-DCR-153

GC/MS Volatiles

Lot-Sample #...: A4G230184-003	**Work Order #...:** GLNWL1AA	**Matrix.....:** WG	
Date Sampled...: 07/22/04 10:55	**Date Received..:** 07/23/04		
Prep Date.....: 07/27/04	**Analysis Date..:** 07/27/04		
Prep Batch #...: 4209406			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.8 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.35 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.9**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**13**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.25 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072204-DCR-153

GC/MS Volatiles

Lot-Sample #...: A4G230184-003 Work Order #...: GLNWL1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.39 J**	**1.0**	**ug/L**	**0.19**
Toluene	**0.75 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**2.1**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072204-DCR-154

GC/MS Volatiles

Lot-Sample #...: A4G230184-004	**Work Order #...:** GLNWN1AA	**Matrix.....:** WG	
Date Sampled...: 07/22/04 11:45	**Date Received..:** 07/23/04		
Prep Date.....: 07/27/04	**Analysis Date..:** 07/27/04		
Prep Batch #...: 4209406			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.3 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.22 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.5**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**3.9**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.16 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**0.74 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	**0.56 J**	**1.0**	**ug/L**	**0.21**
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**1.4**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	**0.24 J**	**1.0**	**ug/L**	**0.16**
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072204-DCR-154

GC/MS Volatiles

Lot-Sample #...: A4G230184-004 Work Order #...: GLNWN1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.58 J**	**1.0**	**ug/L**	**0.19**
Toluene	**0.53 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.91 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072204-DCR-155

GC/MS Volatiles

Lot-Sample #...: A4G230184-005	**Work Order #...:** GLNWP1AA	**Matrix.....:** WG	
Date Sampled...: 07/22/04 13:05	**Date Received..:** 07/23/04		
Prep Date.....: 07/27/04	**Analysis Date..:** 07/27/04		
Prep Batch #...: 4209406			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.3 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.22 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**6.1**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**13**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**2.1**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072204-DCR-155

GC/MS Volatiles

Lot-Sample #...: A4G230184-005 Work Order #...: GLNWP1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**2.3**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	74	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072204-DCR-156

GC/MS Volatiles

Lot-Sample #...: A4G230184-006 **Work Order #...:** GLNWQ1AA **Matrix.....:** WQ
Date Sampled...: 07/22/04 **Date Received..:** 07/23/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**6.2 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.81 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**3.1 J**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072204-DCR-156

GC/MS Volatiles

Lot-Sample #...: A4G230184-006 **Work Order #...:** GLNWQ1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G230184
MB Lot-Sample #: A4G270000-406

Work Order #...: GLXV81AA

Matrix.....: WATER

Prep Date.....: 07/27/04
Prep Batch #...: 4209406
Initial Wgt/Vol: 5 mL

Final Wgt/Vol..: 5 mL

Analysis Date..: 07/27/04
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	**1.1 J**	**25**	**ug/L**	**SW846 8260B**
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G230184 **Work Order #...:** GLXV81AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G230184 **Work Order #...:** GLXV81AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G270000-406 GLXV81AD-LCSD
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	10	9.3	ug/L	93		SW846 8260B
	10	9.7	ug/L	97	4.5	SW846 8260B
Chlorobenzene	10	9.0	ug/L	90		SW846 8260B
	10	9.4	ug/L	94	4.5	SW846 8260B
1,1-Dichloroethene	10	9.5	ug/L	95		SW846 8260B
	10	10	ug/L	104	9.0	SW846 8260B
Toluene	10	8.8	ug/L	88		SW846 8260B
	10	9.3	ug/L	93	5.3	SW846 8260B
Trichloroethene	10	9.0	ug/L	90		SW846 8260B
	10	9.7	ug/L	97	7.0	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	103	(61 - 128)
Toluene-d8	91	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	83	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G230184 **Work Order #...:** GLXV81AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G270000-406 GLXV81AD-LCSD
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**93**	**(80 - 116)**			**SW846 8260B**
	97	**(80 - 116)**	**4.5**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**90**	**(76 - 117)**			**SW846 8260B**
	94	**(76 - 117)**	**4.5**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**95**	**(63 - 130)**			**SW846 8260B**
	104	**(63 - 130)**	**9.0**	**(0-20)**	**SW846 8260B**
Toluene	**88**	**(74 - 119)**			**SW846 8260B**
	93	**(74 - 119)**	**5.3**	**(0-20)**	**SW846 8260B**
Trichloroethene	**90**	**(75 - 122)**			**SW846 8260B**
	97	**(75 - 122)**	**7.0**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	103	(61 - 128)
Toluene-d8	91	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	83	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G230184 **Work Order #...:** GLL2A1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G220306-011 GLL2A1AD-MSD
Date Sampled...: 07/19/04 19:21 **Date Received..:** 07/21/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	10	6.8	ug/L	68 a		SW846 8260B
	ND	10	7.9	ug/L	79	15	SW846 8260B
Chlorobenzene	ND	10	6.6	ug/L	66 a		SW846 8260B
	ND	10	7.5	ug/L	75 a	12	SW846 8260B
1,1-Dichloroethene	ND	10	7.1	ug/L	71		SW846 8260B
	ND	10	8.6	ug/L	86	19	SW846 8260B
Toluene	ND	10	6.5	ug/L	65 a		SW846 8260B
	ND	10	7.4	ug/L	74	14	SW846 8260B
Trichloroethene	ND	10	6.6	ug/L	66		SW846 8260B
	ND	10	7.7	ug/L	77	15	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
	101	(61 - 128)
Toluene-d8	90	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	82	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G230184 **Work Order #...:** GLL2A1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G220306-011 GLL2A1AD-MSD
Date Sampled...: 07/19/04 19:21 **Date Received..:** 07/21/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**68 a**	**(78 - 118)**			**SW846 8260B**
	79	**(78 - 118)**	**15**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**66 a**	**(76 - 117)**			**SW846 8260B**
	75 a	**(76 - 117)**	**12**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**71**	**(62 - 130)**			**SW846 8260B**
	86	**(62 - 130)**	**19**	**(0-20)**	**SW846 8260B**
Toluene	**65 a**	**(70 - 119)**			**SW846 8260B**
	74	**(70 - 119)**	**14**	**(0-20)**	**SW846 8260B**
Trichloroethene	**66**	**(62 - 130)**			**SW846 8260B**
	77	**(62 - 130)**	**15**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
	101	(61 - 128)
Toluene-d8	90	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	82	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

SEVERN TRENT STL

END OF REPORT

REC'D CRA
AUG - 9 2004
CRA SDG G-19.

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A4G240144

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4G240144.
Name: GM GRAND RAPIDS.

Description
Event: VAS Sampling
Samples: 5 waters DCR 157-162
Analysis: TCL VOCs.

TAT: 48 HOUR TAT
Lab: STL-NC
Checked Against Preliminary Data:
Date: N/A Init.: N/A.
Date of Validation Memo: 10/21/04
Invoice Approval Date:
Comments:

Amy L. McCormick
Project Manager

August 4, 2004

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 48hr TAT	REMARKS
1	7/23/04	925	GW-17360-072304-DUP-157	H2O	2	X	X	
2		1015	-158		3	X	X	
3		1105	-155		3	X	X	
4		1215	-160		3	X	X	
5		1355	-161		3	X	X	
6		—	-162		1	X	X	
								CRA contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		15			

RELINQUISHED BY: 1. _____	DATE: 7-23-04 TIME: 1930	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 8936 7994 4248

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27158

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: _____
DATE: 7/24/04 TIME: 1000

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G240144

The following report contains the analytical results for five water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received July 24, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on July 28, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 4.1°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for batch(es) 4209406 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

The pH of the sample GW-17360-072304-DCR-157 was greater than 2. The sample(s) was analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G240144

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072304-DCR-157 07/23/04 09:25 001				
Acetone	8.9 J,B	25	ug/L	SW846 8260B
Benzene	0.34 J	1.0	ug/L	SW846 8260B
Chloroform	2.3	1.0	ug/L	SW846 8260B
Chloromethane	0.33 J	1.0	ug/L	SW846 8260B
Toluene	0.68 J	1.0	ug/L	SW846 8260B
GW-17360-072304-DCR-158 07/23/04 10:15 002				
Acetone	1.6 J	25	ug/L	SW846 8260B
Benzene	0.31 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.71 J	1.0	ug/L	SW846 8260B
Chloroform	4.9	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.28 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	0.37 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	0.75 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.26 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.45 J	1.0	ug/L	SW846 8260B
Toluene	0.84 J	1.0	ug/L	SW846 8260B
Trichloroethene	1.6	1.0	ug/L	SW846 8260B
GW-17360-072304-DCR-159 07/23/04 11:05 003				
Acetone	1.5 J	25	ug/L	SW846 8260B
Benzene	0.52 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.22 J	1.0	ug/L	SW846 8260B
2-Butanone	0.44 J	25	ug/L	SW846 8260B
Chloroform	1.5	1.0	ug/L	SW846 8260B
Cyclohexane	0.40 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	0.50 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	1.2	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	0.33 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.34 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.58 J	1.0	ug/L	SW846 8260B
Toluene	1.2	1.0	ug/L	SW846 8260B
Trichloroethene	2.7	1.0	ug/L	SW846 8260B
GW-17360-072304-DCR-160 07/23/04 12:15 004				
Acetone	3.0 J,B	25	ug/L	SW846 8260B
Bromodichloromethane	3.4	1.0	ug/L	SW846 8260B
2-Butanone	0.54 J	25	ug/L	SW846 8260B
Chloroform	16	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.92 J	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G240144

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072304-DCR-160 07/23/04 12:15 004				
Tetrachloroethene	0.47 J	1.0	ug/L	SW846 8260B
Toluene	1.3	1.0	ug/L	SW846 8260B
Trichloroethene	0.46 J	1.0	ug/L	SW846 8260B
GW-17360-072304-DCR-161 07/23/04 13:55 005				
Acetone	3.3 J,B	25	ug/L	SW846 8260B
Bromodichloromethane	5.7	1.0	ug/L	SW846 8260B
Chloroform	16	1.0	ug/L	SW846 8260B
Dibromochloromethane	1.9	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	0.67 J	50	ug/L	SW846 8260B
Toluene	1.4	1.0	ug/L	SW846 8260B
GW-17360-072304-DCR-162 07/23/04 006				
Acetone	6.2 J,B	25	ug/L	SW846 8260B
2-Butanone	3.7 J	25	ug/L	SW846 8260B
1,1-Dichloroethene	0.50 J	1.0	ug/L	SW846 8260B
Methylene chloride	0.58 J	5.0	ug/L	SW846 8260B
Toluene	0.24 J	1.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G240144

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G240144

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GLRMD	001	GW-17360-072304-DCR-157	07/23/04	09:25
GLRMG	002	GW-17360-072304-DCR-158	07/23/04	10:15
GLRMH	003	GW-17360-072304-DCR-159	07/23/04	11:05
GLRMJ	004	GW-17360-072304-DCR-160	07/23/04	12:15
GLRMK	005	GW-17360-072304-DCR-161	07/23/04	13:55
GLRMM	006	GW-17360-072304-DCR-162	07/23/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL North Canton

REFERENCE NUMBER: 17360-07

PROJECT NAME: Gm - Grand Rapids

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: David C Rivers

SEQ. No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOC	PARAMETERS: 48hr TAT	REMARKS
1	7/23/04	925	GW-17360-072304-DXR-157	H2O	2	X	X	
2		1015	-158		3	X	X	
3		1105	-155		3	X	X	
4		1215	-160		3	X	X	
5		1355	-161		3	X	X	
6		—	-162		1	X	X	
								CRA contact Paul Wisema
			TOTAL NUMBER OF CONTAINERS		15			

RELINQUISHED BY: 1. [signature]	DATE: 7-23-04 TIME: 1930	RECEIVED BY: 1.	DATE: TIME:
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 8936 7994 4248

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27158

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: [signature]
DATE: 7/24/04 TIME: 1020

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G240144

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GLRMD	SANDERSA	7/24/04	Yes		Storage	
GLRMG	SANDERSA	7/24/04	Yes		Storage	
GLRMH	SANDERSA	7/24/04	Yes		Storage	
GLRMJ	SANDERSA	7/24/04	Yes		Storage	
GLRMK	SANDERSA	7/24/04	Yes		Storage	
GLRMM	SANDERSA	7/24/04	Yes		Storage	

STL Cooler Receipt Form/Narrative

Lot Number: [illegible]

North Canton Facility

Client: [illegible] Project: [illegible] Quote#: _____

Cooler Received on: 7/24/04 Opened on: 7/24/04 by: _____ (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other: _____

STL Cooler No# _____ Foam Box ☐ Client Cooler ☑ Other ☐

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity _____
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☑
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☑ None ☐ Other : _____
6. Cooler temperature upon receipt 4.1 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☑ No ☐ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning: _____

√	

1. CHAIN OF CUSTODY

The following discrepancies occurred:

X No sample times on any of the labels - log per COC

2. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*

Sample(s) 1x -157 were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072304-DCR-157

GC/MS Volatiles

Lot-Sample #...: A4G240144-001 **Work Order #...:** GLRMD1AA **Matrix.....:** WG
Date Sampled...: 07/23/04 09:25 **Date Received..:** 07/24/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**8.9 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.34 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.3**	**1.0**	**ug/L**	**0.16**
Chloromethane	**0.33 J**	**1.0**	**ug/L**	**0.14**
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072304-DCR-157

GC/MS Volatiles

Lot-Sample #...: A4G240144-001 Work Order #...: GLRMD1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.68 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072304-DCR-158

GC/MS Volatiles

Lot-Sample #...: A4G240144-002	**Work Order #...:** GLRMG1AA	**Matrix.....:** WG	
Date Sampled...: 07/23/04 10:15	**Date Received..:** 07/24/04		
Prep Date.....: 07/28/04	**Analysis Date..:** 07/28/04		
Prep Batch #...: 4210204			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.6 J**	**25**	**ug/L**	**0.74**
Benzene	**0.31 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.71 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**4.9**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**0.28 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	**0.37 J**	**1.0**	**ug/L**	**0.21**
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**0.75 J**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.26 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072304-DCR-158

GC/MS Volatiles

Lot-Sample #...: A4G240144-002 **Work Order #...:** GLRMG1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.45 J**	**1.0**	**ug/L**	**0.19**
Toluene	**0.84 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**1.6**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072304-DCR-159

GC/MS Volatiles

Lot-Sample #...: A4G240144-003 **Work Order #...:** GLRMH1AA **Matrix.....:** WG
Date Sampled...: 07/23/04 11:05 **Date Received..:** 07/24/04
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210204
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.5 J**	**25**	**ug/L**	**0.74**
Benzene	**0.52 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.22 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.44 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.5**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.40 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	**0.50 J**	**1.0**	**ug/L**	**0.21**
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**1.2**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	**0.33 J**	**1.0**	**ug/L**	**0.16**
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.34 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072304-DCR-159

GC/MS Volatiles

Lot-Sample #...: A4G240144-003 Work Order #...: GLRMH1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.58 J**	**1.0**	**ug/L**	**0.19**
Toluene	**1.2**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**2.7**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072304-DCR-160

GC/MS Volatiles

Lot-Sample #...: A4G240144-004 **Work Order #...:** GLRMJ1AA **Matrix.....:** WG
Date Sampled...: 07/23/04 12:15 **Date Received..:** 07/24/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.0 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**3.4**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.54 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**16**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**0.92 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072304-DCR-160

GC/MS Volatiles

Lot-Sample #...: A4G240144-004 **Work Order #...:** GLRMJ1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.47 J**	**1.0**	**ug/L**	**0.19**
Toluene	**1.3**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.46 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072304-DCR-161

GC/MS Volatiles

Lot-Sample #...: A4G240144-005 **Work Order #...:** GLRMK1AA **Matrix.....:** WG
Date Sampled...: 07/23/04 13:55 **Date Received..:** 07/24/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.3 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**5.7**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**16**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**1.9**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	**0.67 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072304-DCR-161

GC/MS Volatiles

Lot-Sample #...: A4G240144-005 **Work Order #...:** GLRMK1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.4**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072304-DCR-162

GC/MS Volatiles

Lot-Sample #...: A4G240144-006 **Work Order #...:** GLRMM1AA **Matrix.....:** WQ
Date Sampled...: 07/23/04 **Date Received..:** 07/24/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**6.2 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**3.7 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.50 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**0.58 J**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072304-DCR-162

GC/MS Volatiles

Lot-Sample #...: A4G240144-006 **Work Order #...:** GLRMM1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.24 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	74	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G240144
MB Lot-Sample #: A4G270000-406

Work Order #...: GLXV81AA

Matrix.....: WATER

Prep Date.....: 07/27/04
Prep Batch #...: 4209406
Initial Wgt/Vol: 5 mL

Final Wgt/Vol..: 5 mL

Analysis Date..: 07/27/04
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	**1.1 J**	**25**	**ug/L**	**SW846 8260B**
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GLXV81AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GL1NG1AA **Matrix.....:** WATER
MB Lot-Sample #: A4G280000-204

Prep Date.....: 07/28/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/28/04 **Prep Batch #...:** 4210204
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GL1NG1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GLXV81AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G270000-406 GLXV81AD-LCSD
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**9.3**	**ug/L**	**93**		**SW846 8260B**
	10	**9.7**	**ug/L**	**97**	**4.5**	**SW846 8260B**
Chlorobenzene	**10**	**9.0**	**ug/L**	**90**		**SW846 8260B**
	10	**9.4**	**ug/L**	**94**	**4.5**	**SW846 8260B**
1,1-Dichloroethene	**10**	**9.5**	**ug/L**	**95**		**SW846 8260B**
	10	**10**	**ug/L**	**104**	**9.0**	**SW846 8260B**
Toluene	**10**	**8.8**	**ug/L**	**88**		**SW846 8260B**
	10	**9.3**	**ug/L**	**93**	**5.3**	**SW846 8260B**
Trichloroethene	**10**	**9.0**	**ug/L**	**90**		**SW846 8260B**
	10	**9.7**	**ug/L**	**97**	**7.0**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	103	(61 - 128)
Toluene-d8	91	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	83	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GLXV81AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G270000-406 GLXV81AD-LCSD
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**93**	**(80 - 116)**			**SW846 8260B**
	97	**(80 - 116)**	**4.5**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**90**	**(76 - 117)**			**SW846 8260B**
	94	**(76 - 117)**	**4.5**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**95**	**(63 - 130)**			**SW846 8260B**
	104	**(63 - 130)**	**9.0**	**(0-20)**	**SW846 8260B**
Toluene	**88**	**(74 - 119)**			**SW846 8260B**
	93	**(74 - 119)**	**5.3**	**(0-20)**	**SW846 8260B**
Trichloroethene	**90**	**(75 - 122)**			**SW846 8260B**
	97	**(75 - 122)**	**7.0**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	103	(61 - 128)
Toluene-d8	91	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	83	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GL1NG1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G280000-204 GL1NG1AD-LCSD
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210204
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	10	**9.9**	**ug/L**	**99**	**0.40**	**SW846 8260B**
Chlorobenzene	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	10	**9.7**	**ug/L**	**97**	**0.57**	**SW846 8260B**
1,1-Dichloroethene	**10**	**10**	**ug/L**	**101**		**SW846 8260B**
	10	**9.7**	**ug/L**	**97**	**3.4**	**SW846 8260B**
Toluene	**10**	**9.6**	**ug/L**	**96**		**SW846 8260B**
	10	**9.8**	**ug/L**	**98**	**1.1**	**SW846 8260B**
Trichloroethene	**10**	**9.7**	**ug/L**	**97**		**SW846 8260B**
	10	**10**	**ug/L**	**101**	**4.8**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
	94	(61 - 128)
Toluene-d8	99	(76 - 110)
	100	(76 - 110)
4-Bromofluorobenzene	103	(74 - 116)
	100	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GL1NG1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G280000-204 GL1NG1AD-LCSD
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210204
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**98**	**(80 - 116)**			**SW846 8260B**
	99	**(80 - 116)**	**0.40**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**98**	**(76 - 117)**			**SW846 8260B**
	97	**(76 - 117)**	**0.57**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**101**	**(63 - 130)**			**SW846 8260B**
	97	**(63 - 130)**	**3.4**	**(0-20)**	**SW846 8260B**
Toluene	**96**	**(74 - 119)**			**SW846 8260B**
	98	**(74 - 119)**	**1.1**	**(0-20)**	**SW846 8260B**
Trichloroethene	**97**	**(75 - 122)**			**SW846 8260B**
	101	**(75 - 122)**	**4.8**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
	94	(61 - 128)
Toluene-d8	99	(76 - 110)
	100	(76 - 110)
4-Bromofluorobenzene	103	(74 - 116)
	100	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	A4G240144	**Work Order #...:**	GLL2A1AC-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A4G220306-011		GLL2A1AD-MSD		
Date Sampled...:	07/19/04 19:21	**Date Received..:**	07/21/04		
Prep Date.....:	07/27/04	**Analysis Date..:**	07/27/04		
Prep Batch #...:	4209406				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**10**	**6.8**	**ug/L**	**68 a**		**SW846 8260B**
	ND	**10**	**7.9**	**ug/L**	**79**	**15**	**SW846 8260B**
Chlorobenzene	**ND**	**10**	**6.6**	**ug/L**	**66 a**		**SW846 8260B**
	ND	**10**	**7.5**	**ug/L**	**75 a**	**12**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10**	**7.1**	**ug/L**	**71**		**SW846 8260B**
	ND	**10**	**8.6**	**ug/L**	**86**	**19**	**SW846 8260B**
Toluene	**ND**	**10**	**6.5**	**ug/L**	**65 a**		**SW846 8260B**
	ND	**10**	**7.4**	**ug/L**	**74**	**14**	**SW846 8260B**
Trichloroethene	**ND**	**10**	**6.6**	**ug/L**	**66**		**SW846 8260B**
	ND	**10**	**7.7**	**ug/L**	**77**	**15**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
	101	(61 - 128)
Toluene-d8	90	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	82	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GLL2A1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G220306-011 GLL2A1AD-MSD
Date Sampled...: 07/19/04 19:21 **Date Received..:** 07/21/04
Prep Date.....: 07/27/04 **Analysis Date..:** 07/27/04
Prep Batch #...: 4209406
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**68 a**	**(78 - 118)**			**SW846 8260B**
	79	**(78 - 118)**	**15**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**66 a**	**(76 - 117)**			**SW846 8260B**
	75 a	**(76 - 117)**	**12**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**71**	**(62 - 130)**			**SW846 8260B**
	86	**(62 - 130)**	**19**	**(0-20)**	**SW846 8260B**
Toluene	**65 a**	**(70 - 119)**			**SW846 8260B**
	74	**(70 - 119)**	**14**	**(0-20)**	**SW846 8260B**
Trichloroethene	**66**	**(62 - 130)**			**SW846 8260B**
	77	**(62 - 130)**	**15**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
	101	(61 - 128)
Toluene-d8	90	(76 - 110)
	91	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	82	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G240144 **Work Order #...:** GLTVG1AE-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G260107-001 GLTVG1AF-MSD
Date Sampled...: 07/22/04 12:00 **Date Received..:** 07/24/04
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210204
Dilution Factor: 1000 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**470**	**10000**	**9900**	**ug/L**	**94**		**SW846 8260B**
	470	**10000**	**10000**	**ug/L**	**98**	**4.0**	**SW846 8260B**
Chlorobenzene	**ND**	**10000**	**9800**	**ug/L**	**98**		**SW846 8260B**
	ND	**10000**	**9700**	**ug/L**	**97**	**0.70**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10000**	**9200**	**ug/L**	**92**		**SW846 8260B**
	ND	**10000**	**8800**	**ug/L**	**88**	**4.5**	**SW846 8260B**
Toluene	**1200**	**10000**	**10000**	**ug/L**	**93**		**SW846 8260B**
	1200	**10000**	**11000**	**ug/L**	**96**	**3.4**	**SW846 8260B**
Trichloroethene	**ND**	**10000**	**9800**	**ug/L**	**98**		**SW846 8260B**
	ND	**10000**	**10000**	**ug/L**	**100**	**1.3**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	94	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
	92	(61 - 128)
Toluene-d8	98	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)
	101	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A4G240144	**Work Order #...:**	GLTVG1AE-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A4G260107-001		GLTVG1AF-MSD		
Date Sampled...:	07/22/04 12:00	**Date Received..:**	07/24/04		
Prep Date.....:	07/28/04	**Analysis Date..:**	07/28/04		
Prep Batch #...:	4210204				
Dilution Factor:	1000	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**94**	**(78 - 118)**			**SW846 8260B**
	98	**(78 - 118)**	**4.0**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**98**	**(76 - 117)**			**SW846 8260B**
	97	**(76 - 117)**	**0.70**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**92**	**(62 - 130)**			**SW846 8260B**
	88	**(62 - 130)**	**4.5**	**(0-20)**	**SW846 8260B**
Toluene	**93**	**(70 - 119)**			**SW846 8260B**
	96	**(70 - 119)**	**3.4**	**(0-20)**	**SW846 8260B**
Trichloroethene	**98**	**(62 - 130)**			**SW846 8260B**
	100	**(62 - 130)**	**1.3**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	94	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
	92	(61 - 128)
Toluene-d8	98	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)
	101	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

REC'D CRA
AUG 19 2004
G-20

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A4G270183

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: 44G270183
Name: GM GR
Description
Event: Quarterly GW
Samples: 8 water
Analysis: Tcl voc

TAT: 2 day
Lab: STL
Checked Against Preliminary Data:
Date: — Init.: KAK
Date of Validation Memo: 10/11/04
Invoice Approval Date:
Comments:

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

for: Rebecca Stutt
Amy L. McCormick
Project Manager

August 17, 2004

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 48hr TAT	REMARKS
1	7/26/04	1030	GW-17360-072604-DCR-163	H2O	3	X	X	
2		1120	-164		3	X	X	
3		1215	-165		3	X	X	
4		1315	-166		9	X	X	MS/MSD
5		1445	-167		3	X	X	
6		1645	-168		3	X	X	
7		1750	-169		3	X	X	
8		—	-170		1	X	X	
								CRA Contact Paul Wiseman
TOTAL NUMBER OF CONTAINERS					28			

RELINQUISHED BY: 1. _____	DATE: 7-26-04 TIME: 1930	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No. 839355888875

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

25941

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: Brandi Slate

DATE: 7/27/04 TIME: 9:45

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G270183

The following report contains the analytical results for eight water samples submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received July 27, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on July 29, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 4.5°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The pH of the sample GW-17360-072604-DCR-164 was greater than 2. The sample(s) was analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G270183

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072604-DCR-163 07/26/04 10:30 001				
Acetone	1.5 J	25	ug/L	SW846 8260B
Benzene	0.49 J	1.0	ug/L	SW846 8260B
2-Butanone	0.78 J	25	ug/L	SW846 8260B
Carbon disulfide	1.3 J	5.0	ug/L	SW846 8260B
Cyclohexane	0.39 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.36 J	1.0	ug/L	SW846 8260B
Isopropylbenzene	0.46 J,B	5.0	ug/L	SW846 8260B
Methylcyclohexane	0.50 J	1.0	ug/L	SW846 8260B
Toluene	1.1	1.0	ug/L	SW846 8260B
GW-17360-072604-DCR-164 07/26/04 11:20 002				
Acetone	6.9 J	25	ug/L	SW846 8260B
Benzene	0.57 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	1.3	1.0	ug/L	SW846 8260B
2-Butanone	2.1 J	25	ug/L	SW846 8260B
Chloroform	4.2	1.0	ug/L	SW846 8260B
Cyclohexane	0.43 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.53 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.44 J	1.0	ug/L	SW846 8260B
Isopropylbenzene	0.46 J,B	5.0	ug/L	SW846 8260B
Methylcyclohexane	0.53 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	1.5 J	50	ug/L	SW846 8260B
Toluene	4.6	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.45 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.53 J	1.0	ug/L	SW846 8260B
Xylenes (total)	0.85 J	3.0	ug/L	SW846 8260B
GW-17360-072604-DCR-165 07/26/04 12:15 003				
Benzene	0.45 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.20 J	1.0	ug/L	SW846 8260B
2-Butanone	0.41 J	25	ug/L	SW846 8260B
Chloroform	1.2	1.0	ug/L	SW846 8260B
Chloromethane	0.16 J	1.0	ug/L	SW846 8260B
Cyclohexane	0.30 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	0.46 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.28 J	1.0	ug/L	SW846 8260B
Isopropylbenzene	0.46 J,B	5.0	ug/L	SW846 8260B
Methylcyclohexane	0.57 J	1.0	ug/L	SW846 8260B
Toluene	1.3	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	5.4	1.0	ug/L	SW846 8260B
Trichloroethene	11	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G270183

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072604-DCR-166 07/26/04 13:15 004				
Bromodichloromethane	0.23 J	1.0	ug/L	SW846 8260B
Chloroform	1.4	1.0	ug/L	SW846 8260B
Toluene	0.23 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	2.7	1.0	ug/L	SW846 8260B
Trichloroethene	0.90 J	1.0	ug/L	SW846 8260B
GW-17360-072604-DCR-167 07/26/04 14:45 005				
Acetone	0.94 J	25	ug/L	SW846 8260B
Benzene	0.31 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	1.0	1.0	ug/L	SW846 8260B
2-Butanone	0.62 J	25	ug/L	SW846 8260B
Chloroform	2.7	1.0	ug/L	SW846 8260B
Cyclohexane	0.18 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.39 J	1.0	ug/L	SW846 8260B
Isopropylbenzene	0.46 J,B	5.0	ug/L	SW846 8260B
Toluene	3.8	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	0.91 J,B	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.96 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.86 J	1.0	ug/L	SW846 8260B
GW-17360-072604-DCR-168 07/26/04 16:45 006				
Acetone	0.90 J	25	ug/L	SW846 8260B
Benzene	0.28 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.76 J	1.0	ug/L	SW846 8260B
2-Butanone	0.58 J	25	ug/L	SW846 8260B
Chloroform	3.2	1.0	ug/L	SW846 8260B
Chloromethane	0.14 J	1.0	ug/L	SW846 8260B
Cyclohexane	0.14 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	0.35 J	50	ug/L	SW846 8260B
Toluene	3.8	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	1.0	1.0	ug/L	SW846 8260B
Trichloroethene	0.73 J	1.0	ug/L	SW846 8260B
GW-17360-072604-DCR-169 07/26/04 17:50 007				
Acetone	1.5 J	25	ug/L	SW846 8260B
Benzene	0.31 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.69 J	1.0	ug/L	SW846 8260B
2-Butanone	0.77 J	25	ug/L	SW846 8260B
Chloroform	4.3	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G270183

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072604-DCR-169 07/26/04 17:50 007				
Cyclohexane	0.18 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	0.39 J	50	ug/L	SW846 8260B
Toluene	4.4	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.68 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.79 J	1.0	ug/L	SW846 8260B
GW-17360-072604-DCR-170 07/26/04 008				
Acetone	1.5 J	25	ug/L	SW846 8260B
2-Butanone	1.4 J	25	ug/L	SW846 8260B
Carbon disulfide	0.48 J	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	0.64 J	1.0	ug/L	SW846 8260B
Toluene	0.21 J	1.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G270183

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G270183

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GLW82	001	GW-17360-072604-DCR-163	07/26/04	10:30
GLW84	002	GW-17360-072604-DCR-164	07/26/04	11:20
GLW85	003	GW-17360-072604-DCR-165	07/26/04	12:15
GLW86	004	GW-17360-072604-DCR-166	07/26/04	13:15
GLW88	005	GW-17360-072604-DCR-167	07/26/04	14:45
GLW89	006	GW-17360-072604-DCR-168	07/26/04	16:45
GLW9A	007	GW-17360-072604-DCR-169	07/26/04	17:50
GLW9C	008	GW-17360-072604-DCR-170	07/26/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ. No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 40CFR TNI	REMARKS
1	7/26/04	1030	GW-17360-072604-DCR-163	H2O	3	X	X	
2		1120	-164		3	X	X	
3		1215	-165		3	X	X	
4		1315	-166		9	X	X	
5		1445	-167		3	X	X	MS/MSD
6		1645	-168		3	X	X	
7		1750	-169		3	X	X	
8		—	-170		1	X	X	
								CRA Contact Paul Gibson

TOTAL NUMBER OF CONTAINERS: 28

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
1. _____	7-26-04	1930	1. _____		
2. _____			2. _____		
3. _____			1. _____		

METHOD OF SHIPMENT: FED EX

AIR BILL No. 839355888875

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

25941

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: _____

DATE: 7/27/04 TIME: 9:45

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

STL North Canton

16

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G270183

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GLW82	STILLERJ	7/27/04	Yes		Storage	
GLW84	STILLERJ	7/27/04	Yes		Storage	
GLW85	STILLERJ	7/27/04	Yes		Storage	
GLW86	STILLERJ	7/27/04	Yes		Storage	
GLW88	STILLERJ	7/27/04	Yes		Storage	
GLW89	STILLERJ	7/27/04	Yes		Storage	
GLW9A	STILLERJ	7/27/04	Yes		Storage	
GLW9C	STILLERJ	7/27/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** 440,270183

North Canton Facility

Client: CRA Project: GM-Grand Rapids Quote#:

Cooler Received on: 2/22/04 Opened on: 2/22/04 by: (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:

STL Cooler No# M-235 Foam Box ☐ Client Cooler ☐ Other

1. Were custody seals on the outside of the cooler? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
   If YES, Quantity
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☒
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other :
6. Cooler temperature upon receipt 4.5 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☒
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☒
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

√	
	1. CHAIN OF CUSTODY
	The following discrepancies occurred:
	2. SAMPLE CONDITION
	Sample(s) were received after the recommended holding time had expired.
	Sample(s) were received in a broken container.
	3. SAMPLE PRESERVATION
	Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	Sample(s) were received with bubble > 6 mm in diameter (cc: PM)
	4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072604-DCR-163

GC/MS Volatiles

Lot-Sample #...: A4G270183-001 Work Order #...: GLW821AA Matrix.....: WG
Date Sampled...: 07/26/04 10:30 Date Received..: 07/27/04
Prep Date.....: 07/28/04 Analysis Date..: 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.5 J**	**25**	**ug/L**	**0.74**
Benzene	**0.49 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.78 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	**1.3 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.39 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.36 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	**0.46 J,B**	**5.0**	**ug/L**	**0.15**
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.50 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072604-DCR-163

GC/MS Volatiles

Lot-Sample #...: A4G270183-001 **Work Order #...:** GLW821AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.1**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-164

GC/MS Volatiles

Lot-Sample #...: A4G270183-002 **Work Order #...:** GLW841AA **Matrix.....:** WG
Date Sampled...: 07/26/04 11:20 **Date Received..:** 07/27/04
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**6.9 J**	**25**	**ug/L**	**0.74**
Benzene	**0.57 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.3**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**2.1 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**4.2**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.43 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**0.53 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.44 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	**0.46 J,B**	**5.0**	**ug/L**	**0.15**
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.53 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	**1.5 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072604-DCR-164

GC/MS Volatiles

Lot-Sample #...: A4G270183-002 Work Order #...: GLW841AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**4.6**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.45 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.53 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	**0.85 J**	**3.0**	**ug/L**	**0.44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-165

GC/MS Volatiles

Lot-Sample #...: A4G270183-003 **Work Order #...:** GLW851AA **Matrix.....:** WG
Date Sampled...: 07/26/04 12:15 **Date Received..:** 07/27/04
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	**0.45 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.20 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.41 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.2**	**1.0**	**ug/L**	**0.16**
Chloromethane	**0.16 J**	**1.0**	**ug/L**	**0.14**
Cyclohexane	**0.30 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.46 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.28 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	**0.46 J,B**	**5.0**	**ug/L**	**0.15**
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.57 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-165

GC/MS Volatiles

Lot-Sample #...: A4G270183-003 **Work Order #...:** GLW851AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.3**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**5.4**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**11**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-166

GC/MS Volatiles

Lot-Sample #...: A4G270183-004 Work Order #...: GLW861AA Matrix.....: WG
Date Sampled...: 07/26/04 13:15 Date Received..: 07/27/04
Prep Date.....: 07/28/04 Analysis Date..: 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**0.23 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.4**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-166

GC/MS Volatiles

Lot-Sample #...: A4G270183-004 **Work Order #...:** GLW861AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.23 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**2.7**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.90 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-167

GC/MS Volatiles

Lot-Sample #...: A4G270183-005 Work Order #...: GLW881AA Matrix.....: WG
Date Sampled...: 07/26/04 14:45 Date Received..: 07/27/04
Prep Date.....: 07/28/04 Analysis Date..: 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**0.94 J**	**25**	**ug/L**	**0.74**
Benzene	**0.31 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.0**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.62 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.7**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.18 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**0.39 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	**0.46 J,B**	**5.0**	**ug/L**	**0.15**
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072604-DCR-167

GC/MS Volatiles

Lot-Sample #...: A4G270183-005 Work Order #...: GLW881AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**3.8**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	**0.91 J,B**	**5.0**	**ug/L**	**0.19**
1,1,1-Trichloroethane	**0.96 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.86 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072604-DCR-168

GC/MS Volatiles

Lot-Sample #...: A4G270183-006 Work Order #...: GLW891AA Matrix.....: WG
Date Sampled...: 07/26/04 16:45 Date Received..: 07/27/04
Prep Date.....: 07/28/04 Analysis Date..: 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**0.90 J**	**25**	**ug/L**	**0.74**
Benzene	**0.28 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.76 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.58 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**3.2**	**1.0**	**ug/L**	**0.16**
Chloromethane	**0.14 J**	**1.0**	**ug/L**	**0.14**
Cyclohexane	**0.14 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	**0.35 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072604-DCR-168

GC/MS Volatiles

Lot-Sample #...: A4G270183-006 **Work Order #...:** GLW891AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**3.8**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**1.0**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.73 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072604-DCR-169

GC/MS Volatiles

Lot-Sample #...: A4G270183-007	Work Order #...: GLW9A1AA	Matrix.....: WG	
Date Sampled...: 07/26/04 17:50	Date Received..: 07/27/04		
Prep Date.....: 07/28/04	Analysis Date..: 07/28/04		
Prep Batch #...: 4210345			
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol..: 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.5 J**	**25**	**ug/L**	**0.74**
Benzene	**0.31 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.69 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.77 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**4.3**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.18 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	**0.39 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-169

GC/MS Volatiles

Lot-Sample #...: A4G270183-007 **Work Order #...:** GLW9A1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**4.4**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.68 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.79 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072604-DCR-170

GC/MS Volatiles

Lot-Sample #...: A4G270183-008 Work Order #...: GLW9C1AA Matrix.....: WG
Date Sampled...: 07/26/04 Date Received..: 07/27/04
Prep Date.....: 07/28/04 Analysis Date..: 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.5 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**1.4 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	**0.48 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.64 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072604-DCR-170

GC/MS Volatiles

Lot-Sample #...: A4G270183-008 **Work Order #...:** GLW9C1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.21 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G270183 **Work Order #...:** GL1901AA **Matrix.....:** WATER
MB Lot-Sample #: A4G280000-345

Prep Date.....: 07/28/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/28/04 **Prep Batch #...:** 4210345
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	**0.44 J**	**5.0**	**ug/L**	**SW846 8260B**
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G270183 **Work Order #...:** GL1901AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	**0.92 J**	**5.0**	**ug/L**	**SW846 8260B**
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G270183 **Work Order #...:** GL1901AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G280000-345 GL1901AD-LCSD
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	10	**9.9**	**ug/L**	**99**	**0.76**	**SW846 8260B**
Chlorobenzene	**10**	**9.7**	**ug/L**	**97**		**SW846 8260B**
	10	**10**	**ug/L**	**101**	**3.2**	**SW846 8260B**
1,1-Dichloroethene	**10**	**10**	**ug/L**	**104**		**SW846 8260B**
	10	**11**	**ug/L**	**106**	**2.2**	**SW846 8260B**
Toluene	**10**	**10**	**ug/L**	**103**		**SW846 8260B**
	10	**10**	**ug/L**	**104**	**1.2**	**SW846 8260B**
Trichloroethene	**10**	**10**	**ug/L**	**101**		**SW846 8260B**
	10	**10**	**ug/L**	**100**	**1.5**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	86	(73 - 122)
1,2-Dichloroethane-d4	87	(61 - 128)
	86	(61 - 128)
Toluene-d8	92	(76 - 110)
	93	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)
	96	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G270183 **Work Order #...:** GL1901AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G280000-345 GL1901AD-LCSD
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**98**	**(80 - 116)**			**SW846 8260B**
	99	**(80 - 116)**	**0.76**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**97**	**(76 - 117)**			**SW846 8260B**
	101	**(76 - 117)**	**3.2**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**104**	**(63 - 130)**			**SW846 8260B**
	106	**(63 - 130)**	**2.2**	**(0-20)**	**SW846 8260B**
Toluene	**103**	**(74 - 119)**			**SW846 8260B**
	104	**(74 - 119)**	**1.2**	**(0-20)**	**SW846 8260B**
Trichloroethene	**101**	**(75 - 122)**			**SW846 8260B**
	100	**(75 - 122)**	**1.5**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	86	(73 - 122)
1,2-Dichloroethane-d4	87	(61 - 128)
	86	(61 - 128)
Toluene-d8	92	(76 - 110)
	93	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)
	96	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G270183 **Work Order #...:** GLW861AC-MS **Matrix.....:** WG
MS Lot-Sample #: A4G270183-004 GLW861AD-MSD
Date Sampled...: 07/26/04 13:15 **Date Received..:** 07/27/04
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**10**	**9.5**	**ug/L**	**95**		**SW846 8260B**
	ND	**10**	**9.5**	**ug/L**	**95**	**0.64**	**SW846 8260B**
Chlorobenzene	**ND**	**10**	**9.5**	**ug/L**	**95**		**SW846 8260B**
	ND	**10**	**9.5**	**ug/L**	**95**	**0.49**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10**	**11**	**ug/L**	**105**		**SW846 8260B**
	ND	**10**	**11**	**ug/L**	**105**	**0.06**	**SW846 8260B**
Toluene	**0.23**	**10**	**10**	**ug/L**	**98**		**SW846 8260B**
	0.23	**10**	**10**	**ug/L**	**100**	**1.4**	**SW846 8260B**
Trichloroethene	**0.90**	**10**	**10**	**ug/L**	**95**		**SW846 8260B**
	0.90	**10**	**11**	**ug/L**	**97**	**2.2**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	94	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
	87	(61 - 128)
Toluene-d8	94	(76 - 110)
	93	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)
	97	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G270183 **Work Order #...:** GLW861AC-MS **Matrix.....:** WG
MS Lot-Sample #: A4G270183-004 GLW861AD-MSD
Date Sampled...: 07/26/04 13:15 **Date Received..:** 07/27/04
Prep Date.....: 07/28/04 **Analysis Date..:** 07/28/04
Prep Batch #...: 4210345
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**95**	**(78 - 118)**			**SW846 8260B**
	95	**(78 - 118)**	**0.64**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**95**	**(76 - 117)**			**SW846 8260B**
	95	**(76 - 117)**	**0.49**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**105**	**(62 - 130)**			**SW846 8260B**
	105	**(62 - 130)**	**0.06**	**(0-20)**	**SW846 8260B**
Toluene	**98**	**(70 - 119)**			**SW846 8260B**
	100	**(70 - 119)**	**1.4**	**(0-20)**	**SW846 8260B**
Trichloroethene	**95**	**(62 - 130)**			**SW846 8260B**
	97	**(62 - 130)**	**2.2**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	94	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
	87	(61 - 128)
Toluene-d8	94	(76 - 110)
	93	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)
	97	(74 - 116)

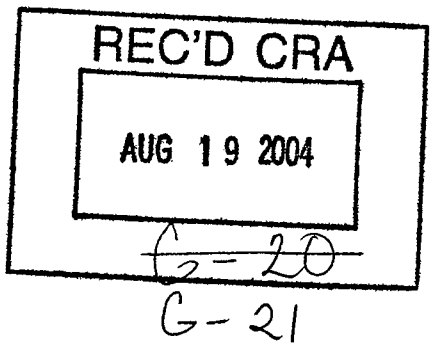
NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT



SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM GRAND RAPIDS

Lot #: A4G280151

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4G280151
Name: GM - GR
Description
Event: Quarterly GW
Samples: 6 water
Analysis: TCL VOC
TAT: 2 day
Lab: STL
Checked Against Preliminary Data:
Date: _____ Init.: KAK
Date of Validation Memo: 10/21/04
Invoice Approval Date: _____
Comments: _____

for: Rebecca Stutt
Amy L. McCormick
Project Manager

August 17, 2004

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 48 hr TAT	REMARKS
1	7/27/04	845	GW-17360-072704-DCR-171	H2O	3	X	X	
2		1425	-172		2	X	X	
3		1510	-173		2	X	X	
4		1605	-174		2	X	X	
5		1685	-175		2	X	X	
6		1700	-176		2	X	X	
7		1755	-177		2	X	X	
8		—	-178		1	X	X	
								CRA Contact Paul Wiseman

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
1. _____	7-27-04	1900	1. _____		
2. _____			2. _____		
3. _____			1. _____		

METHOD OF SHIPMENT: FED EX

AIR BILL No. 8393 5588 8864

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: _____

DATE: 7-28-04 TIME: 9:35

27159

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G280151

The following report contains the analytical results for eight water samples submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM Grand Rapids Site, project number 17360-09. The samples were received July 28, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on July 30, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 5.4°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The pH of the sample GW-17360-072704-DCR-177 was greater than 2. The sample(s) was analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

Y:\Barb\STL headers\Qc846-Narrative_012804.doc, Revised: 01/28/04 DJL

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G280151

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072704-DCR-171 07/27/04 08:45 001				
Acetone	4.9 J,B	25	ug/L	SW846 8260B
Benzene	0.54 J	1.0	ug/L	SW846 8260B
2-Butanone	1.1 J	25	ug/L	SW846 8260B
Chloroform	3.8	1.0	ug/L	SW846 8260B
Ethylbenzene	0.28 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	0.43 J	50	ug/L	SW846 8260B
Toluene	4.1	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.51 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.72 J	1.0	ug/L	SW846 8260B
GW-17360-072704-DCR-172 07/27/04 14:25 002				
Acetone	1.0 J,B	25	ug/L	SW846 8260B
Benzene	0.48 J	1.0	ug/L	SW846 8260B
Cyclohexane	0.36 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.25 J	1.0	ug/L	SW846 8260B
Toluene	1.0	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.73 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.93 J	1.0	ug/L	SW846 8260B
GW-17360-072704-DCR-173 07/27/04 15:10 003				
cis-1,2-Dichloroethene	0.82 J	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	2.7 J	5.0	ug/L	SW846 8260B
Toluene	0.24 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.21 J	1.0	ug/L	SW846 8260B
Trichloroethene	4.5	1.0	ug/L	SW846 8260B
GW-17360-072704-DCR-174 07/27/04 16:05 004				
Acetone	2.0 J,B	50	ug/L	SW846 8260B
Benzene	0.45 J	2.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	57	2.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	4.9	2.0	ug/L	SW846 8260B
Methyl tert-butyl ether	2.3 J	10	ug/L	SW846 8260B
Toluene	0.92 J	2.0	ug/L	SW846 8260B
Trichloroethene	23	2.0	ug/L	SW846 8260B
GW-17360-072704-DCR-175 07/27/04 16:55 005				
Acetone	2.1 J,B	42	ug/L	SW846 8260B
Chloroform	0.42 J	1.7	ug/L	SW846 8260B
cis-1,2-Dichloroethene	38	1.7	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G280151

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072704-DCR-175 07/27/04 16:55 005				
trans-1,2-Dichloroethene	4.4	1.7	ug/L	SW846 8260B
Methyl tert-butyl ether	1.9 J	8.4	ug/L	SW846 8260B
Tetrachloroethene	17	1.7	ug/L	SW846 8260B
Toluene	0.61 J	1.7	ug/L	SW846 8260B
Trichloroethene	34	1.7	ug/L	SW846 8260B
GW-17360-072704-DCR-176 07/27/04 17:00 006				
Acetone	2.5 J,B	42	ug/L	SW846 8260B
Chloroform	0.44 J	1.7	ug/L	SW846 8260B
cis-1,2-Dichloroethene	39	1.7	ug/L	SW846 8260B
trans-1,2-Dichloroethene	4.9	1.7	ug/L	SW846 8260B
Methyl tert-butyl ether	2.9 J	8.4	ug/L	SW846 8260B
Tetrachloroethene	15	1.7	ug/L	SW846 8260B
Toluene	0.59 J	1.7	ug/L	SW846 8260B
Trichloroethene	33	1.7	ug/L	SW846 8260B
GW-17360-072704-DCR-177 07/27/04 17:55 007				
Acetone	3.5 J,B	42	ug/L	SW846 8260B
Benzene	0.41 J	1.7	ug/L	SW846 8260B
Bromodichloromethane	0.36 J	1.7	ug/L	SW846 8260B
Chloroform	1.5 J	1.7	ug/L	SW846 8260B
cis-1,2-Dichloroethene	37	1.7	ug/L	SW846 8260B
trans-1,2-Dichloroethene	2.9	1.7	ug/L	SW846 8260B
Methyl tert-butyl ether	1.3 J	8.4	ug/L	SW846 8260B
Tetrachloroethene	15	1.7	ug/L	SW846 8260B
Toluene	1.8	1.7	ug/L	SW846 8260B
Trichloroethene	19	1.7	ug/L	SW846 8260B
GW-17360-072704-DCR-178 07/27/04 008				
Acetone	1.6 J,B	25	ug/L	SW846 8260B
Carbon disulfide	0.37 J	5.0	ug/L	SW846 8260B
Methylene chloride	0.80 J	5.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G280151

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G280151

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GL1HT	001	GW-17360-072704-DCR-171	07/27/04	08:45
GL1H0	002	GW-17360-072704-DCR-172	07/27/04	14:25
GL1H1	003	GW-17360-072704-DCR-173	07/27/04	15:10
GL1H2	004	GW-17360-072704-DCR-174	07/27/04	16:05
GL1H3	005	GW-17360-072704-DCR-175	07/27/04	16:55
GL1H5	006	GW-17360-072704-DCR-176	07/27/04	17:00
GL1H7	007	GW-17360-072704-DCR-177	07/27/04	17:55
GL1H8	008	GW-17360-072704-DCR-178	07/27/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: 3M Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 48 hr TAT	REMARKS
1	7/27/04	845	GW-17360-072704-DCR-171	H2O	3	X	X	
2		1425	-172		2	X	X	
3		1510	-173		2	X	X	
4		1605	-174		2	X	X	
5		1655	-175		2	X	X	
6		1700	-176		2	X	X	
7		1755	-177		2	X	X	
8		—	-178		1	X	X	
								CRA Contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS					

RELINQUISHED BY: 1. _____	DATE: 7-27-04 TIME: 1900	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No. 8393 5588 8864

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27159

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: _____

DATE: 7/28/04 TIME: 9:35

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

15

STL North Canton

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G280151

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GL1HT	STILLERJ	7/28/04	Yes		Storage	
GL1H0	STILLERJ	7/28/04	Yes		Storage	
GL1H1	STILLERJ	7/28/04	Yes		Storage	
GL1H2	STILLERJ	7/28/04	Yes		Storage	
GL1H3	STILLERJ	7/28/04	Yes		Storage	
GL1H5	STILLERJ	7/28/04	Yes		Storage	
GL1H7	STILLERJ	7/28/04	Yes		Storage	
GL1H8	STILLERJ	7/28/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** 440280151

North Canton Facility

Client: CRA Project: GM Grand Rapids Quote#: _____

Cooler Received on: 4/28/04 Opened on: 4/28/04 by: Anne Sanders (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other: _____

STL Cooler No# _____ Foam Box ☐ Client Cooler ☑ Other ____

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity _____
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☑
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☑ None ☐ Other : _____
6. Cooler temperature upon receipt 5.4 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning: _____

√	
	1. CHAIN OF CUSTODY
	The following discrepancies occurred:
	2. SAMPLE CONDITION
	Sample(s) _____ were received after the recommended holding time had expired.
	Sample(s) _____ were received in a broken container.
	3. SAMPLE PRESERVATION
	Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
	4. Other (see below or back)
	48hr test OK Rec. AIM 4/28/04

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-171

GC/MS Volatiles

Lot-Sample #...: A4G280151-001 **Work Order #...:** GL1HT1AA **Matrix.....:** WG
Date Sampled...: 07/27/04 08:45 **Date Received..:** 07/28/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**4.9 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.54 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**1.1 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**3.8**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.28 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	**0.43 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072704-DCR-171

GC/MS Volatiles

Lot-Sample #...: A4G280151-001 **Work Order #...:** GL1HT1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**4.1**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.51 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.72 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-172

GC/MS Volatiles

Lot-Sample #...: A4G280151-002 **Work Order #...:** GL1H01AA **Matrix.....:** WG
Date Sampled...: 07/27/04 14:25 **Date Received..:** 07/28/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.0 J,B**	**25**	**ug/L**	**0.74**
Benzene	**0.48 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.36 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.25 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072704-DCR-172

GC/MS Volatiles

Lot-Sample #...: A4G280151-002 **Work Order #...:** GL1H01AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.0**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.73 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.93 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-173

GC/MS Volatiles

Lot-Sample #...: A4G280151-003 **Work Order #...:** GL1H11AA **Matrix.....:** WG
Date Sampled...: 07/27/04 15:10 **Date Received..:** 07/28/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**0.82 J**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**2.7 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-173

GC/MS Volatiles

Lot-Sample #...: A4G280151-003 **Work Order #...:** GL1H11AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.24 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.21 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**4.5**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-174

GC/MS Volatiles

Lot-Sample #...: A4G280151-004 **Work Order #...:** GL1H21AA **Matrix.....:** WG
Date Sampled...: 07/27/04 16:05 **Date Received..:** 07/28/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 2 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.0 J,B**	**50**	**ug/L**	**1.5**
Benzene	**0.45 J**	**2.0**	**ug/L**	**0.44**
Bromodichloromethane	ND	2.0	ug/L	0.28
Bromoform	ND	2.0	ug/L	0.34
Bromomethane	ND	2.0	ug/L	0.72
2-Butanone	ND	50	ug/L	0.78
Carbon disulfide	ND	10	ug/L	0.56
Carbon tetrachloride	ND	2.0	ug/L	0.38
Chlorobenzene	ND	2.0	ug/L	0.40
Chloroethane	ND	2.0	ug/L	0.48
Chloroform	ND	2.0	ug/L	0.32
Chloromethane	ND	2.0	ug/L	0.28
Cyclohexane	ND	2.0	ug/L	0.24
Dibromochloromethane	ND	2.0	ug/L	0.38
1,2-Dibromo-3-chloro-propane	ND	2.0	ug/L	0.56
1,2-Dibromoethane	ND	2.0	ug/L	0.48
1,2-Dichlorobenzene	ND	2.0	ug/L	0.40
1,3-Dichlorobenzene	ND	2.0	ug/L	0.36
1,4-Dichlorobenzene	ND	2.0	ug/L	0.44
Dichlorodifluoromethane	ND	2.0	ug/L	0.50
1,1-Dichloroethane	ND	2.0	ug/L	0.42
1,2-Dichloroethane	ND	2.0	ug/L	0.32
1,1-Dichloroethene	ND	2.0	ug/L	0.36
cis-1,2-Dichloroethene	**57**	**2.0**	**ug/L**	**0.42**
trans-1,2-Dichloroethene	**4.9**	**2.0**	**ug/L**	**0.32**
1,2-Dichloropropane	ND	2.0	ug/L	0.30
cis-1,3-Dichloropropene	ND	2.0	ug/L	0.24
trans-1,3-Dichloropropene	ND	2.0	ug/L	0.34
Ethylbenzene	ND	2.0	ug/L	0.38
2-Hexanone	ND	100	ug/L	0.70
Isopropylbenzene	ND	10	ug/L	0.30
Methyl acetate	ND	20	ug/L	1.0
Methylene chloride	ND	10	ug/L	0.38
Methylcyclohexane	ND	2.0	ug/L	1.0
4-Methyl-2-pentanone	ND	100	ug/L	0.64
Methyl tert-butyl ether	**2.3 J**	**10**	**ug/L**	**0.36**
Styrene	ND	2.0	ug/L	0.26

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-174

GC/MS Volatiles

Lot-Sample #...: A4G280151-004 **Work Order #...:** GL1H21AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	0.44
Tetrachloroethene	ND	2.0	ug/L	0.38
Toluene	**0.92 J**	**2.0**	**ug/L**	**0.34**
1,2,4-Trichloro-benzene	ND	10	ug/L	0.38
1,1,1-Trichloroethane	ND	2.0	ug/L	0.42
1,1,2-Trichloroethane	ND	2.0	ug/L	0.44
Trichloroethene	**23**	**2.0**	**ug/L**	**0.56**
Trichlorofluoromethane	ND	2.0	ug/L	0.32
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ug/L	0.52
Vinyl chloride	ND	2.0	ug/L	0.42
Xylenes (total)	ND	6.0	ug/L	0.88

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072704-DCR-175

GC/MS Volatiles

Lot-Sample #...: A4G280151-005 **Work Order #...:** GL1H31AA **Matrix.....:** WG
Date Sampled...: 07/27/04 16:55 **Date Received..:** 07/28/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1.67 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.1 J,B**	**42**	**ug/L**	**1.2**
Benzene	ND	1.7	ug/L	0.37
Bromodichloromethane	ND	1.7	ug/L	0.23
Bromoform	ND	1.7	ug/L	0.28
Bromomethane	ND	1.7	ug/L	0.60
2-Butanone	ND	42	ug/L	0.65
Carbon disulfide	ND	8.4	ug/L	0.47
Carbon tetrachloride	ND	1.7	ug/L	0.32
Chlorobenzene	ND	1.7	ug/L	0.33
Chloroethane	ND	1.7	ug/L	0.40
Chloroform	**0.42 J**	**1.7**	**ug/L**	**0.27**
Chloromethane	ND	1.7	ug/L	0.23
Cyclohexane	ND	1.7	ug/L	0.20
Dibromochloromethane	ND	1.7	ug/L	0.32
1,2-Dibromo-3-chloro-propane	ND	1.7	ug/L	0.47
1,2-Dibromoethane	ND	1.7	ug/L	0.40
1,2-Dichlorobenzene	ND	1.7	ug/L	0.33
1,3-Dichlorobenzene	ND	1.7	ug/L	0.30
1,4-Dichlorobenzene	ND	1.7	ug/L	0.37
Dichlorodifluoromethane	ND	1.7	ug/L	0.42
1,1-Dichloroethane	ND	1.7	ug/L	0.35
1,2-Dichloroethane	ND	1.7	ug/L	0.27
1,1-Dichloroethene	ND	1.7	ug/L	0.30
cis-1,2-Dichloroethene	**38**	**1.7**	**ug/L**	**0.35**
trans-1,2-Dichloroethene	**4.4**	**1.7**	**ug/L**	**0.27**
1,2-Dichloropropane	ND	1.7	ug/L	0.25
cis-1,3-Dichloropropene	ND	1.7	ug/L	0.20
trans-1,3-Dichloropropene	ND	1.7	ug/L	0.28
Ethylbenzene	ND	1.7	ug/L	0.32
2-Hexanone	ND	84	ug/L	0.58
Isopropylbenzene	ND	8.4	ug/L	0.25
Methyl acetate	ND	17	ug/L	0.87
Methylene chloride	ND	8.4	ug/L	0.32
Methylcyclohexane	ND	1.7	ug/L	0.84
4-Methyl-2-pentanone	ND	84	ug/L	0.53
Methyl tert-butyl ether	**1.9 J**	**8.4**	**ug/L**	**0.30**
Styrene	ND	1.7	ug/L	0.22

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072704-DCR-175

GC/MS Volatiles

Lot-Sample #...: A4G280151-005 Work Order #...: GL1H31AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.7	ug/L	0.37
Tetrachloroethene	**17**	**1.7**	**ug/L**	**0.32**
Toluene	**0.61 J**	**1.7**	**ug/L**	**0.28**
1,2,4-Trichloro-benzene	ND	8.4	ug/L	0.32
1,1,1-Trichloroethane	ND	1.7	ug/L	0.35
1,1,2-Trichloroethane	ND	1.7	ug/L	0.37
Trichloroethene	**34**	**1.7**	**ug/L**	**0.47**
Trichlorofluoromethane	ND	1.7	ug/L	0.27
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.7	ug/L	0.43
Vinyl chloride	ND	1.7	ug/L	0.35
Xylenes (total)	ND	5.0	ug/L	0.73

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072704-DCR-176

GC/MS Volatiles

Lot-Sample #...: A4G280151-006 **Work Order #...:** GL1H51AA **Matrix.....:** WG
Date Sampled...: 07/27/04 17:00 **Date Received..:** 07/28/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1.67 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.5 J,B**	**42**	**ug/L**	**1.2**
Benzene	ND	1.7	ug/L	0.37
Bromodichloromethane	ND	1.7	ug/L	0.23
Bromoform	ND	1.7	ug/L	0.28
Bromomethane	ND	1.7	ug/L	0.60
2-Butanone	ND	42	ug/L	0.65
Carbon disulfide	ND	8.4	ug/L	0.47
Carbon tetrachloride	ND	1.7	ug/L	0.32
Chlorobenzene	ND	1.7	ug/L	0.33
Chloroethane	ND	1.7	ug/L	0.40
Chloroform	**0.44 J**	**1.7**	**ug/L**	**0.27**
Chloromethane	ND	1.7	ug/L	0.23
Cyclohexane	ND	1.7	ug/L	0.20
Dibromochloromethane	ND	1.7	ug/L	0.32
1,2-Dibromo-3-chloro-propane	ND	1.7	ug/L	0.47
1,2-Dibromoethane	ND	1.7	ug/L	0.40
1,2-Dichlorobenzene	ND	1.7	ug/L	0.33
1,3-Dichlorobenzene	ND	1.7	ug/L	0.30
1,4-Dichlorobenzene	ND	1.7	ug/L	0.37
Dichlorodifluoromethane	ND	1.7	ug/L	0.42
1,1-Dichloroethane	ND	1.7	ug/L	0.35
1,2-Dichloroethane	ND	1.7	ug/L	0.27
1,1-Dichloroethene	ND	1.7	ug/L	0.30
cis-1,2-Dichloroethene	**39**	**1.7**	**ug/L**	**0.35**
trans-1,2-Dichloroethene	**4.9**	**1.7**	**ug/L**	**0.27**
1,2-Dichloropropane	ND	1.7	ug/L	0.25
cis-1,3-Dichloropropene	ND	1.7	ug/L	0.20
trans-1,3-Dichloropropene	ND	1.7	ug/L	0.28
Ethylbenzene	ND	1.7	ug/L	0.32
2-Hexanone	ND	84	ug/L	0.58
Isopropylbenzene	ND	8.4	ug/L	0.25
Methyl acetate	ND	17	ug/L	0.87
Methylene chloride	ND	8.4	ug/L	0.32
Methylcyclohexane	ND	1.7	ug/L	0.84
4-Methyl-2-pentanone	ND	84	ug/L	0.53
Methyl tert-butyl ether	**2.9 J**	**8.4**	**ug/L**	**0.30**
Styrene	ND	1.7	ug/L	0.22

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072704-DCR-176

GC/MS Volatiles

Lot-Sample #...: A4G280151-006 Work Order #...: GL1H51AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.7	ug/L	0.37
Tetrachloroethene	**15**	**1.7**	**ug/L**	**0.32**
Toluene	**0.59 J**	**1.7**	**ug/L**	**0.28**
1,2,4-Trichloro-benzene	ND	8.4	ug/L	0.32
1,1,1-Trichloroethane	ND	1.7	ug/L	0.35
1,1,2-Trichloroethane	ND	1.7	ug/L	0.37
Trichloroethene	**33**	**1.7**	**ug/L**	**0.47**
Trichlorofluoromethane	ND	1.7	ug/L	0.27
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.7	ug/L	0.43
Vinyl chloride	ND	1.7	ug/L	0.35
Xylenes (total)	ND	5.0	ug/L	0.73

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-177

GC/MS Volatiles

Lot-Sample #...: A4G280151-007 **Work Order #...:** GL1H71AA **Matrix.....:** WG
Date Sampled...: 07/27/04 17:55 **Date Received..:** 07/28/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1.67 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.5 J,B**	**42**	**ug/L**	**1.2**
Benzene	**0.41 J**	**1.7**	**ug/L**	**0.37**
Bromodichloromethane	**0.36 J**	**1.7**	**ug/L**	**0.23**
Bromoform	ND	1.7	ug/L	0.28
Bromomethane	ND	1.7	ug/L	0.60
2-Butanone	ND	42	ug/L	0.65
Carbon disulfide	ND	8.4	ug/L	0.47
Carbon tetrachloride	ND	1.7	ug/L	0.32
Chlorobenzene	ND	1.7	ug/L	0.33
Chloroethane	ND	1.7	ug/L	0.40
Chloroform	**1.5 J**	**1.7**	**ug/L**	**0.27**
Chloromethane	ND	1.7	ug/L	0.23
Cyclohexane	ND	1.7	ug/L	0.20
Dibromochloromethane	ND	1.7	ug/L	0.32
1,2-Dibromo-3-chloro-propane	ND	1.7	ug/L	0.47
1,2-Dibromoethane	ND	1.7	ug/L	0.40
1,2-Dichlorobenzene	ND	1.7	ug/L	0.33
1,3-Dichlorobenzene	ND	1.7	ug/L	0.30
1,4-Dichlorobenzene	ND	1.7	ug/L	0.37
Dichlorodifluoromethane	ND	1.7	ug/L	0.42
1,1-Dichloroethane	ND	1.7	ug/L	0.35
1,2-Dichloroethane	ND	1.7	ug/L	0.27
1,1-Dichloroethene	ND	1.7	ug/L	0.30
cis-1,2-Dichloroethene	**37**	**1.7**	**ug/L**	**0.35**
trans-1,2-Dichloroethene	**2.9**	**1.7**	**ug/L**	**0.27**
1,2-Dichloropropane	ND	1.7	ug/L	0.25
cis-1,3-Dichloropropene	ND	1.7	ug/L	0.20
trans-1,3-Dichloropropene	ND	1.7	ug/L	0.28
Ethylbenzene	ND	1.7	ug/L	0.32
2-Hexanone	ND	84	ug/L	0.58
Isopropylbenzene	ND	8.4	ug/L	0.25
Methyl acetate	ND	17	ug/L	0.87
Methylene chloride	ND	8.4	ug/L	0.32
Methylcyclohexane	ND	1.7	ug/L	0.84
4-Methyl-2-pentanone	ND	84	ug/L	0.53
Methyl tert-butyl ether	**1.3 J**	**8.4**	**ug/L**	**0.30**
Styrene	ND	1.7	ug/L	0.22

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-177

GC/MS Volatiles

Lot-Sample #...: A4G280151-007 **Work Order #...:** GL1H71AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.7	ug/L	0.37
Tetrachloroethene	**15**	**1.7**	**ug/L**	**0.32**
Toluene	**1.8**	**1.7**	**ug/L**	**0.28**
1,2,4-Trichloro-benzene	ND	8.4	ug/L	0.32
1,1,1-Trichloroethane	ND	1.7	ug/L	0.35
1,1,2-Trichloroethane	ND	1.7	ug/L	0.37
Trichloroethene	**19**	**1.7**	**ug/L**	**0.47**
Trichlorofluoromethane	ND	1.7	ug/L	0.27
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.7	ug/L	0.43
Vinyl chloride	ND	1.7	ug/L	0.35
Xylenes (total)	ND	5.0	ug/L	0.73

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072704-DCR-178

GC/MS Volatiles

Lot-Sample #...: A4G280151-008	**Work Order #...:** GL1H81AA	**Matrix.....:** WG	
Date Sampled...: 07/27/04	**Date Received..:** 07/28/04		
Prep Date.....: 07/29/04	**Analysis Date..:** 07/29/04		
Prep Batch #...: 4212184			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.6 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	**0.37 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**0.80 J**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072704-DCR-178

GC/MS Volatiles

Lot-Sample #...: A4G280151-008 Work Order #...: GL1H81AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G280151 **Work Order #...:** GL60N1AA **Matrix.....:** WATER
MB Lot-Sample #: A4G300000-184

Prep Date.....: 07/29/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/29/04 **Prep Batch #...:** 4212184
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	**0.75 J**	**25**	**ug/L**	**SW846 8260B**
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G280151 **Work Order #...:** GL60N1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G280151 **Work Order #...:** GL60N1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G300000-184 GL60N1AD-LCSD
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	10	9.6	ug/L	96		SW846 8260B
	10	10	ug/L	100	4.1	SW846 8260B
Chlorobenzene	10	9.3	ug/L	93		SW846 8260B
	10	9.6	ug/L	96	3.3	SW846 8260B
1,1-Dichloroethene	10	8.8	ug/L	88		SW846 8260B
	10	8.2	ug/L	82	7.1	SW846 8260B
Toluene	10	9.1	ug/L	91		SW846 8260B
	10	9.7	ug/L	97	6.2	SW846 8260B
Trichloroethene	10	9.6	ug/L	96		SW846 8260B
	10	9.9	ug/L	99	3.1	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
	96	(61 - 128)
Toluene-d8	98	(76 - 110)
	100	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)
	99	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G280151 **Work Order #...:** GL60N1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G300000-184 GL60N1AD-LCSD
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**96**	**(80 - 116)**			**SW846 8260B**
	100	**(80 - 116)**	**4.1**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**93**	**(76 - 117)**			**SW846 8260B**
	96	**(76 - 117)**	**3.3**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**88**	**(63 - 130)**			**SW846 8260B**
	82	**(63 - 130)**	**7.1**	**(0-20)**	**SW846 8260B**
Toluene	**91**	**(74 - 119)**			**SW846 8260B**
	97	**(74 - 119)**	**6.2**	**(0-20)**	**SW846 8260B**
Trichloroethene	**96**	**(75 - 122)**			**SW846 8260B**
	99	**(75 - 122)**	**3.1**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
	96	(61 - 128)
Toluene-d8	98	(76 - 110)
	100	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)
	99	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G280151 **Work Order #...:** GLQNH1AC-MS GLQNH1AD-MSD **Matrix.....:** WATER
MS Lot-Sample #: A4G230398-004
Date Sampled...: 07/20/04 09:59 **Date Received..:** 07/22/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	10	9.6	ug/L	96		SW846 8260B
	ND	10	9.6	ug/L	96	0.21	SW846 8260B
Chlorobenzene	ND	10	9.0	ug/L	90		SW846 8260B
	ND	10	9.1	ug/L	91	1.0	SW846 8260B
1,1-Dichloroethene	0.82	10	9.8	ug/L	89		SW846 8260B
	0.82	10	10	ug/L	92	2.4	SW846 8260B
Toluene	0.27	10	9.5	ug/L	92		SW846 8260B
	0.27	10	9.6	ug/L	93	1.1	SW846 8260B
Trichloroethene	13	10	22	ug/L	93		SW846 8260B
	13	10	23	ug/L	100	3.0	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	99	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
	96	(61 - 128)
Toluene-d8	100	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G280151 **Work Order #...:** GLQNH1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G230398-004 GLQNH1AD-MSD
Date Sampled...: 07/20/04 09:59 **Date Received..:** 07/22/04
Prep Date.....: 07/29/04 **Analysis Date..:** 07/29/04
Prep Batch #...: 4212184
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**96**	**(78 - 118)**			**SW846 8260B**
	96	**(78 - 118)**	**0.21**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**90**	**(76 - 117)**			**SW846 8260B**
	91	**(76 - 117)**	**1.0**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**89**	**(62 - 130)**			**SW846 8260B**
	92	**(62 - 130)**	**2.4**	**(0-20)**	**SW846 8260B**
Toluene	**92**	**(70 - 119)**			**SW846 8260B**
	93	**(70 - 119)**	**1.1**	**(0-20)**	**SW846 8260B**
Trichloroethene	**93**	**(62 - 130)**			**SW846 8260B**
	100	**(62 - 130)**	**3.0**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	99	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
	96	(61 - 128)
Toluene-d8	100	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

REC'D CRA
AUG 26 2004
G-22

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM GRAND RAPIDS

Lot #: A4G290136

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4G290136
Name: GM - GR
Description
Event: GW MONITORING
Samples: 4 water
Analysis: VOC
TAT: 2 day
Lab: STL
Checked Against Preliminary Data:
Date: 8/27/04 Init.: KAK
Date of Validation Memo: 10/21/04
Invoice Approval Date:
Comments:

Ken Kuyper for
Amy L. McCormick
Project Manager

August 24, 2004

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	48hr TAT	REMARKS
1	7/28/04	825	GW-17360-072804-DCR-179	H2O	2	X	X	
2		1030	-180		2	X	X	
3		1655	-181		2	X	X	
4	↓	—	-182	↓	1	X	X	
								CRA Contact Paul Wiseman
TOTAL NUMBER OF CONTAINERS					7			

RELINQUISHED BY: 1. _____	DATE: 7/28/04 TIME: 1830	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 8393 5588 8853

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27160

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: _____
DATE: 7/29/04 TIME: 945

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G290136

The following report contains the analytical results for three water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM Grand Rapids Site, project number 17360-09. The samples were received July 29, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on August 02, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.9°C.

See STL's Cooler Receipt Form for additional information.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The pH of the sample GW-17360-072804-DCR-181 was greater than 2. The sample(s) was analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G290136

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072804-DCR-179 07/28/04 08:25 001				
Acetone	4.5 J	25	ug/L	SW846 8260B
Benzene	0.34 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.47 J	1.0	ug/L	SW846 8260B
Carbon disulfide	0.58 J	5.0	ug/L	SW846 8260B
Chloroform	1.9	1.0	ug/L	SW846 8260B
Chloromethane	0.16 J	1.0	ug/L	SW846 8260B
Cyclohexane	0.20 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	11	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	1.3	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	1.7 J	5.0	ug/L	SW846 8260B
Tetrachloroethene	1.2	1.0	ug/L	SW846 8260B
Toluene	1.4	1.0	ug/L	SW846 8260B
Trichloroethene	7.4	1.0	ug/L	SW846 8260B
GW-17360-072804-DCR-180 07/28/04 10:30 002				
Acetone	2.3 J	25	ug/L	SW846 8260B
Benzene	0.38 J	1.0	ug/L	SW846 8260B
Chloroform	2.3	1.0	ug/L	SW846 8260B
Cyclohexane	0.23 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	25	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	3.0	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	2.5 J	5.0	ug/L	SW846 8260B
Tetrachloroethene	3.3	1.0	ug/L	SW846 8260B
Toluene	2.0	1.0	ug/L	SW846 8260B
Trichloroethene	17	1.0	ug/L	SW846 8260B
GW-17360-072804-DCR-181 07/28/04 16:55 003				
Acetone	5.6 J	25	ug/L	SW846 8260B
Benzene	0.42 J	1.0	ug/L	SW846 8260B
2-Butanone	1.8 J	25	ug/L	SW846 8260B
Cyclohexane	0.25 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	2.0	1.0	ug/L	SW846 8260B
Ethylbenzene	0.19 J	1.0	ug/L	SW846 8260B
Toluene	0.91 J	1.0	ug/L	SW846 8260B
Trichloroethene	6.5	1.0	ug/L	SW846 8260B
Vinyl chloride	1.2	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G290136

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072804-DCR-182 07/28/04 004				
Acetone	1.6 J	25	ug/L	SW846 8260B
2-Butanone	0.66 J	25	ug/L	SW846 8260B
Carbon disulfide	0.66 J	5.0	ug/L	SW846 8260B
Methylene chloride	1.5 J	5.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G290136

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G290136

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GL346	001	GW-17360-072804-DCR-179	07/28/04	08:25
GL35H	002	GW-17360-072804-DCR-180	07/28/04	10:30
GL35J	003	GW-17360-072804-DCR-181	07/28/04	16:55
GL35L	004	GW-17360-072804-DCR-182	07/28/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ. No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOC	PARAMETERS: 48hr TAT	REMARKS
1	7/29/04	825	GW-17360-072904-DUP-179	H2O	2	X	X	
2		1030	-180		2	X	X	
3		1633	-181		2	X	X	
4		—	-182		1	X	X	
								CRA Contact Paul Wiseman
TOTAL NUMBER OF CONTAINERS					7			

RELINQUISHED BY: 1. _____	DATE: 7/29/04 TIME: 1530	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FEDEX AIR BILL No. 8393 5588 8853

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27160

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: _____
DATE: 7/29/04 TIME: 945

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

STL North Canton

15

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G290136

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GL346	EARLES	7/29/04	Yes		Storage	
GL35H	EARLES	7/29/04	Yes		Storage	
GL35J	EARLES	7/29/04	Yes		Storage	
GL35L	EARLES	7/29/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** A4L1013

North Canton Facility

Client: CA Project: GM Grand Rapids Quote#:

Cooler Received on: 4/29/04 Opened on: 4/29/04 by: Anne Sanders (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:

STL Cooler No#_____ Foam Box ☐ Client Cooler ☑ Other

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity_____
   Were the custody seals signed and dated? Yes ☑ No ☐ NA ☑
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☑ None ☐ Other :_____
6. Cooler temperature upon receipt 1.9 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM _____ Date:_____ by:_____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

√	
	1. CHAIN OF CUSTODY
✓	The following discrepancies occurred: Sample ID not completed on vials - log Rec. COC
	2. SAMPLE CONDITION
	Sample(s) _____ were received after the recommended holding time had expired.
	Sample(s) _____ were received in a broken container.
	3. SAMPLE PRESERVATION
	Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
	4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072804-DCR-179

GC/MS Volatiles

Lot-Sample #...: A4G290136-001	Work Order #...: GL3461AA	Matrix.....: WG	
Date Sampled...: 07/28/04 08:25	Date Received..: 07/29/04		
Prep Date.....: 07/30/04	Analysis Date..: 07/30/04		
Prep Batch #...: 4215204			
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol..: 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**4.5 J**	**25**	**ug/L**	**0.74**
Benzene	**0.34 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.47 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	**0.58 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.9**	**1.0**	**ug/L**	**0.16**
Chloromethane	**0.16 J**	**1.0**	**ug/L**	**0.14**
Cyclohexane	**0.20 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**11**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	**1.3**	**1.0**	**ug/L**	**0.16**
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**1.7 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072804-DCR-179

GC/MS Volatiles

Lot-Sample #...: A4G290136-001 Work Order #...: GL3461AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**1.2**	**1.0**	**ug/L**	**0.19**
Toluene	**1.4**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**7.4**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072804-DCR-180

GC/MS Volatiles

Lot-Sample #...: A4G290136-002 Work Order #...: GL35H1AA Matrix.....: WG
Date Sampled...: 07/28/04 10:30 Date Received..: 07/29/04
Prep Date.....: 07/30/04 Analysis Date..: 07/30/04
Prep Batch #...: 4215204
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.3 J**	**25**	**ug/L**	**0.74**
Benzene	**0.38 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.3**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.23 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**25**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	**3.0**	**1.0**	**ug/L**	**0.16**
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**2.5 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072804-DCR-180

GC/MS Volatiles

Lot-Sample #...: A4G290136-002 Work Order #...: GL35H1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**3.3**	**1.0**	**ug/L**	**0.19**
Toluene	**2.0**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**17**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072804-DCR-181

GC/MS Volatiles

Lot-Sample #...: A4G290136-003 Work Order #...: GL35J1AA Matrix.....: WG
Date Sampled...: 07/28/04 16:55 Date Received..: 07/29/04
Prep Date.....: 07/30/04 Analysis Date..: 07/30/04
Prep Batch #...: 4215204
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**5.6 J**	**25**	**ug/L**	**0.74**
Benzene	**0.42 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**1.8 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.25 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**2.0**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.19 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072804-DCR-181

GC/MS Volatiles

Lot-Sample #...: A4G290136-003 Work Order #...: GL35J1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.91 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**6.5**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	**1.2**	**1.0**	**ug/L**	**0.21**
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072804-DCR-182

GC/MS Volatiles

Lot-Sample #...: A4G290136-004 Work Order #...: GL35L1AA Matrix.....: WQ
Date Sampled...: 07/28/04 Date Received..: 07/29/04
Prep Date.....: 07/30/04 Analysis Date..: 07/30/04
Prep Batch #...: 4215204
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.6 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.66 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	**0.66 J**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**1.5 J**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072804-DCR-182

GC/MS Volatiles

Lot-Sample #...: A4G290136-004 **Work Order #...:** GL35L1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G290136 **Work Order #...:** GMAJ21AA **Matrix.....:** WATER
MB Lot-Sample #: A4H020000-204

Prep Date.....: 07/30/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/30/04 **Prep Batch #...:** 4215204
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	**0.45 J**	**5.0**	**ug/L**	**SW846 8260B**
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G290136 **Work Order #...:** GMAJ21AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G290136 **Work Order #...:** GMAJ21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H020000-204 GMAJ21AD-LCSD
Prep Date.....: 07/30/04 **Analysis Date..:** 07/30/04
Prep Batch #...: 4215204
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**9.3**	**ug/L**	**93**		**SW846 8260B**
	10	**9.5**	**ug/L**	**95**	**2.9**	**SW846 8260B**
Chlorobenzene	**10**	**10**	**ug/L**	**101**		**SW846 8260B**
	10	**10**	**ug/L**	**100**	**0.90**	**SW846 8260B**
1,1-Dichloroethene	**10**	**10**	**ug/L**	**103**		**SW846 8260B**
	10	**10**	**ug/L**	**103**	**0.030**	**SW846 8260B**
Toluene	**10**	**11**	**ug/L**	**106**		**SW846 8260B**
	10	**10**	**ug/L**	**104**	**2.5**	**SW846 8260B**
Trichloroethene	**10**	**9.5**	**ug/L**	**95**		**SW846 8260B**
	10	**9.5**	**ug/L**	**95**	**0.52**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
	92	(73 - 122)
1,2-Dichloroethane-d4	83	(61 - 128)
	87	(61 - 128)
Toluene-d8	97	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G290136 **Work Order #...:** GMAJ21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H020000-204 GMAJ21AD-LCSD
Prep Date.....: 07/30/04 **Analysis Date..:** 07/30/04
Prep Batch #...: 4215204
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**93**	**(80 - 116)**			**SW846 8260B**
	95	**(80 - 116)**	**2.9**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**101**	**(76 - 117)**			**SW846 8260B**
	100	**(76 - 117)**	**0.90**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**103**	**(63 - 130)**			**SW846 8260B**
	103	**(63 - 130)**	**0.030**	**(0-20)**	**SW846 8260B**
Toluene	**106**	**(74 - 119)**			**SW846 8260B**
	104	**(74 - 119)**	**2.5**	**(0-20)**	**SW846 8260B**
Trichloroethene	**95**	**(75 - 122)**			**SW846 8260B**
	95	**(75 - 122)**	**0.52**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
	92	(73 - 122)
1,2-Dichloroethane-d4	83	(61 - 128)
	87	(61 - 128)
Toluene-d8	97	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	A4G290136	**Work Order #...:**	GLQNX1AD-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A4G230398-010		GLQNX1AE-MSD		
Date Sampled...:	07/22/04 08:00	**Date Received..:**	07/22/04		
Prep Date.....:	07/30/04	**Analysis Date..:**	07/30/04		
Prep Batch #...:	4215204				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**0.24**	**10**	**9.2**	**ug/L**	**89**		**SW846 8260B**
	0.24	**10**	**9.3**	**ug/L**	**91**	**1.5**	**SW846 8260B**
Chlorobenzene	**ND**	**10**	**9.6**	**ug/L**	**96**		**SW846 8260B**
	ND	**10**	**9.5**	**ug/L**	**95**	**1.2**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10**	**9.7**	**ug/L**	**97**		**SW846 8260B**
	ND	**10**	**9.8**	**ug/L**	**98**	**0.49**	**SW846 8260B**
Toluene	**0.78**	**10**	**11**	**ug/L**	**100**		**SW846 8260B**
	0.78	**10**	**11**	**ug/L**	**98**	**2.0**	**SW846 8260B**
Trichloroethene	**ND**	**10**	**9.0**	**ug/L**	**90**		**SW846 8260B**
	ND	**10**	**9.2**	**ug/L**	**92**	**2.4**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	90	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
	87	(61 - 128)
Toluene-d8	96	(76 - 110)
	94	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G290136 **Work Order #...:** GLQNX1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: A4G230398-010 GLQNX1AE-MSD
Date Sampled...: 07/22/04 08:00 **Date Received..:** 07/22/04
Prep Date.....: 07/30/04 **Analysis Date..:** 07/30/04
Prep Batch #...: 4215204
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**89**	**(78 - 118)**			**SW846 8260B**
	91	**(78 - 118)**	**1.5**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**96**	**(76 - 117)**			**SW846 8260B**
	95	**(76 - 117)**	**1.2**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**97**	**(62 - 130)**			**SW846 8260B**
	98	**(62 - 130)**	**0.49**	**(0-20)**	**SW846 8260B**
Toluene	**100**	**(70 - 119)**			**SW846 8260B**
	98	**(70 - 119)**	**2.0**	**(0-20)**	**SW846 8260B**
Trichloroethene	**90**	**(62 - 130)**			**SW846 8260B**
	92	**(62 - 130)**	**2.4**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	90	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
	87	(61 - 128)
Toluene-d8	96	(76 - 110)
	94	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

REC'D CRA
AUG 30
CRA SDG G-23

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM GRAND RAPIDS

Lot #: A4G300129

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4G300129
Name: GM GRAND RAPIDS.

Description
Event: GW MONITORING
Samples: 8 waters DCR 183-190
Analysis: TCL VOCs.

TAT: 24 HOUR TAT
Lab: STL-NC.
Checked Against Preliminary Data:
Date: N/A Init.: N/A.
Date of Validation Memo: 10/21/04
Invoice Approval Date:
Comments:

SEVERN TRENT LABORATORIES, IN

FOR Amy L. McCormick
Project Manager

August 25, 2004

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: 24hr TAT	REMARKS
1	7/29/04	850	GW-17360-072904-DCR-183	H20	2	X	X	
2		855	-184		2	X	X	
3		930	-185		3	X	X	
4		1030	-186		3	X	X	
5		1210	-187		3	X	X	
6		1330	-188		6	X	X	MS/MSD
7		~~1445~~ 1445	-189		3	X	X	
8		1600	-190		3	X	X	
								CRA Contact Paul Wiseman
TOTAL NUMBER OF CONTAINERS					25			

RELINQUISHED BY: 1. _____	DATE: 7-29-04 TIME: 1930	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 8393 5588 8842

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27161

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: Natalie J Buhler
DATE: 7-30-04 TIME: 9:45

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G300129

The following report contains the analytical results for eight water samples submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM Grand Rapids Site, project number 17360-09. The samples were received July 30, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on August 02, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 3.3°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G300129

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072904-DCR-183 07/29/04 08:50 001				
Benzene	0.26 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.76 J	1.0	ug/L	SW846 8260B
Chloroform	1.4	1.0	ug/L	SW846 8260B
Cyclohexane	0.52 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.76 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.61 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	0.68 J	1.0	ug/L	SW846 8260B
Toluene	1.2 B	1.0	ug/L	SW846 8260B
Xylenes (total)	1.8 J	3.0	ug/L	SW846 8260B
GW-17360-072904-DCR-184 07/29/04 08:55 002				
Benzene	0.26 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.84 J	1.0	ug/L	SW846 8260B
Chloroform	1.3	1.0	ug/L	SW846 8260B
Cyclohexane	0.52 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.73 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.63 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	0.72 J	1.0	ug/L	SW846 8260B
Toluene	1.2 B	1.0	ug/L	SW846 8260B
Xylenes (total)	1.8 J	3.0	ug/L	SW846 8260B
GW-17360-072904-DCR-185 07/29/04 09:30 003				
Bromodichloromethane	5.5	1.0	ug/L	SW846 8260B
Chloroform	8.2	1.0	ug/L	SW846 8260B
Dibromochloromethane	2.9	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	0.87 J	50	ug/L	SW846 8260B
Toluene	2.9 B	1.0	ug/L	SW846 8260B
GW-17360-072904-DCR-186 07/29/04 10:30 004				
Benzene	0.24 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	1.7	1.0	ug/L	SW846 8260B
Chloroform	2.5	1.0	ug/L	SW846 8260B
Cyclohexane	0.47 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	1.1	1.0	ug/L	SW846 8260B
Ethylbenzene	0.56 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	0.62 J	1.0	ug/L	SW846 8260B
Toluene	1.7 B	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.22 J	1.0	ug/L	SW846 8260B
Xylenes (total)	1.6 J	3.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G300129

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072904-DCR-187 07/29/04 12:10 005				
Benzene	0.24 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	3.7	1.0	ug/L	SW846 8260B
Chloroform	6.0	1.0	ug/L	SW846 8260B
Cyclohexane	0.46 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	1.9	1.0	ug/L	SW846 8260B
Ethylbenzene	0.54 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	0.64 J	1.0	ug/L	SW846 8260B
Toluene	3.5 B	1.0	ug/L	SW846 8260B
Xylenes (total)	1.6 J	3.0	ug/L	SW846 8260B
GW-17360-072904-DCR-188 07/29/04 13:30 006				
Benzene	0.41 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	2.1	1.0	ug/L	SW846 8260B
Chloroform	4.0	1.0	ug/L	SW846 8260B
Cyclohexane	0.65 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	1.2	1.0	ug/L	SW846 8260B
Ethylbenzene	0.60 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	0.76 J	1.0	ug/L	SW846 8260B
Toluene	2.7 B	1.0	ug/L	SW846 8260B
Xylenes (total)	1.7 J	3.0	ug/L	SW846 8260B
GW-17360-072904-DCR-189 07/29/04 14:45 007				
Acetone	1.0 J	25	ug/L	SW846 8260B
Benzene	0.35 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	3.0	1.0	ug/L	SW846 8260B
2-Butanone	0.53 J	25	ug/L	SW846 8260B
Chloroform	6.4	1.0	ug/L	SW846 8260B
Cyclohexane	0.52 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	1.7	1.0	ug/L	SW846 8260B
Ethylbenzene	0.59 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	0.71 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	0.92 J	50	ug/L	SW846 8260B
Toluene	4.5 B	1.0	ug/L	SW846 8260B
Xylenes (total)	1.7 J	3.0	ug/L	SW846 8260B
GW-17360-072904-DCR-190 07/29/04 16:00 008				
Acetone	1.0 J	25	ug/L	SW846 8260B
Benzene	0.32 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	3.1	1.0	ug/L	SW846 8260B
2-Butanone	0.56 J	25	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G300129

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-072904-DCR-190 07/29/04 16:00 008				
Chloroform	6.0	1.0	ug/L	SW846 8260B
Cyclohexane	0.47 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	1.7	1.0	ug/L	SW846 8260B
Ethylbenzene	0.57 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	0.71 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	0.90 J	50	ug/L	SW846 8260B
Toluene	4.8 B	1.0	ug/L	SW846 8260B
Xylenes (total)	1.7 J	3.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G300129

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G300129

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GL6LF	001	GW-17360-072904-DCR-183	07/29/04	08:50
GL6LH	002	GW-17360-072904-DCR-184	07/29/04	08:55
GL6LJ	003	GW-17360-072904-DCR-185	07/29/04	09:30
GL6LL	004	GW-17360-072904-DCR-186	07/29/04	10:30
GL6LR	005	GW-17360-072904-DCR-187	07/29/04	12:10
GL6LV	006	GW-17360-072904-DCR-188	07/29/04	13:30
GL6LX	007	GW-17360-072904-DCR-189	07/29/04	14:45
GL6L1	008	GW-17360-072904-DCR-190	07/29/04	16:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	24hr TAT	REMARKS
1	7/29/04	850	GW-17360-072904-DCR-183	H20	2	X	X	
2		855	-184		2	X	X	
3		930	-185		3	X	X	
4		1030	-186		3	X	X	
5		1240	-187		3	X	X	
6		1330	-188		6	X	X	MS/MSD
7		1445	-189		3	X	X	
8		1600	-190		3	X	X	
								CRA Contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		25			

RELINQUISHED BY: 1. _____	DATE: 7-29-04 TIME: 1930	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No. 8393 5588 8842

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27161

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: Natalie J Buhler

DATE: 7-30-04 TIME: 9:45

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G300129

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GL6LF	SANDERSA	7/30/04	Yes		Storage	
GL6LH	SANDERSA	7/30/04	Yes		Storage	
GL6LJ	SANDERSA	7/30/04	Yes		Storage	
GL6LL	SANDERSA	7/30/04	Yes		Storage	
GL6LR	SANDERSA	7/30/04	Yes		Storage	
GL6LV	SANDERSA	7/30/04	Yes		Storage	
GL6LX	SANDERSA	7/30/04	Yes		Storage	
GL6L1	SANDERSA	7/30/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** 17360129

North Canton Facility

Client: CRA Project: GW Grand Rapids Quote#:

Cooler Received on: 7-30-04 Opened on: 7-30-04 by: Natalie J Buhler (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:

STL Cooler No# Foam Box ☐ Client Cooler ☒ Other

1. Were custody seals on the outside of the cooler? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
   If YES, Quantity —
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☒
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☒ None ☐ Other :
6. Cooler temperature upon receipt 3.3 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☒
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐

Contacted PM Date: by: via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

√		

1. CHAIN OF CUSTODY

The following discrepancies occurred:

COC = GW-17360-072904-DLR-183. labels = 183, 184, 185, 186, 187, 188, thru 190 - will log 190 per COC per DLR.

2. SAMPLE CONDITION

Sample(s)	were received after the recommended holding time had expired.
Sample(s)	were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) _____	were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
Sample(s)	were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-183

GC/MS Volatiles

Lot-Sample #...: A4G300129-001 Work Order #...: GL6LF1AA Matrix.....: WG
Date Sampled...: 07/29/04 08:50 Date Received..: 07/30/04
Prep Date.....: 07/31/04 Analysis Date..: 07/31/04
Prep Batch #...: 4213117
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	**0.26 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.76 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.4**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.52 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**0.76 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.61 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.68 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072904-DCR-183

GC/MS Volatiles

Lot-Sample #...: A4G300129-001 Work Order #...: GL6LF1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.2 B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	**1.8 J**	**3.0**	**ug/L**	**0.44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(73 - 122)
1,2-Dichloroethane-d4	85	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072904-DCR-184

GC/MS Volatiles

Lot-Sample #...: A4G300129-002 Work Order #...: GL6LH1AA Matrix.....: WG
Date Sampled...: 07/29/04 08:55 Date Received..: 07/30/04
Prep Date.....: 07/31/04 Analysis Date..: 07/31/04
Prep Batch #...: 4213117
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	**0.26 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.84 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.3**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.52 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**0.73 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.63 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.72 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-184

GC/MS Volatiles

Lot-Sample #...: A4G300129-002 **Work Order #...:** GL6LH1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.2 B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	**1.8 J**	**3.0**	**ug/L**	**0.44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
1,2-Dichloroethane-d4	86	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072904-DCR-185

GC/MS Volatiles

Lot-Sample #...: A4G300129-003 **Work Order #...:** GL6LJ1AA **Matrix.....:** WG
Date Sampled...: 07/29/04 09:30 **Date Received..:** 07/30/04
Prep Date.....: 08/01/04 **Analysis Date..:** 08/01/04
Prep Batch #...: 4213117
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**5.5**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**8.2**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**2.9**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	**0.87 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072904-DCR-185

GC/MS Volatiles

Lot-Sample #...: A4G300129-003 Work Order #...: GL6LJ1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**2.9 B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-186

GC/MS Volatiles

Lot-Sample #...:	A4G300129-004	**Work Order #...:**	GL6LL1AA	**Matrix.....:**	WG
Date Sampled...:	07/29/04 10:30	**Date Received..:**	07/30/04		
Prep Date.....:	07/31/04	**Analysis Date..:**	07/31/04		
Prep Batch #...:	4213117				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	**0.24 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**1.7**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.5**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.47 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**1.1**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.56 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.62 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072904-DCR-186

GC/MS Volatiles

Lot-Sample #...: A4G300129-004 Work Order #...: GL6LL1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**1.7 B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.22 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	**1.6 J**	**3.0**	**ug/L**	**0.44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
1,2-Dichloroethane-d4	87	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-187

GC/MS Volatiles

Lot-Sample #...:	A4G300129-005	**Work Order #...:**	GL6LR1AA	**Matrix.....:**	WG
Date Sampled...:	07/29/04 12:10	**Date Received..:**	07/30/04		
Prep Date.....:	07/31/04	**Analysis Date..:**	07/31/04		
Prep Batch #...:	4213117				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	**0.24 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**3.7**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**6.0**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.46 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**1.9**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.54 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.64 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-187

GC/MS Volatiles

Lot-Sample #...: A4G300129-005 Work Order #...: GL6LR1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**3.5 B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	**1.6 J**	**3.0**	**ug/L**	**0.44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
1,2-Dichloroethane-d4	86	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072904-DCR-188

GC/MS Volatiles

Lot-Sample #...: A4G300129-006 Work Order #...: GL6LV1AA Matrix.....: WG
Date Sampled...: 07/29/04 13:30 Date Received..: 07/30/04
Prep Date.....: 07/31/04 Analysis Date..: 07/31/04
Prep Batch #...: 4213117
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	**0.41 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**2.1**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**4.0**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.65 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**1.2**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.60 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.76 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-188

GC/MS Volatiles

Lot-Sample #...: A4G300129-006 Work Order #...: GL6LV1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**2.7 B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	**1.7 J**	**3.0**	**ug/L**	**0.44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-189

GC/MS Volatiles

Lot-Sample #...: A4G300129-007 **Work Order #...:** GL6LX1AA **Matrix.....:** WG
Date Sampled...: 07/29/04 14:45 **Date Received..:** 07/30/04
Prep Date.....: 07/31/04 **Analysis Date..:** 07/31/04
Prep Batch #...: 4213117
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.0 J**	**25**	**ug/L**	**0.74**
Benzene	**0.35 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**3.0**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.53 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**6.4**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.52 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**1.7**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.59 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.71 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	**0.92 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072904-DCR-189

GC/MS Volatiles

Lot-Sample #...: A4G300129-007 Work Order #...: GL6LX1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**4.5 B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	**1.7 J**	**3.0**	**ug/L**	**0.44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-072904-DCR-190

GC/MS Volatiles

Lot-Sample #...: A4G300129-008	**Work Order #...:** GL6L11AA		**Matrix.....:** WG
Date Sampled...: 07/29/04 16:00	**Date Received..:** 07/30/04		
Prep Date.....: 07/31/04	**Analysis Date..:** 07/31/04		
Prep Batch #...: 4213117			
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL		**Final Wgt/Vol..:** 5 mL
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.0 J**	**25**	**ug/L**	**0.74**
Benzene	**0.32 J**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**3.1**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	**0.56 J**	**25**	**ug/L**	**0.39**
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**6.0**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	**0.47 J**	**1.0**	**ug/L**	**0.12**
Dibromochloromethane	**1.7**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	**0.57 J**	**1.0**	**ug/L**	**0.19**
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	**0.71 J**	**1.0**	**ug/L**	**0.50**
4-Methyl-2-pentanone	**0.90 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-072904-DCR-190

GC/MS Volatiles

Lot-Sample #...: A4G300129-008 Work Order #...: GL6L11AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**4.8 B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	**1.7 J**	**3.0**	**ug/L**	**0.44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(73 - 122)
1,2-Dichloroethane-d4	86	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G300129 **Work Order #...:** GL9141AA **Matrix.....:** WATER
MB Lot-Sample #: A4G310000-117

Prep Date.....: 07/31/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/31/04 **Prep Batch #...:** 4213117
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	**0.46 J**	**1.0**	**ug/L**	**SW846 8260B**

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G300129 **Work Order #...:** GL9141AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	**0.89 J**	**5.0**	**ug/L**	**SW846 8260B**
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(73 - 122)
1,2-Dichloroethane-d4	87	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G300129 **Work Order #...:** GL9141AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G310000-117 GL9141AD-LCSD
Prep Date.....: 07/31/04 **Analysis Date..:** 07/31/04
Prep Batch #...: 4213117
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**11**	**ug/L**	**112**		**SW846 8260B**
	10	**11**	**ug/L**	**110**	**1.3**	**SW846 8260B**
Chlorobenzene	**10**	**11**	**ug/L**	**110**		**SW846 8260B**
	10	**11**	**ug/L**	**106**	**3.8**	**SW846 8260B**
1,1-Dichloroethene	**10**	**12**	**ug/L**	**119**		**SW846 8260B**
	10	**12**	**ug/L**	**116**	**2.3**	**SW846 8260B**
Toluene	**10**	**10**	**ug/L**	**103**		**SW846 8260B**
	10	**9.9**	**ug/L**	**99**	**3.2**	**SW846 8260B**
Trichloroethene	**10**	**11**	**ug/L**	**112**		**SW846 8260B**
	10	**11**	**ug/L**	**110**	**1.7**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	86	(73 - 122)
	86	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
	86	(61 - 128)
Toluene-d8	91	(76 - 110)
	90	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)
	85	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G300129 **Work Order #...:** GL9141AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4G310000-117 GL9141AD-LCSD
Prep Date.....: 07/31/04 **Analysis Date..:** 07/31/04
Prep Batch #...: 4213117
Dilution Factor: 1 **Final Wgt/Vol...:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**112**	**(80 - 116)**			**SW846 8260B**
	110	**(80 - 116)**	**1.3**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**110**	**(76 - 117)**			**SW846 8260B**
	106	**(76 - 117)**	**3.8**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**119**	**(63 - 130)**			**SW846 8260B**
	116	**(63 - 130)**	**2.3**	**(0-20)**	**SW846 8260B**
Toluene	**103**	**(74 - 119)**			**SW846 8260B**
	99	**(74 - 119)**	**3.2**	**(0-20)**	**SW846 8260B**
Trichloroethene	**112**	**(75 - 122)**			**SW846 8260B**
	110	**(75 - 122)**	**1.7**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	86	(73 - 122)
	86	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
	86	(61 - 128)
Toluene-d8	91	(76 - 110)
	90	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)
	85	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G300129 **Work Order #...:** GL6LV1AC-MS **Matrix.....:** WG
MS Lot-Sample #: A4G300129-006 GL6LV1AD-MSD
Date Sampled...: 07/29/04 13:30 **Date Received..:** 07/30/04
Prep Date.....: 07/31/04 **Analysis Date..:** 07/31/04
Prep Batch #...: 4213117
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**0.41**	**10**	**12**	**ug/L**	**113**		**SW846 8260B**
	0.41	**10**	**12**	**ug/L**	**116**	**2.7**	**SW846 8260B**
Chlorobenzene	**ND**	**10**	**11**	**ug/L**	**106**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**104**	**1.4**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10**	**12**	**ug/L**	**121**		**SW846 8260B**
	ND	**10**	**12**	**ug/L**	**123**	**1.9**	**SW846 8260B**
Toluene	**2.7**	**10**	**12**	**ug/L**	**98**		**SW846 8260B**
	2.7	**10**	**13**	**ug/L**	**100**	**2.1**	**SW846 8260B**
Trichloroethene	**ND**	**10**	**11**	**ug/L**	**112**		**SW846 8260B**
	ND	**10**	**12**	**ug/L**	**114**	**1.4**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(73 - 122)
	90	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
	91	(61 - 128)
Toluene-d8	92	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)
	86	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A4G300129	**Work Order #...:**	GL6LV1AC-MS GL6LV1AD-MSD	**Matrix.....:**	WG
MS Lot-Sample #:	A4G300129-006				
Date Sampled...:	07/29/04 13:30	**Date Received..:**	07/30/04		
Prep Date.....:	07/31/04	**Analysis Date..:**	07/31/04		
Prep Batch #...:	4213117				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**113**	**(78 - 118)**			**SW846 8260B**
	116	**(78 - 118)**	**2.7**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**106**	**(76 - 117)**			**SW846 8260B**
	104	**(76 - 117)**	**1.4**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**121**	**(62 - 130)**			**SW846 8260B**
	123	**(62 - 130)**	**1.9**	**(0-20)**	**SW846 8260B**
Toluene	**98**	**(70 - 119)**			**SW846 8260B**
	100	**(70 - 119)**	**2.1**	**(0-20)**	**SW846 8260B**
Trichloroethene	**112**	**(62 - 130)**			**SW846 8260B**
	114	**(62 - 130)**	**1.4**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(73 - 122)
	90	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
	91	(61 - 128)
Toluene-d8	92	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)
	86	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

REC'D CRA
AUG - 4 2004
CRA SDG G-13

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A4G150200

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4G150200
Name: GM GRAND RAPIDS.
Description
Event: VAS Sampling
Samples: 22 solids DCR 078-099.
Analysis: TCL VOCs.

TAT: STUDARD TAT
Lab: STL-NC
Checked Against Preliminary Data:
Date: N/A Init.: N/A.
Date of Validation Memo: 10/20/04
Invoice Approval Date:
Comments:

Amy L. McCormick
Project Manager

July 30, 2004

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM-Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	REMARKS
	7/14/04	1050	S-17360-071404-DCR-078	SOIL	2	X	STD TAT
		1055	-079		2	X	
		1100	-080		2	X	
		1105	-081		2	X	
		1110	-082		2	X	
		1115	-083		2	X	
		1125	-084		2	X	
		1130	-085		2	X	
		1140	-086		2	X	
		1150	-087		2	X	
		1200	-088		2	X	
		1355	-089		2	X	
		1400	-090		2	X	CRA contact Paul Wiseman
		1405	-091		2	X	
			TOTAL NUMBER OF CONTAINERS		28		

RELINQUISHED BY: 1. _____	DATE: 7-14-04 TIME: 1915	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 8318 9665 3065

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27170

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: Angelle Matthews
DATE: 7-15-04 TIME: 10:00

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	REMARKS
	7/14/04	1410	S-17360-071404-DCR-092	Soil	2	X	STD TAT
		1415	-093		2	X	
		1420	-094		2	X	
		1430	-095		2	X	
		1440	-096		2	X	
		1445	-097		2	X	
		1455	-098		2	X	
	↓	1505	-099	↓	2	X	
							CRA Contact Paul Wiseman
TOTAL NUMBER OF CONTAINERS					16		

RELINQUISHED BY: 1. _____	DATE: 7-14-04 TIME: 1915	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FEDEX AIR BILL No. 8318 9665 3065

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27171

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: Angela Matthews
DATE: 7-15-04 TIME: 10:00

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G150200

The following report contains the analytical results for twenty-two solid samples submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received July 15, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on July 29, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters which are never reported on a dry weight basis is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 5.8°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

Y:\Barb\STL headers\Qc846-Narrative_012804.doc, Revised: 01/28/04 DJL

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G150200

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-17360-071404-DCR-078 07/14/04 10:50 001				
Chloromethane	25 J,B	540	ug/kg	SW846 8260B
Cyclohexane	18 J	2600	ug/kg	SW846 8260B
Methylcyclohexane	100 J	2600	ug/kg	SW846 8260B
Toluene	42 J	220	ug/kg	SW846 8260B
Trichloroethene	2800	110	ug/kg	SW846 8260B
Xylenes (total)	84 J	330	ug/kg	SW846 8260B
Percent Solids	95.8	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-079 07/14/04 10:55 002				
Chloromethane	33 J,B	320	ug/kg	SW846 8260B
Percent Solids	98.2	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-080 07/14/04 11:00 003				
Trichloroethene	20 J	59	ug/kg	SW846 8260B
Percent Solids	98.2	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-081 07/14/04 11:05 004				
Chloromethane	46 J,B	400	ug/kg	SW846 8260B
Percent Solids	95.9	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-082 07/14/04 11:10 005				
Chloromethane	26 J,B	270	ug/kg	SW846 8260B
Trichloroethene	78	53	ug/kg	SW846 8260B
Percent Solids	98.1	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-083 07/14/04 11:15 006				
Chloromethane	24 J,B	260	ug/kg	SW846 8260B
Trichloroethene	24 J	51	ug/kg	SW846 8260B
Percent Solids	97.7	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-084 07/14/04 11:25 007				
Chloromethane	23 J,B	250	ug/kg	SW846 8260B
Trichloroethene	40 J	50	ug/kg	SW846 8260B
Percent Solids	97.9	10.0	%	MCAWW 160.3 MOD

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G150200

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-17360-071404-DCR-085 07/14/04 11:30 008				
Chloromethane	24 J,B	260	ug/kg	SW846 8260B
Trichloroethene	31 J	53	ug/kg	SW846 8260B
Percent Solids	98.0	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-086 07/14/04 11:40 009				
Chloromethane	24 J,B	290	ug/kg	SW846 8260B
Percent Solids	98.0	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-087 07/14/04 11:50 010				
Chloromethane	22 J,B	270	ug/kg	SW846 8260B
Trichloroethene	20 J	55	ug/kg	SW846 8260B
Percent Solids	96.3	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-088 07/14/04 12:00 011				
Chloromethane	20 J,B	260	ug/kg	SW846 8260B
Percent Solids	96.7	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-089 07/14/04 13:55 012				
Methylcyclohexane	200 J	10000	ug/kg	SW846 8260B
Toluene	160 J	860	ug/kg	SW846 8260B
Trichloroethene	12000	430	ug/kg	SW846 8260B
Xylenes (total)	280 J	1300	ug/kg	SW846 8260B
Percent Solids	95.0	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-090 07/14/04 14:00 013				
Chloromethane	22 J,B	290	ug/kg	SW846 8260B
Percent Solids	97.5	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-091 07/14/04 14:05 014				
Percent Solids	97.6	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-092 07/14/04 14:10 015				
Percent Solids	97.0	10.0	%	MCAWW 160.3 MOD

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G150200

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-17360-071404-DCR-093 07/14/04 14:15 016				
Trichloroethene	40 J	58	ug/kg	SW846 8260B
Percent Solids	95.0	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-094 07/14/04 14:20 017				
Trichloroethene	22 J	61	ug/kg	SW846 8260B
Percent Solids	98.1	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-095 07/14/04 14:30 018				
Chloromethane	19 J,B	270	ug/kg	SW846 8260B
Trichloroethene	22 J	55	ug/kg	SW846 8260B
Percent Solids	96.3	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-096 07/14/04 14:40 019				
Chloromethane	18 J,B	290	ug/kg	SW846 8260B
Trichloroethene	87	57	ug/kg	SW846 8260B
Percent Solids	96.8	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-097 07/14/04 14:45 020				
Trichloroethene	63	55	ug/kg	SW846 8260B
Percent Solids	98.1	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-098 07/14/04 14:55 021				
Trichloroethene	27 J	59	ug/kg	SW846 8260B
Percent Solids	97.0	10.0	%	MCAWW 160.3 MOD
S-17360-071404-DCR-099 07/14/04 15:05 022				
Trichloroethene	46 J	55	ug/kg	SW846 8260B
Percent Solids	97.5	10.0	%	MCAWW 160.3 MOD

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G150200

PARAMETER	ANALYTICAL METHOD
Total Residue as Percent Solids	MCAWW 160.3 MOD
Volatile Organics by GC/MS	SW846 8260B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G150200

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GK5LT	001	S-17360-071404-DCR-078	07/14/04	10:50
GK5L7	002	S-17360-071404-DCR-079	07/14/04	10:55
GK5L9	003	S-17360-071404-DCR-080	07/14/04	11:00
GK5MC	004	S-17360-071404-DCR-081	07/14/04	11:05
GK566	005	S-17360-071404-DCR-082	07/14/04	11:10
GK568	006	S-17360-071404-DCR-083	07/14/04	11:15
GK57C	007	S-17360-071404-DCR-084	07/14/04	11:25
GK57D	008	S-17360-071404-DCR-085	07/14/04	11:30
GK57E	009	S-17360-071404-DCR-086	07/14/04	11:40
GK57F	010	S-17360-071404-DCR-087	07/14/04	11:50
GK57H	011	S-17360-071404-DCR-088	07/14/04	12:00
GK57J	012	S-17360-071404-DCR-089	07/14/04	13:55
GK57K	013	S-17360-071404-DCR-090	07/14/04	14:00
GK57M	014	S-17360-071404-DCR-091	07/14/04	14:05
GK57N	015	S-17360-071404-DCR-092	07/14/04	14:10
GK57P	016	S-17360-071404-DCR-093	07/14/04	14:15
GK57Q	017	S-17360-071404-DCR-094	07/14/04	14:20
GK57R	018	S-17360-071404-DCR-095	07/14/04	14:30
GK57T	019	S-17360-071404-DCR-096	07/14/04	14:40
GK57V	020	S-17360-071404-DCR-097	07/14/04	14:45
GK57W	021	S-17360-071404-DCR-098	07/14/04	14:55
GK57X	022	S-17360-071404-DCR-099	07/14/04	15:05

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM-Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	REMARKS
	7/14/04	1050	S-17360-071404-DCR-078	soil	2	X	STD TAT
		1055	-079		2	X	
		1100	-080		2	X	
		1105	-081		2	X	
		1110	-082		2	X	
		1115	-083		2	X	
		1125	-084		2	X	
		1130	-085		2	X	
		1140	-086		2	X	
		1150	-087		2	X	
		1200	-088		2	X	
		1355	-089		2	X	
		1400	-090		2	X	
		1405	-091		2	X	CRA contact Paul Wisenor
TOTAL NUMBER OF CONTAINERS					28		

RELINQUISHED BY: 1. _____	DATE: 7-14-04 TIME: 1915	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 8318 9665 3065

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27170

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: Arielle Matthews
DATE: 7-15-04 TIME: 10:00

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

STL North Canton

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	REMARKS
	7/14/04	1410	S-17360-071404-DCR-092	Soil	2	X	STD TAT
		1415	-093		2	X	
		1420	-094		2	X	
		1430	-095		2	X	
		1440	-096		2	X	
		1445	-097		2	X	
		1455	-098		2	X	
	↓	1505	-099	↓	2	X	
							CRA Contact Pam Wiseman
TOTAL NUMBER OF CONTAINERS					16		

RELINQUISHED BY: 1. _____	DATE: 7-14-04 TIME: 1915	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FEDEX AIR BILL No. 8318 9665 3065

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27171

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: Angela Matthews
DATE: 7-15-04 TIME: 10:00

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

STL North Canton 17

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record.

Client: 57787

Lot #: A4G150200

Case Number/SDG: 17360-09

Storage Location: C116 MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GK5LT	STILLERJ	7/15/04	Yes		Storage	
GK5L7	STILLERJ	7/15/04	Yes		Storage	
GK5L9	STILLERJ	7/15/04	Yes		Storage	
GK5MC	STILLERJ	7/15/04	Yes		Storage	
GK566	STILLERJ	7/15/04	Yes		Storage	
GK568	STILLERJ	7/15/04	Yes		Storage	
GK57C	STILLERJ	7/15/04	Yes		Storage	
GK57D	STILLERJ	7/15/04	Yes		Storage	
GK57E	STILLERJ	7/15/04	Yes		Storage	
GK57F	STILLERJ	7/15/04	Yes		Storage	
GK57H	STILLERJ	7/15/04	Yes		Storage	
GK57J	STILLERJ	7/15/04	Yes		Storage	
GK57K	STILLERJ	7/15/04	Yes		Storage	
GK57M	STILLERJ	7/15/04	Yes		Storage	
GK57N	STILLERJ	7/15/04	Yes		Storage	
GK57P	STILLERJ	7/15/04	Yes		Storage	
GK57Q	STILLERJ	7/15/04	Yes		Storage	
GK57R	STILLERJ	7/15/04	Yes		Storage	
GK57T	STILLERJ	7/15/04	Yes		Storage	
GK57V	STILLERJ	7/15/04	Yes		Storage	
GK57W	STILLERJ	7/15/04	Yes		Storage	
GK57X	STILLERJ	7/15/04	Yes		Storage	

STL Cooler Receipt Form/Narrative Lot Number: 4416150200

North Canton Facility

Client: ERA Project: GM - Grand Rapids Quote#:

Cooler Received on: 7-15-04 Opened on: 7-15-04 by: Angela Matthews (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:

STL Cooler No# Foam Box ☐ Client Cooler ☒ Other

1. Were custody seals on the outside of the cooler? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity
   Were the custody seals signed and dated? Yes ☐ No ☒ NA ☐
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other :
6. Cooler temperature upon receipt 5.8 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☒ Against Bottles ☐ IR ☐ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☒
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☒
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐

Contacted PM Date: by: via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

√		

1. CHAIN OF CUSTODY

The following discrepancies occurred:

2. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #122603-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # 111401-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*

Sample(s) were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-078

GC/MS Volatiles

Lot-Sample #...: A4G150200-001 **Work Order #...:** GK5LT1AA **Matrix.....:** SO
Date Sampled...: 07/14/04 10:50 **Date Received..:** 07/15/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/20/04
Prep Batch #...: 4202313
Dilution Factor: 2.08 **Initial Wgt/Vol:** 24 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 4.2 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	1600	ug/kg	220
Benzene	ND	110	ug/kg	14
Bromodichloromethane	ND	220	ug/kg	26
Bromoform	ND	220	ug/kg	28
Bromomethane	ND	540	ug/kg	54
2-Butanone	ND	1600	ug/kg	110
Carbon disulfide	ND	540	ug/kg	43
Carbon tetrachloride	ND	110	ug/kg	26
Chlorobenzene	ND	110	ug/kg	14
Chloroethane	ND	540	ug/kg	140
Chloroform	ND	110	ug/kg	26
Chloromethane	**25 J,B**	**540**	**ug/kg**	**11**
Cyclohexane	**18 J**	**2600**	**ug/kg**	**17**
Dibromochloromethane	ND	110	ug/kg	15
1,2-Dibromo-3-chloro-propane	ND	540	ug/kg	130
1,2-Dibromoethane	ND	540	ug/kg	22
1,2-Dichlorobenzene	ND	220	ug/kg	37
1,3-Dichlorobenzene	ND	220	ug/kg	16
1,4-Dichlorobenzene	ND	220	ug/kg	17
Dichlorodifluoromethane	ND	220	ug/kg	12
1,1-Dichloroethane	ND	110	ug/kg	16
1,2-Dichloroethane	ND	110	ug/kg	20
1,1-Dichloroethene	ND	110	ug/kg	18
cis-1,2-Dichloroethene	ND	110	ug/kg	30
trans-1,2-Dichloroethene	ND	110	ug/kg	24
1,2-Dichloropropane	ND	110	ug/kg	16
cis-1,3-Dichloropropene	ND	110	ug/kg	12
trans-1,3-Dichloropropene	ND	110	ug/kg	12
Ethylbenzene	ND	110	ug/kg	15
2-Hexanone	ND	5400	ug/kg	52
Isopropylbenzene	ND	540	ug/kg	11
Methyl acetate	ND	2600	ug/kg	110
Methylene chloride	ND	540	ug/kg	220
Methylcyclohexane	**100 J**	**2600**	**ug/kg**	**12**
4-Methyl-2-pentanone	ND	5400	ug/kg	24
Methyl tert-butyl ether	ND	540	ug/kg	22
Styrene	ND	110	ug/kg	61

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-078

GC/MS Volatiles

Lot-Sample #...: A4G150200-001 **Work Order #...:** GK5LT1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	220	ug/kg	18
Tetrachloroethene	ND	110	ug/kg	20
Toluene	**42 J**	**220**	**ug/kg**	**20**
1,2,4-Trichloro-benzene	ND	540	ug/kg	26
1,1,1-Trichloroethane	ND	110	ug/kg	21
1,1,2-Trichloroethane	ND	110	ug/kg	22
Trichloroethene	**2800**	**110**	**ug/kg**	**26**
Trichlorofluoromethane	ND	220	ug/kg	18
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	540	ug/kg	22
Vinyl chloride	ND	220	ug/kg	35
Xylenes (total)	**84 J**	**330**	**ug/kg**	**33**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	71 DIL	(59 - 138)
1,2-Dichloroethane-d4	78 DIL	(61 - 130)
Toluene-d8	91 DIL	(60 - 143)
4-Bromofluorobenzene	82 DIL	(47 - 158)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-079

GC/MS Volatiles

Lot-Sample #...: A4G150200-002 **Work Order #...:** GK5L71AA **Matrix.....:** SO
Date Sampled...: 07/14/04 10:55 **Date Received..:** 07/15/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/19/04
Prep Batch #...: 4202313
Dilution Factor: 1.24 **Initial Wgt/Vol:** 20.2 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 1.8 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	950	ug/kg	130
Benzene	ND	63	ug/kg	8.1
Bromodichloromethane	ND	130	ug/kg	15
Bromoform	ND	130	ug/kg	16
Bromomethane	ND	320	ug/kg	32
2-Butanone	ND	950	ug/kg	62
Carbon disulfide	ND	320	ug/kg	25
Carbon tetrachloride	ND	63	ug/kg	15
Chlorobenzene	ND	63	ug/kg	8.0
Chloroethane	ND	320	ug/kg	82
Chloroform	ND	63	ug/kg	15
Chloromethane	**33 J,B**	**320**	**ug/kg**	**6.6**
Cyclohexane	ND	1500	ug/kg	9.7
Dibromochloromethane	ND	63	ug/kg	8.7
1,2-Dibromo-3-chloro-propane	ND	320	ug/kg	76
1,2-Dibromoethane	ND	320	ug/kg	13
1,2-Dichlorobenzene	ND	130	ug/kg	21
1,3-Dichlorobenzene	ND	130	ug/kg	9.1
1,4-Dichlorobenzene	ND	130	ug/kg	10
Dichlorodifluoromethane	ND	130	ug/kg	6.8
1,1-Dichloroethane	ND	63	ug/kg	9.2
1,2-Dichloroethane	ND	63	ug/kg	12
1,1-Dichloroethene	ND	63	ug/kg	10
cis-1,2-Dichloroethene	ND	63	ug/kg	18
trans-1,2-Dichloroethene	ND	63	ug/kg	14
1,2-Dichloropropane	ND	63	ug/kg	9.3
cis-1,3-Dichloropropene	ND	63	ug/kg	6.9
trans-1,3-Dichloropropene	ND	63	ug/kg	6.8
Ethylbenzene	ND	63	ug/kg	8.6
2-Hexanone	ND	3200	ug/kg	30
Isopropylbenzene	ND	320	ug/kg	6.4
Methyl acetate	ND	1500	ug/kg	66
Methylene chloride	ND	320	ug/kg	130
Methylcyclohexane	ND	1500	ug/kg	7.2
4-Methyl-2-pentanone	ND	3200	ug/kg	14
Methyl tert-butyl ether	ND	320	ug/kg	13
Styrene	ND	63	ug/kg	35

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-079

GC/MS Volatiles

Lot-Sample #...: A4G150200-002 Work Order #...: GK5L71AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	130	ug/kg	10
Tetrachloroethene	ND	63	ug/kg	11
Toluene	ND	130	ug/kg	11
1,2,4-Trichloro-benzene	ND	320	ug/kg	15
1,1,1-Trichloroethane	ND	63	ug/kg	12
1,1,2-Trichloroethane	ND	63	ug/kg	13
Trichloroethene	ND	63	ug/kg	15
Trichlorofluoromethane	ND	130	ug/kg	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	320	ug/kg	13
Vinyl chloride	ND	130	ug/kg	20
Xylenes (total)	ND	190	ug/kg	19

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	76	(59 - 138)
1,2-Dichloroethane-d4	80	(61 - 130)
Toluene-d8	93	(60 - 143)
4-Bromofluorobenzene	86	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-080

GC/MS Volatiles

Lot-Sample #...: A4G150200-003 **Work Order #...:** GK5L91AA **Matrix.....:** SO
Date Sampled...: 07/14/04 11:00 **Date Received..:** 07/15/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/20/04
Prep Batch #...: 4202313
Dilution Factor: 1.16 **Initial Wgt/Vol:** 21.6 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 1.8 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	890	ug/kg	120
Benzene	ND	59	ug/kg	7.6
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	15
Bromomethane	ND	300	ug/kg	30
2-Butanone	ND	890	ug/kg	58
Carbon disulfide	ND	300	ug/kg	24
Carbon tetrachloride	ND	59	ug/kg	14
Chlorobenzene	ND	59	ug/kg	7.4
Chloroethane	ND	300	ug/kg	77
Chloroform	ND	59	ug/kg	14
Chloromethane	ND	300	ug/kg	6.1
Cyclohexane	ND	1400	ug/kg	9.1
Dibromochloromethane	ND	59	ug/kg	8.1
1,2-Dibromo-3-chloro-propane	ND	300	ug/kg	71
1,2-Dibromoethane	ND	300	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.5
1,4-Dichlorobenzene	ND	120	ug/kg	9.3
Dichlorodifluoromethane	ND	120	ug/kg	6.4
1,1-Dichloroethane	ND	59	ug/kg	8.6
1,2-Dichloroethane	ND	59	ug/kg	11
1,1-Dichloroethene	ND	59	ug/kg	9.8
cis-1,2-Dichloroethene	ND	59	ug/kg	17
trans-1,2-Dichloroethene	ND	59	ug/kg	13
1,2-Dichloropropane	ND	59	ug/kg	8.7
cis-1,3-Dichloropropene	ND	59	ug/kg	6.5
trans-1,3-Dichloropropene	ND	59	ug/kg	6.4
Ethylbenzene	ND	59	ug/kg	8.0
2-Hexanone	ND	3000	ug/kg	28
Isopropylbenzene	ND	300	ug/kg	6.0
Methyl acetate	ND	1400	ug/kg	61
Methylene chloride	ND	300	ug/kg	120
Methylcyclohexane	ND	1400	ug/kg	6.7
4-Methyl-2-pentanone	ND	3000	ug/kg	13
Methyl tert-butyl ether	ND	300	ug/kg	12
Styrene	ND	59	ug/kg	33

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-080

GC/MS Volatiles

Lot-Sample #...: A4G150200-003 **Work Order #...:** GK5L91AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.7
Tetrachloroethene	ND	59	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	300	ug/kg	14
1,1,1-Trichloroethane	ND	59	ug/kg	11
1,1,2-Trichloroethane	ND	59	ug/kg	12
Trichloroethene	**20 J**	**59**	**ug/kg**	**14**
Trichlorofluoromethane	ND	120	ug/kg	9.8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	300	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	ND	180	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	71	(59 - 138)
1,2-Dichloroethane-d4	81	(61 - 130)
Toluene-d8	95	(60 - 143)
4-Bromofluorobenzene	86	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-081

GC/MS Volatiles

Lot-Sample #...: A4G150200-004 **Work Order #...:** GK5MC1AA **Matrix.....:** SO
Date Sampled...: 07/14/04 11:05 **Date Received..:** 07/15/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/19/04
Prep Batch #...: 4202313
Dilution Factor: 1.52 **Initial Wgt/Vol:** 16.4 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 4.1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	1200	ug/kg	160
Benzene	ND	79	ug/kg	10
Bromodichloromethane	ND	160	ug/kg	19
Bromoform	ND	160	ug/kg	21
Bromomethane	ND	400	ug/kg	40
2-Butanone	ND	1200	ug/kg	78
Carbon disulfide	ND	400	ug/kg	32
Carbon tetrachloride	ND	79	ug/kg	19
Chlorobenzene	ND	79	ug/kg	10
Chloroethane	ND	400	ug/kg	100
Chloroform	ND	79	ug/kg	19
Chloromethane	**46 J,B**	**400**	**ug/kg**	**8.2**
Cyclohexane	ND	1900	ug/kg	12
Dibromochloromethane	ND	79	ug/kg	11
1,2-Dibromo-3-chloro-propane	ND	400	ug/kg	95
1,2-Dibromoethane	ND	400	ug/kg	16
1,2-Dichlorobenzene	ND	160	ug/kg	27
1,3-Dichlorobenzene	ND	160	ug/kg	11
1,4-Dichlorobenzene	ND	160	ug/kg	13
Dichlorodifluoromethane	ND	160	ug/kg	8.6
1,1-Dichloroethane	ND	79	ug/kg	12
1,2-Dichloroethane	ND	79	ug/kg	15
1,1-Dichloroethene	ND	79	ug/kg	13
cis-1,2-Dichloroethene	ND	79	ug/kg	22
trans-1,2-Dichloroethene	ND	79	ug/kg	17
1,2-Dichloropropane	ND	79	ug/kg	12
cis-1,3-Dichloropropene	ND	79	ug/kg	8.7
trans-1,3-Dichloropropene	ND	79	ug/kg	8.6
Ethylbenzene	ND	79	ug/kg	11
2-Hexanone	ND	4000	ug/kg	38
Isopropylbenzene	ND	400	ug/kg	8.1
Methyl acetate	ND	1900	ug/kg	82
Methylene chloride	ND	400	ug/kg	160
Methylcyclohexane	ND	1900	ug/kg	9.0
4-Methyl-2-pentanone	ND	4000	ug/kg	17
Methyl tert-butyl ether	ND	400	ug/kg	16
Styrene	ND	79	ug/kg	44

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-081

GC/MS Volatiles

Lot-Sample #...: A4G150200-004 **Work Order #...:** GK5MC1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	160	ug/kg	13
Tetrachloroethene	ND	79	ug/kg	14
Toluene	ND	160	ug/kg	14
1,2,4-Trichloro-benzene	ND	400	ug/kg	19
1,1,1-Trichloroethane	ND	79	ug/kg	15
1,1,2-Trichloroethane	ND	79	ug/kg	16
Trichloroethene	ND	79	ug/kg	19
Trichlorofluoromethane	ND	160	ug/kg	13
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	400	ug/kg	16
Vinyl chloride	ND	160	ug/kg	25
Xylenes (total)	ND	240	ug/kg	24

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	76	(59 - 138)
1,2-Dichloroethane-d4	80	(61 - 130)
Toluene-d8	97	(60 - 143)
4-Bromofluorobenzene	90	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-082

GC/MS Volatiles

Lot-Sample #...: A4G150200-005 **Work Order #...:** GK5661AA **Matrix.....:** SO
Date Sampled...: 07/14/04 11:10 **Date Received..:** 07/15/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/19/04
Prep Batch #...: 4202313
Dilution Factor: 1.05 **Initial Wgt/Vol:** 23.7 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 1.9 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	800	ug/kg	110
Benzene	ND	53	ug/kg	6.8
Bromodichloromethane	ND	110	ug/kg	13
Bromoform	ND	110	ug/kg	14
Bromomethane	ND	270	ug/kg	27
2-Butanone	ND	800	ug/kg	52
Carbon disulfide	ND	270	ug/kg	21
Carbon tetrachloride	ND	53	ug/kg	13
Chlorobenzene	ND	53	ug/kg	6.7
Chloroethane	ND	270	ug/kg	70
Chloroform	ND	53	ug/kg	13
Chloromethane	**26 J,B**	**270**	**ug/kg**	**5.6**
Cyclohexane	ND	1300	ug/kg	8.2
Dibromochloromethane	ND	53	ug/kg	7.4
1,2-Dibromo-3-chloro-propane	ND	270	ug/kg	64
1,2-Dibromoethane	ND	270	ug/kg	11
1,2-Dichlorobenzene	ND	110	ug/kg	18
1,3-Dichlorobenzene	ND	110	ug/kg	7.7
1,4-Dichlorobenzene	ND	110	ug/kg	8.5
Dichlorodifluoromethane	ND	110	ug/kg	5.8
1,1-Dichloroethane	ND	53	ug/kg	7.8
1,2-Dichloroethane	ND	53	ug/kg	10
1,1-Dichloroethene	ND	53	ug/kg	8.9
cis-1,2-Dichloroethene	ND	53	ug/kg	15
trans-1,2-Dichloroethene	ND	53	ug/kg	12
1,2-Dichloropropane	ND	53	ug/kg	7.9
cis-1,3-Dichloropropene	ND	53	ug/kg	5.9
trans-1,3-Dichloropropene	ND	53	ug/kg	5.8
Ethylbenzene	ND	53	ug/kg	7.3
2-Hexanone	ND	2700	ug/kg	26
Isopropylbenzene	ND	270	ug/kg	5.5
Methyl acetate	ND	1300	ug/kg	56
Methylene chloride	ND	270	ug/kg	110
Methylcyclohexane	ND	1300	ug/kg	6.1
4-Methyl-2-pentanone	ND	2700	ug/kg	12
Methyl tert-butyl ether	ND	270	ug/kg	11
Styrene	ND	53	ug/kg	30

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-082

GC/MS Volatiles

Lot-Sample #...: A4G150200-005 **Work Order #...:** GK5661AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	8.8
Tetrachloroethene	ND	53	ug/kg	9.6
Toluene	ND	110	ug/kg	9.7
1,2,4-Trichloro-benzene	ND	270	ug/kg	13
1,1,1-Trichloroethane	ND	53	ug/kg	10
1,1,2-Trichloroethane	ND	53	ug/kg	11
Trichloroethene	**78**	**53**	**ug/kg**	**13**
Trichlorofluoromethane	ND	110	ug/kg	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	270	ug/kg	11
Vinyl chloride	ND	110	ug/kg	17
Xylenes (total)	ND	160	ug/kg	16

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	73	(59 - 138)
1,2-Dichloroethane-d4	78	(61 - 130)
Toluene-d8	94	(60 - 143)
4-Bromofluorobenzene	86	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-083

GC/MS Volatiles

Lot-Sample #...: A4G150200-006 **Work Order #...:** GK5681AA **Matrix.....:** SO
Date Sampled...: 07/14/04 11:15 **Date Received..:** 07/15/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/19/04
Prep Batch #...: 4202313
Dilution Factor: 1 **Initial Wgt/Vol:** 24.9 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 2.3 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	770	ug/kg	100
Benzene	ND	51	ug/kg	6.5
Bromodichloromethane	ND	100	ug/kg	12
Bromoform	ND	100	ug/kg	13
Bromomethane	ND	260	ug/kg	26
2-Butanone	ND	770	ug/kg	50
Carbon disulfide	ND	260	ug/kg	20
Carbon tetrachloride	ND	51	ug/kg	12
Chlorobenzene	ND	51	ug/kg	6.4
Chloroethane	ND	260	ug/kg	67
Chloroform	ND	51	ug/kg	12
Chloromethane	**24 J,B**	**260**	**ug/kg**	**5.3**
Cyclohexane	ND	1200	ug/kg	7.9
Dibromochloromethane	ND	51	ug/kg	7.1
1,2-Dibromo-3-chloro-propane	ND	260	ug/kg	61
1,2-Dibromoethane	ND	260	ug/kg	10
1,2-Dichlorobenzene	ND	100	ug/kg	17
1,3-Dichlorobenzene	ND	100	ug/kg	7.4
1,4-Dichlorobenzene	ND	100	ug/kg	8.1
Dichlorodifluoromethane	ND	100	ug/kg	5.5
1,1-Dichloroethane	ND	51	ug/kg	7.5
1,2-Dichloroethane	ND	51	ug/kg	9.5
1,1-Dichloroethene	ND	51	ug/kg	8.5
cis-1,2-Dichloroethene	ND	51	ug/kg	14
trans-1,2-Dichloroethene	ND	51	ug/kg	11
1,2-Dichloropropane	ND	51	ug/kg	7.6
cis-1,3-Dichloropropene	ND	51	ug/kg	5.6
trans-1,3-Dichloropropene	ND	51	ug/kg	5.5
Ethylbenzene	ND	51	ug/kg	7.0
2-Hexanone	ND	2600	ug/kg	25
Isopropylbenzene	ND	260	ug/kg	5.2
Methyl acetate	ND	1200	ug/kg	53
Methylene chloride	ND	260	ug/kg	100
Methylcyclohexane	ND	1200	ug/kg	5.8
4-Methyl-2-pentanone	ND	2600	ug/kg	11
Methyl tert-butyl ether	ND	260	ug/kg	10
Styrene	ND	51	ug/kg	29

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-083

GC/MS Volatiles

Lot-Sample #...: A4G150200-006 **Work Order #...:** GK5681AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	100	ug/kg	8.4
Tetrachloroethene	ND	51	ug/kg	9.2
Toluene	ND	100	ug/kg	9.3
1,2,4-Trichloro-benzene	ND	260	ug/kg	12
1,1,1-Trichloroethane	ND	51	ug/kg	9.7
1,1,2-Trichloroethane	ND	51	ug/kg	10
Trichloroethene	**24 J**	**51**	**ug/kg**	**12**
Trichlorofluoromethane	ND	100	ug/kg	8.5
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	260	ug/kg	10
Vinyl chloride	ND	100	ug/kg	16
Xylenes (total)	ND	150	ug/kg	15

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	72	(59 - 138)
1,2-Dichloroethane-d4	78	(61 - 130)
Toluene-d8	94	(60 - 143)
4-Bromofluorobenzene	83	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-084

GC/MS Volatiles

Lot-Sample #...: A4G150200-007 **Work Order #...:** GK57C1AA **Matrix.....:** SO
Date Sampled...: 07/14/04 11:25 **Date Received..:** 07/15/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/19/04
Prep Batch #...: 4202313
Dilution Factor: 0.98 **Initial Wgt/Vol:** 25.6 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 2.2 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	750	ug/kg	99
Benzene	ND	50	ug/kg	6.4
Bromodichloromethane	ND	100	ug/kg	12
Bromoform	ND	100	ug/kg	13
Bromomethane	ND	250	ug/kg	25
2-Butanone	ND	750	ug/kg	49
Carbon disulfide	ND	250	ug/kg	20
Carbon tetrachloride	ND	50	ug/kg	12
Chlorobenzene	ND	50	ug/kg	6.3
Chloroethane	ND	250	ug/kg	65
Chloroform	ND	50	ug/kg	12
Chloromethane	**23 J,B**	**250**	**ug/kg**	**5.2**
Cyclohexane	ND	1200	ug/kg	7.7
Dibromochloromethane	ND	50	ug/kg	6.9
1,2-Dibromo-3-chloro-propane	ND	250	ug/kg	60
1,2-Dibromoethane	ND	250	ug/kg	9.9
1,2-Dichlorobenzene	ND	100	ug/kg	17
1,3-Dichlorobenzene	ND	100	ug/kg	7.2
1,4-Dichlorobenzene	ND	100	ug/kg	7.9
Dichlorodifluoromethane	ND	100	ug/kg	5.4
1,1-Dichloroethane	ND	50	ug/kg	7.3
1,2-Dichloroethane	ND	50	ug/kg	9.3
1,1-Dichloroethene	ND	50	ug/kg	8.3
cis-1,2-Dichloroethene	ND	50	ug/kg	14
trans-1,2-Dichloroethene	ND	50	ug/kg	11
1,2-Dichloropropane	ND	50	ug/kg	7.4
cis-1,3-Dichloropropene	ND	50	ug/kg	5.5
trans-1,3-Dichloropropene	ND	50	ug/kg	5.4
Ethylbenzene	ND	50	ug/kg	6.8
2-Hexanone	ND	2500	ug/kg	24
Isopropylbenzene	ND	250	ug/kg	5.1
Methyl acetate	ND	1200	ug/kg	52
Methylene chloride	ND	250	ug/kg	99
Methylcyclohexane	ND	1200	ug/kg	5.7
4-Methyl-2-pentanone	ND	2500	ug/kg	11
Methyl tert-butyl ether	ND	250	ug/kg	10
Styrene	ND	50	ug/kg	28

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-084

GC/MS Volatiles

Lot-Sample #...: A4G150200-007 **Work Order #...:** GK57C1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	100	ug/kg	8.2
Tetrachloroethene	ND	50	ug/kg	9.0
Toluene	ND	100	ug/kg	9.1
1,2,4-Trichloro-benzene	ND	250	ug/kg	12
1,1,1-Trichloroethane	ND	50	ug/kg	9.5
1,1,2-Trichloroethane	ND	50	ug/kg	9.9
Trichloroethene	**40 J**	**50**	**ug/kg**	**12**
Trichlorofluoromethane	ND	100	ug/kg	8.3
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	250	ug/kg	10
Vinyl chloride	ND	100	ug/kg	16
Xylenes (total)	ND	150	ug/kg	15

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	74	(59 - 138)
1,2-Dichloroethane-d4	83	(61 - 130)
Toluene-d8	96	(60 - 143)
4-Bromofluorobenzene	87	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-085

GC/MS Volatiles

Lot-Sample #...: A4G150200-008 **Work Order #...:** GK57D1AA **Matrix.....:** SO
Date Sampled...: 07/14/04 11:30 **Date Received..:** 07/15/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/19/04
Prep Batch #...: 4202313
Dilution Factor: 1.03 **Initial Wgt/Vol:** 24.3 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 2.0 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	790	ug/kg	100
Benzene	ND	53	ug/kg	6.7
Bromodichloromethane	ND	110	ug/kg	13
Bromoform	ND	110	ug/kg	14
Bromomethane	ND	260	ug/kg	26
2-Butanone	ND	790	ug/kg	52
Carbon disulfide	ND	260	ug/kg	21
Carbon tetrachloride	ND	53	ug/kg	13
Chlorobenzene	ND	53	ug/kg	6.6
Chloroethane	ND	260	ug/kg	68
Chloroform	ND	53	ug/kg	13
Chloromethane	**24 J,B**	**260**	**ug/kg**	**5.5**
Cyclohexane	ND	1300	ug/kg	8.1
Dibromochloromethane	ND	53	ug/kg	7.3
1,2-Dibromo-3-chloro-propane	ND	260	ug/kg	63
1,2-Dibromoethane	ND	260	ug/kg	10
1,2-Dichlorobenzene	ND	110	ug/kg	18
1,3-Dichlorobenzene	ND	110	ug/kg	7.6
1,4-Dichlorobenzene	ND	110	ug/kg	8.3
Dichlorodifluoromethane	ND	110	ug/kg	5.7
1,1-Dichloroethane	ND	53	ug/kg	7.7
1,2-Dichloroethane	ND	53	ug/kg	9.8
1,1-Dichloroethene	ND	53	ug/kg	8.7
cis-1,2-Dichloroethene	ND	53	ug/kg	15
trans-1,2-Dichloroethene	ND	53	ug/kg	12
1,2-Dichloropropane	ND	53	ug/kg	7.8
cis-1,3-Dichloropropene	ND	53	ug/kg	5.8
trans-1,3-Dichloropropene	ND	53	ug/kg	5.7
Ethylbenzene	ND	53	ug/kg	7.2
2-Hexanone	ND	2600	ug/kg	25
Isopropylbenzene	ND	260	ug/kg	5.4
Methyl acetate	ND	1300	ug/kg	55
Methylene chloride	ND	260	ug/kg	100
Methylcyclohexane	ND	1300	ug/kg	6.0
4-Methyl-2-pentanone	ND	2600	ug/kg	12
Methyl tert-butyl ether	ND	260	ug/kg	11
Styrene	ND	53	ug/kg	29

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-085

GC/MS Volatiles

Lot-Sample #...: A4G150200-008 **Work Order #...:** GK57D1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	8.6
Tetrachloroethene	ND	53	ug/kg	9.5
Toluene	ND	110	ug/kg	9.6
1,2,4-Trichloro-benzene	ND	260	ug/kg	13
1,1,1-Trichloroethane	ND	53	ug/kg	10
1,1,2-Trichloroethane	ND	53	ug/kg	10
Trichloroethene	**31 J**	**53**	**ug/kg**	**13**
Trichlorofluoromethane	ND	110	ug/kg	8.7
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	260	ug/kg	11
Vinyl chloride	ND	110	ug/kg	17
Xylenes (total)	ND	160	ug/kg	16

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	73	(59 - 138)
1,2-Dichloroethane-d4	83	(61 - 130)
Toluene-d8	96	(60 - 143)
4-Bromofluorobenzene	87	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-086

GC/MS Volatiles

Lot-Sample #...: A4G150200-009 **Work Order #...:** GK57E1AA **Matrix.....:** SO
Date Sampled...: 07/14/04 11:40 **Date Received..:** 07/15/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/19/04
Prep Batch #...: 4202313
Dilution Factor: 1.13 **Initial Wgt/Vol:** 22.2 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 2.0 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	860	ug/kg	110
Benzene	ND	58	ug/kg	7.4
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	15
Bromomethane	ND	290	ug/kg	29
2-Butanone	ND	860	ug/kg	56
Carbon disulfide	ND	290	ug/kg	23
Carbon tetrachloride	ND	58	ug/kg	14
Chlorobenzene	ND	58	ug/kg	7.3
Chloroethane	ND	290	ug/kg	75
Chloroform	ND	58	ug/kg	14
Chloromethane	**24 J,B**	**290**	**ug/kg**	**6.0**
Cyclohexane	ND	1400	ug/kg	8.9
Dibromochloromethane	ND	58	ug/kg	8.0
1,2-Dibromo-3-chloro-propane	ND	290	ug/kg	69
1,2-Dibromoethane	ND	290	ug/kg	11
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.3
1,4-Dichlorobenzene	ND	120	ug/kg	9.1
Dichlorodifluoromethane	ND	120	ug/kg	6.2
1,1-Dichloroethane	ND	58	ug/kg	8.4
1,2-Dichloroethane	ND	58	ug/kg	11
1,1-Dichloroethene	ND	58	ug/kg	9.6
cis-1,2-Dichloroethene	ND	58	ug/kg	16
trans-1,2-Dichloroethene	ND	58	ug/kg	13
1,2-Dichloropropane	ND	58	ug/kg	8.5
cis-1,3-Dichloropropene	ND	58	ug/kg	6.3
trans-1,3-Dichloropropene	ND	58	ug/kg	6.2
Ethylbenzene	ND	58	ug/kg	7.8
2-Hexanone	ND	2900	ug/kg	28
Isopropylbenzene	ND	290	ug/kg	5.9
Methyl acetate	ND	1400	ug/kg	60
Methylene chloride	ND	290	ug/kg	110
Methylcyclohexane	ND	1400	ug/kg	6.6
4-Methyl-2-pentanone	ND	2900	ug/kg	13
Methyl tert-butyl ether	ND	290	ug/kg	12
Styrene	ND	58	ug/kg	32

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-086

GC/MS Volatiles

Lot-Sample #...: A4G150200-009 **Work Order #...:** GK57E1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.5
Tetrachloroethene	ND	58	ug/kg	10
Toluene	ND	120	ug/kg	10
1,2,4-Trichloro-benzene	ND	290	ug/kg	14
1,1,1-Trichloroethane	ND	58	ug/kg	11
1,1,2-Trichloroethane	ND	58	ug/kg	11
Trichloroethene	ND	58	ug/kg	14
Trichlorofluoromethane	ND	120	ug/kg	9.6
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	290	ug/kg	12
Vinyl chloride	ND	120	ug/kg	18
Xylenes (total)	ND	170	ug/kg	17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	72	(59 - 138)
1,2-Dichloroethane-d4	78	(61 - 130)
Toluene-d8	94	(60 - 143)
4-Bromofluorobenzene	83	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-087

GC/MS Volatiles

Lot-Sample #...: A4G150200-010 **Work Order #...:** GK57F1AA **Matrix.....:** SO
Date Sampled...: 07/14/04 11:50 **Date Received..:** 07/15/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/19/04
Prep Batch #...: 4202313
Dilution Factor: 1.05 **Initial Wgt/Vol:** 23.8 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 3.8 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	820	ug/kg	110
Benzene	ND	55	ug/kg	7.0
Bromodichloromethane	ND	110	ug/kg	13
Bromoform	ND	110	ug/kg	14
Bromomethane	ND	270	ug/kg	27
2-Butanone	ND	820	ug/kg	53
Carbon disulfide	ND	270	ug/kg	22
Carbon tetrachloride	ND	55	ug/kg	13
Chlorobenzene	ND	55	ug/kg	6.9
Chloroethane	ND	270	ug/kg	71
Chloroform	ND	55	ug/kg	13
Chloromethane	**22 J,B**	**270**	**ug/kg**	**5.7**
Cyclohexane	ND	1300	ug/kg	8.4
Dibromochloromethane	ND	55	ug/kg	7.5
1,2-Dibromo-3-chloro-propane	ND	270	ug/kg	65
1,2-Dibromoethane	ND	270	ug/kg	11
1,2-Dichlorobenzene	ND	110	ug/kg	19
1,3-Dichlorobenzene	ND	110	ug/kg	7.9
1,4-Dichlorobenzene	ND	110	ug/kg	8.6
Dichlorodifluoromethane	ND	110	ug/kg	5.9
1,1-Dichloroethane	ND	55	ug/kg	8.0
1,2-Dichloroethane	ND	55	ug/kg	10
1,1-Dichloroethene	ND	55	ug/kg	9.1
cis-1,2-Dichloroethene	ND	55	ug/kg	15
trans-1,2-Dichloroethene	ND	55	ug/kg	12
1,2-Dichloropropane	ND	55	ug/kg	8.1
cis-1,3-Dichloropropene	ND	55	ug/kg	6.0
trans-1,3-Dichloropropene	ND	55	ug/kg	5.9
Ethylbenzene	ND	55	ug/kg	7.4
2-Hexanone	ND	2700	ug/kg	26
Isopropylbenzene	ND	270	ug/kg	5.6
Methyl acetate	ND	1300	ug/kg	57
Methylene chloride	ND	270	ug/kg	110
Methylcyclohexane	ND	1300	ug/kg	6.2
4-Methyl-2-pentanone	ND	2700	ug/kg	12
Methyl tert-butyl ether	ND	270	ug/kg	11
Styrene	ND	55	ug/kg	31

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-087

GC/MS Volatiles

Lot-Sample #...: A4G150200-010 **Work Order #...:** GK57F1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	8.9
Tetrachloroethene	ND	55	ug/kg	9.8
Toluene	ND	110	ug/kg	9.9
1,2,4-Trichloro-benzene	ND	270	ug/kg	13
1,1,1-Trichloroethane	ND	55	ug/kg	10
1,1,2-Trichloroethane	ND	55	ug/kg	11
Trichloroethene	**20 J**	**55**	**ug/kg**	**13**
Trichlorofluoromethane	ND	110	ug/kg	9.1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	270	ug/kg	11
Vinyl chloride	ND	110	ug/kg	17
Xylenes (total)	ND	160	ug/kg	16

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	69	(59 - 138)
1,2-Dichloroethane-d4	79	(61 - 130)
Toluene-d8	94	(60 - 143)
4-Bromofluorobenzene	87	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-088

GC/MS Volatiles

Lot-Sample #...:	A4G150200-011	**Work Order #...:**	GK57H1AA	**Matrix.....:**	SO
Date Sampled...:	07/14/04 12:00	**Date Received..:**	07/15/04		
Prep Date.....:	07/16/04	**Analysis Date..:**	07/19/04		
Prep Batch #...:	4202313				
Dilution Factor:	1.02	**Initial Wgt/Vol:**	24.6 g	**Final Wgt/Vol..:**	25 mL
% Moisture.....:	3.3	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	790	ug/kg	100
Benzene	ND	53	ug/kg	6.8
Bromodichloromethane	ND	110	ug/kg	13
Bromoform	ND	110	ug/kg	14
Bromomethane	ND	260	ug/kg	26
2-Butanone	ND	790	ug/kg	52
Carbon disulfide	ND	260	ug/kg	21
Carbon tetrachloride	ND	53	ug/kg	13
Chlorobenzene	ND	53	ug/kg	6.6
Chloroethane	ND	260	ug/kg	69
Chloroform	ND	53	ug/kg	13
Chloromethane	**20 J,B**	**260**	**ug/kg**	**5.5**
Cyclohexane	ND	1300	ug/kg	8.1
Dibromochloromethane	ND	53	ug/kg	7.3
1,2-Dibromo-3-chloro-propane	ND	260	ug/kg	63
1,2-Dibromoethane	ND	260	ug/kg	10
1,2-Dichlorobenzene	ND	110	ug/kg	18
1,3-Dichlorobenzene	ND	110	ug/kg	7.6
1,4-Dichlorobenzene	ND	110	ug/kg	8.3
Dichlorodifluoromethane	ND	110	ug/kg	5.7
1,1-Dichloroethane	ND	53	ug/kg	7.7
1,2-Dichloroethane	ND	53	ug/kg	9.8
1,1-Dichloroethene	ND	53	ug/kg	8.8
cis-1,2-Dichloroethene	ND	53	ug/kg	15
trans-1,2-Dichloroethene	ND	53	ug/kg	12
1,2-Dichloropropane	ND	53	ug/kg	7.8
cis-1,3-Dichloropropene	ND	53	ug/kg	5.8
trans-1,3-Dichloropropene	ND	53	ug/kg	5.7
Ethylbenzene	ND	53	ug/kg	7.2
2-Hexanone	ND	2600	ug/kg	25
Isopropylbenzene	ND	260	ug/kg	5.4
Methyl acetate	ND	1300	ug/kg	55
Methylene chloride	ND	260	ug/kg	100
Methylcyclohexane	ND	1300	ug/kg	6.0
4-Methyl-2-pentanone	ND	2600	ug/kg	12
Methyl tert-butyl ether	ND	260	ug/kg	11
Styrene	ND	53	ug/kg	30

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-088

GC/MS Volatiles

Lot-Sample #...: A4G150200-011 **Work Order #...:** GK57H1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	8.7
Tetrachloroethene	ND	53	ug/kg	9.5
Toluene	ND	110	ug/kg	9.6
1,2,4-Trichloro-benzene	ND	260	ug/kg	13
1,1,1-Trichloroethane	ND	53	ug/kg	10
1,1,2-Trichloroethane	ND	53	ug/kg	10
Trichloroethene	ND	53	ug/kg	13
Trichlorofluoromethane	ND	110	ug/kg	8.8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	260	ug/kg	11
Vinyl chloride	ND	110	ug/kg	17
Xylenes (total)	ND	160	ug/kg	16

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	66	(59 - 138)
1,2-Dichloroethane-d4	73	(61 - 130)
Toluene-d8	85	(60 - 143)
4-Bromofluorobenzene	81	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-089

GC/MS Volatiles

Lot-Sample #...: A4G150200-012 **Work Order #...:** GK57J1AA **Matrix.....:** SO
Date Sampled...: 07/14/04 13:55 **Date Received..:** 07/15/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/20/04
Prep Batch #...: 4202313
Dilution Factor: 8.17 **Initial Wgt/Vol:** 20.4 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 5.0 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	6500	ug/kg	850
Benzene	ND	430	ug/kg	55
Bromodichloromethane	ND	860	ug/kg	100
Bromoform	ND	860	ug/kg	110
Bromomethane	ND	2200	ug/kg	220
2-Butanone	ND	6500	ug/kg	420
Carbon disulfide	ND	2200	ug/kg	170
Carbon tetrachloride	ND	430	ug/kg	100
Chlorobenzene	ND	430	ug/kg	54
Chloroethane	ND	2200	ug/kg	560
Chloroform	ND	430	ug/kg	100
Chloromethane	ND	2200	ug/kg	45
Cyclohexane	ND	10000	ug/kg	66
Dibromochloromethane	ND	430	ug/kg	59
1,2-Dibromo-3-chloro-propane	ND	2200	ug/kg	520
1,2-Dibromoethane	ND	2200	ug/kg	85
1,2-Dichlorobenzene	ND	860	ug/kg	150
1,3-Dichlorobenzene	ND	860	ug/kg	62
1,4-Dichlorobenzene	ND	860	ug/kg	68
Dichlorodifluoromethane	ND	860	ug/kg	46
1,1-Dichloroethane	ND	430	ug/kg	63
1,2-Dichloroethane	ND	430	ug/kg	80
1,1-Dichloroethene	ND	430	ug/kg	71
cis-1,2-Dichloroethene	ND	430	ug/kg	120
trans-1,2-Dichloroethene	ND	430	ug/kg	95
1,2-Dichloropropane	ND	430	ug/kg	64
cis-1,3-Dichloropropene	ND	430	ug/kg	47
trans-1,3-Dichloropropene	ND	430	ug/kg	46
Ethylbenzene	ND	430	ug/kg	59
2-Hexanone	ND	22000	ug/kg	210
Isopropylbenzene	ND	2200	ug/kg	44
Methyl acetate	ND	10000	ug/kg	450
Methylene chloride	ND	2200	ug/kg	850
Methylcyclohexane	**200 J**	**10000**	**ug/kg**	**49**
4-Methyl-2-pentanone	ND	22000	ug/kg	95
Methyl tert-butyl ether	ND	2200	ug/kg	86
Styrene	ND	430	ug/kg	240

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-089

GC/MS Volatiles

Lot-Sample #...: A4G150200-012 **Work Order #...:** GK57J1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	860	ug/kg	71
Tetrachloroethene	ND	430	ug/kg	77
Toluene	**160 J**	**860**	**ug/kg**	**78**
1,2,4-Trichloro-benzene	ND	2200	ug/kg	100
1,1,1-Trichloroethane	ND	430	ug/kg	82
1,1,2-Trichloroethane	ND	430	ug/kg	85
Trichloroethene	**12000**	**430**	**ug/kg**	**100**
Trichlorofluoromethane	ND	860	ug/kg	71
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2200	ug/kg	86
Vinyl chloride	ND	860	ug/kg	140
Xylenes (total)	**280 J**	**1300**	**ug/kg**	**130**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	72 DIL	(59 - 138)
1,2-Dichloroethane-d4	74 DIL	(61 - 130)
Toluene-d8	87 DIL	(60 - 143)
4-Bromofluorobenzene	79 DIL	(47 - 158)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-090

GC/MS Volatiles

Lot-Sample #...: A4G150200-013 **Work Order #...:** GK57K1AA **Matrix.....:** SO
Date Sampled...: 07/14/04 14:00 **Date Received..:** 07/15/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/19/04
Prep Batch #...: 4202313
Dilution Factor: 1.13 **Initial Wgt/Vol:** 22.2 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 2.5 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	870	ug/kg	110
Benzene	ND	58	ug/kg	7.4
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	15
Bromomethane	ND	290	ug/kg	29
2-Butanone	ND	870	ug/kg	57
Carbon disulfide	ND	290	ug/kg	23
Carbon tetrachloride	ND	58	ug/kg	14
Chlorobenzene	ND	58	ug/kg	7.3
Chloroethane	ND	290	ug/kg	75
Chloroform	ND	58	ug/kg	14
Chloromethane	**22 J,B**	**290**	**ug/kg**	**6.0**
Cyclohexane	ND	1400	ug/kg	8.9
Dibromochloromethane	ND	58	ug/kg	8.0
1,2-Dibromo-3-chloro-propane	ND	290	ug/kg	70
1,2-Dibromoethane	ND	290	ug/kg	11
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.3
1,4-Dichlorobenzene	ND	120	ug/kg	9.2
Dichlorodifluoromethane	ND	120	ug/kg	6.3
1,1-Dichloroethane	ND	58	ug/kg	8.5
1,2-Dichloroethane	ND	58	ug/kg	11
1,1-Dichloroethene	ND	58	ug/kg	9.6
cis-1,2-Dichloroethene	ND	58	ug/kg	16
trans-1,2-Dichloroethene	ND	58	ug/kg	13
1,2-Dichloropropane	ND	58	ug/kg	8.6
cis-1,3-Dichloropropene	ND	58	ug/kg	6.4
trans-1,3-Dichloropropene	ND	58	ug/kg	6.3
Ethylbenzene	ND	58	ug/kg	7.9
2-Hexanone	ND	2900	ug/kg	28
Isopropylbenzene	ND	290	ug/kg	5.9
Methyl acetate	ND	1400	ug/kg	60
Methylene chloride	ND	290	ug/kg	110
Methylcyclohexane	ND	1400	ug/kg	6.6
4-Methyl-2-pentanone	ND	2900	ug/kg	13
Methyl tert-butyl ether	ND	290	ug/kg	12
Styrene	ND	58	ug/kg	32

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-090

GC/MS Volatiles

Lot-Sample #...: A4G150200-013 **Work Order #...:** GK57K1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.5
Tetrachloroethene	ND	58	ug/kg	10
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	290	ug/kg	14
1,1,1-Trichloroethane	ND	58	ug/kg	11
1,1,2-Trichloroethane	ND	58	ug/kg	11
Trichloroethene	ND	58	ug/kg	14
Trichlorofluoromethane	ND	120	ug/kg	9.6
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	290	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	ND	170	ug/kg	17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	72	(59 - 138)
1,2-Dichloroethane-d4	81	(61 - 130)
Toluene-d8	94	(60 - 143)
4-Bromofluorobenzene	86	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-091

GC/MS Volatiles

Lot-Sample #...: A4G150200-014 **Work Order #...:** GK57M1AA **Matrix.....:** SO
Date Sampled...: 07/14/04 14:05 **Date Received..:** 07/15/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/19/04
Prep Batch #...: 4202313
Dilution Factor: 1.2 **Initial Wgt/Vol:** 20.9 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 2.4 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	920	ug/kg	120
Benzene	ND	61	ug/kg	7.9
Bromodichloromethane	ND	120	ug/kg	15
Bromoform	ND	120	ug/kg	16
Bromomethane	ND	310	ug/kg	31
2-Butanone	ND	920	ug/kg	60
Carbon disulfide	ND	310	ug/kg	25
Carbon tetrachloride	ND	61	ug/kg	15
Chlorobenzene	ND	61	ug/kg	7.7
Chloroethane	ND	310	ug/kg	80
Chloroform	ND	61	ug/kg	15
Chloromethane	ND	310	ug/kg	6.4
Cyclohexane	ND	1500	ug/kg	9.5
Dibromochloromethane	ND	61	ug/kg	8.5
1,2-Dibromo-3-chloro-propane	ND	310	ug/kg	74
1,2-Dibromoethane	ND	310	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	21
1,3-Dichlorobenzene	ND	120	ug/kg	8.8
1,4-Dichlorobenzene	ND	120	ug/kg	9.7
Dichlorodifluoromethane	ND	120	ug/kg	6.6
1,1-Dichloroethane	ND	61	ug/kg	9.0
1,2-Dichloroethane	ND	61	ug/kg	11
1,1-Dichloroethene	ND	61	ug/kg	10
cis-1,2-Dichloroethene	ND	61	ug/kg	17
trans-1,2-Dichloroethene	ND	61	ug/kg	14
1,2-Dichloropropane	ND	61	ug/kg	9.1
cis-1,3-Dichloropropene	ND	61	ug/kg	6.8
trans-1,3-Dichloropropene	ND	61	ug/kg	6.6
Ethylbenzene	ND	61	ug/kg	8.4
2-Hexanone	ND	3100	ug/kg	29
Isopropylbenzene	ND	310	ug/kg	6.3
Methyl acetate	ND	1500	ug/kg	64
Methylene chloride	ND	310	ug/kg	120
Methylcyclohexane	ND	1500	ug/kg	7.0
4-Methyl-2-pentanone	ND	3100	ug/kg	14
Methyl tert-butyl ether	ND	310	ug/kg	12
Styrene	ND	61	ug/kg	34

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-091

GC/MS Volatiles

Lot-Sample #...: A4G150200-014 **Work Order #...:** GK57M1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	10
Tetrachloroethene	ND	61	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	310	ug/kg	15
1,1,1-Trichloroethane	ND	61	ug/kg	12
1,1,2-Trichloroethane	ND	61	ug/kg	12
Trichloroethene	ND	61	ug/kg	15
Trichlorofluoromethane	ND	120	ug/kg	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	310	ug/kg	12
Vinyl chloride	ND	120	ug/kg	20
Xylenes (total)	ND	180	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	75	(59 - 138)
1,2-Dichloroethane-d4	81	(61 - 130)
Toluene-d8	93	(60 - 143)
4-Bromofluorobenzene	85	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-092

GC/MS Volatiles

Lot-Sample #...: A4G150200-015 **Work Order #...:** GK57N1AA **Matrix.....:** SO
Date Sampled...: 07/14/04 14:10 **Date Received..:** 07/15/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/19/04
Prep Batch #...: 4202313
Dilution Factor: 1.14 **Initial Wgt/Vol:** 21.9 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 3.0 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	880	ug/kg	120
Benzene	ND	59	ug/kg	7.5
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	15
Bromomethane	ND	290	ug/kg	29
2-Butanone	ND	880	ug/kg	58
Carbon disulfide	ND	290	ug/kg	24
Carbon tetrachloride	ND	59	ug/kg	14
Chlorobenzene	ND	59	ug/kg	7.4
Chloroethane	ND	290	ug/kg	76
Chloroform	ND	59	ug/kg	14
Chloromethane	ND	290	ug/kg	6.1
Cyclohexane	ND	1400	ug/kg	9.0
Dibromochloromethane	ND	59	ug/kg	8.1
1,2-Dibromo-3-chloro-propane	ND	290	ug/kg	71
1,2-Dibromoethane	ND	290	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.5
1,4-Dichlorobenzene	ND	120	ug/kg	9.3
Dichlorodifluoromethane	ND	120	ug/kg	6.3
1,1-Dichloroethane	ND	59	ug/kg	8.6
1,2-Dichloroethane	ND	59	ug/kg	11
1,1-Dichloroethene	ND	59	ug/kg	9.8
cis-1,2-Dichloroethene	ND	59	ug/kg	16
trans-1,2-Dichloroethene	ND	59	ug/kg	13
1,2-Dichloropropane	ND	59	ug/kg	8.7
cis-1,3-Dichloropropene	ND	59	ug/kg	6.5
trans-1,3-Dichloropropene	ND	59	ug/kg	6.3
Ethylbenzene	ND	59	ug/kg	8.0
2-Hexanone	ND	2900	ug/kg	28
Isopropylbenzene	ND	290	ug/kg	6.0
Methyl acetate	ND	1400	ug/kg	61
Methylene chloride	ND	290	ug/kg	120
Methylcyclohexane	ND	1400	ug/kg	6.7
4-Methyl-2-pentanone	ND	2900	ug/kg	13
Methyl tert-butyl ether	ND	290	ug/kg	12
Styrene	ND	59	ug/kg	33

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-092

GC/MS Volatiles

Lot-Sample #...: A4G150200-015 **Work Order #...:** GK57N1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.6
Tetrachloroethene	ND	59	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	290	ug/kg	14
1,1,1-Trichloroethane	ND	59	ug/kg	11
1,1,2-Trichloroethane	ND	59	ug/kg	12
Trichloroethene	ND	59	ug/kg	14
Trichlorofluoromethane	ND	120	ug/kg	9.8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	290	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	ND	180	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	82	(59 - 138)
1,2-Dichloroethane-d4	89	(61 - 130)
Toluene-d8	104	(60 - 143)
4-Bromofluorobenzene	93	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-093

GC/MS Volatiles

Lot-Sample #...:	A4G150200-016	**Work Order #...:**	GK57P1AA	**Matrix.....:**	SO
Date Sampled...:	07/14/04 14:15	**Date Received..:**	07/15/04		
Prep Date.....:	07/16/04	**Analysis Date..:**	07/19/04		
Prep Batch #...:	4202313				
Dilution Factor:	1.11	**Initial Wgt/Vol:**	22.6 g	**Final Wgt/Vol..:**	25 mL
% Moisture.....:	5.0	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	880	ug/kg	120
Benzene	ND	58	ug/kg	7.5
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	15
Bromomethane	ND	290	ug/kg	29
2-Butanone	ND	880	ug/kg	57
Carbon disulfide	ND	290	ug/kg	23
Carbon tetrachloride	ND	58	ug/kg	14
Chlorobenzene	ND	58	ug/kg	7.4
Chloroethane	ND	290	ug/kg	76
Chloroform	ND	58	ug/kg	14
Chloromethane	ND	290	ug/kg	6.1
Cyclohexane	ND	1400	ug/kg	9.0
Dibromochloromethane	ND	58	ug/kg	8.1
1,2-Dibromo-3-chloro-propane	ND	290	ug/kg	70
1,2-Dibromoethane	ND	290	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.4
1,4-Dichlorobenzene	ND	120	ug/kg	9.2
Dichlorodifluoromethane	ND	120	ug/kg	6.3
1,1-Dichloroethane	ND	58	ug/kg	8.5
1,2-Dichloroethane	ND	58	ug/kg	11
1,1-Dichloroethene	ND	58	ug/kg	9.7
cis-1,2-Dichloroethene	ND	58	ug/kg	16
trans-1,2-Dichloroethene	ND	58	ug/kg	13
1,2-Dichloropropane	ND	58	ug/kg	8.6
cis-1,3-Dichloropropene	ND	58	ug/kg	6.4
trans-1,3-Dichloropropene	ND	58	ug/kg	6.3
Ethylbenzene	ND	58	ug/kg	7.9
2-Hexanone	ND	2900	ug/kg	28
Isopropylbenzene	ND	290	ug/kg	6.0
Methyl acetate	ND	1400	ug/kg	61
Methylene chloride	ND	290	ug/kg	120
Methylcyclohexane	ND	1400	ug/kg	6.7
4-Methyl-2-pentanone	ND	2900	ug/kg	13
Methyl tert-butyl ether	ND	290	ug/kg	12
Styrene	ND	58	ug/kg	33

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-093

GC/MS Volatiles

Lot-Sample #...: A4G150200-016 **Work Order #...:** GK57P1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.6
Tetrachloroethene	ND	58	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	290	ug/kg	14
1,1,1-Trichloroethane	ND	58	ug/kg	11
1,1,2-Trichloroethane	ND	58	ug/kg	12
Trichloroethene	**40 J**	**58**	**ug/kg**	**14**
Trichlorofluoromethane	ND	120	ug/kg	9.7
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	290	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	ND	180	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	74	(59 - 138)
1,2-Dichloroethane-d4	80	(61 - 130)
Toluene-d8	93	(60 - 143)
4-Bromofluorobenzene	85	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-094

GC/MS Volatiles

Lot-Sample #...:	A4G150200-017	Work Order #...:	GK57Q1AA	Matrix.....:	SO
Date Sampled...:	07/14/04 14:20	Date Received..:	07/15/04		
Prep Date.....:	07/16/04	Analysis Date..:	07/20/04		
Prep Batch #...:	4202313				
Dilution Factor:	1.2	Initial Wgt/Vol:	20.9 g	Final Wgt/Vol..:	25 mL
% Moisture.....:	1.9	Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	920	ug/kg	120
Benzene	ND	61	ug/kg	7.8
Bromodichloromethane	ND	120	ug/kg	15
Bromoform	ND	120	ug/kg	16
Bromomethane	ND	310	ug/kg	31
2-Butanone	ND	920	ug/kg	60
Carbon disulfide	ND	310	ug/kg	24
Carbon tetrachloride	ND	61	ug/kg	15
Chlorobenzene	ND	61	ug/kg	7.7
Chloroethane	ND	310	ug/kg	80
Chloroform	ND	61	ug/kg	15
Chloromethane	ND	310	ug/kg	6.4
Cyclohexane	ND	1500	ug/kg	9.4
Dibromochloromethane	ND	61	ug/kg	8.4
1,2-Dibromo-3-chloro-propane	ND	310	ug/kg	73
1,2-Dibromoethane	ND	310	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	21
1,3-Dichlorobenzene	ND	120	ug/kg	8.8
1,4-Dichlorobenzene	ND	120	ug/kg	9.7
Dichlorodifluoromethane	ND	120	ug/kg	6.6
1,1-Dichloroethane	ND	61	ug/kg	8.9
1,2-Dichloroethane	ND	61	ug/kg	11
1,1-Dichloroethene	ND	61	ug/kg	10
cis-1,2-Dichloroethene	ND	61	ug/kg	17
trans-1,2-Dichloroethene	ND	61	ug/kg	13
1,2-Dichloropropane	ND	61	ug/kg	9.1
cis-1,3-Dichloropropene	ND	61	ug/kg	6.7
trans-1,3-Dichloropropene	ND	61	ug/kg	6.6
Ethylbenzene	ND	61	ug/kg	8.3
2-Hexanone	ND	3100	ug/kg	29
Isopropylbenzene	ND	310	ug/kg	6.2
Methyl acetate	ND	1500	ug/kg	64
Methylene chloride	ND	310	ug/kg	120
Methylcyclohexane	ND	1500	ug/kg	7.0
4-Methyl-2-pentanone	ND	3100	ug/kg	13
Methyl tert-butyl ether	ND	310	ug/kg	12
Styrene	ND	61	ug/kg	34

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-094

GC/MS Volatiles

Lot-Sample #...: A4G150200-017 Work Order #...: GK57Q1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	10
Tetrachloroethene	ND	61	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	310	ug/kg	15
1,1,1-Trichloroethane	ND	61	ug/kg	12
1,1,2-Trichloroethane	ND	61	ug/kg	12
Trichloroethene	**22 J**	**61**	**ug/kg**	**15**
Trichlorofluoromethane	ND	120	ug/kg	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	310	ug/kg	12
Vinyl chloride	ND	120	ug/kg	20
Xylenes (total)	ND	180	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	68	(59 - 138)
1,2-Dichloroethane-d4	81	(61 - 130)
Toluene-d8	94	(60 - 143)
4-Bromofluorobenzene	85	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-095

GC/MS Volatiles

Lot-Sample #...:	A4G150200-018	**Work Order #...:**	GK57R1AA	**Matrix.....:**	SO
Date Sampled...:	07/14/04 14:30	**Date Received..:**	07/15/04		
Prep Date.....:	07/16/04	**Analysis Date..:**	07/20/04		
Prep Batch #...:	4202313				
Dilution Factor:	1.05	**Initial Wgt/Vol:**	23.7 g	**Final Wgt/Vol..:**	25 mL
% Moisture.....:	3.8	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	820	ug/kg	110
Benzene	ND	55	ug/kg	7.0
Bromodichloromethane	ND	110	ug/kg	13
Bromoform	ND	110	ug/kg	14
Bromomethane	ND	270	ug/kg	27
2-Butanone	ND	820	ug/kg	53
Carbon disulfide	ND	270	ug/kg	22
Carbon tetrachloride	ND	55	ug/kg	13
Chlorobenzene	ND	55	ug/kg	6.9
Chloroethane	ND	270	ug/kg	71
Chloroform	ND	55	ug/kg	13
Chloromethane	**19 J,B**	**270**	**ug/kg**	**5.7**
Cyclohexane	ND	1300	ug/kg	8.4
Dibromochloromethane	ND	55	ug/kg	7.5
1,2-Dibromo-3-chloro-propane	ND	270	ug/kg	65
1,2-Dibromoethane	ND	270	ug/kg	11
1,2-Dichlorobenzene	ND	110	ug/kg	19
1,3-Dichlorobenzene	ND	110	ug/kg	7.9
1,4-Dichlorobenzene	ND	110	ug/kg	8.6
Dichlorodifluoromethane	ND	110	ug/kg	5.9
1,1-Dichloroethane	ND	55	ug/kg	8.0
1,2-Dichloroethane	ND	55	ug/kg	10
1,1-Dichloroethene	ND	55	ug/kg	9.1
cis-1,2-Dichloroethene	ND	55	ug/kg	15
trans-1,2-Dichloroethene	ND	55	ug/kg	12
1,2-Dichloropropane	ND	55	ug/kg	8.1
cis-1,3-Dichloropropene	ND	55	ug/kg	6.0
trans-1,3-Dichloropropene	ND	55	ug/kg	5.9
Ethylbenzene	ND	55	ug/kg	7.4
2-Hexanone	ND	2700	ug/kg	26
Isopropylbenzene	ND	270	ug/kg	5.6
Methyl acetate	ND	1300	ug/kg	57
Methylene chloride	ND	270	ug/kg	110
Methylcyclohexane	ND	1300	ug/kg	6.2
4-Methyl-2-pentanone	ND	2700	ug/kg	12
Methyl tert-butyl ether	ND	270	ug/kg	11
Styrene	ND	55	ug/kg	31

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-095

GC/MS Volatiles

Lot-Sample #...: A4G150200-018 **Work Order #...:** GK57R1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	8.9
Tetrachloroethene	ND	55	ug/kg	9.8
Toluene	ND	110	ug/kg	9.9
1,2,4-Trichloro-benzene	ND	270	ug/kg	13
1,1,1-Trichloroethane	ND	55	ug/kg	10
1,1,2-Trichloroethane	ND	55	ug/kg	11
Trichloroethene	**22 J**	**55**	**ug/kg**	**13**
Trichlorofluoromethane	ND	110	ug/kg	9.1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	270	ug/kg	11
Vinyl chloride	ND	110	ug/kg	17
Xylenes (total)	ND	160	ug/kg	16

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	64	(59 - 138)
1,2-Dichloroethane-d4	79	(61 - 130)
Toluene-d8	95	(60 - 143)
4-Bromofluorobenzene	86	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-096

GC/MS Volatiles

Lot-Sample #...: A4G150200-019	Work Order #...: GK57T1AA	Matrix.....: SO	
Date Sampled...: 07/14/04 14:40	Date Received..: 07/15/04		
Prep Date.....: 07/16/04	Analysis Date..: 07/20/04		
Prep Batch #...: 4202313			
Dilution Factor: 1.11	Initial Wgt/Vol: 22.6 g	Final Wgt/Vol..: 25 mL	
% Moisture.....: 3.2	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	860	ug/kg	110
Benzene	ND	57	ug/kg	7.3
Bromodichloromethane	ND	110	ug/kg	14
Bromoform	ND	110	ug/kg	15
Bromomethane	ND	290	ug/kg	29
2-Butanone	ND	860	ug/kg	56
Carbon disulfide	ND	290	ug/kg	23
Carbon tetrachloride	ND	57	ug/kg	14
Chlorobenzene	ND	57	ug/kg	7.2
Chloroethane	ND	290	ug/kg	75
Chloroform	ND	57	ug/kg	14
Chloromethane	**18 J,B**	**290**	**ug/kg**	**6.0**
Cyclohexane	ND	1400	ug/kg	8.8
Dibromochloromethane	ND	57	ug/kg	7.9
1,2-Dibromo-3-chloro-propane	ND	290	ug/kg	69
1,2-Dibromoethane	ND	290	ug/kg	11
1,2-Dichlorobenzene	ND	110	ug/kg	19
1,3-Dichlorobenzene	ND	110	ug/kg	8.3
1,4-Dichlorobenzene	ND	110	ug/kg	9.1
Dichlorodifluoromethane	ND	110	ug/kg	6.2
1,1-Dichloroethane	ND	57	ug/kg	8.4
1,2-Dichloroethane	ND	57	ug/kg	11
1,1-Dichloroethene	ND	57	ug/kg	9.5
cis-1,2-Dichloroethene	ND	57	ug/kg	16
trans-1,2-Dichloroethene	ND	57	ug/kg	13
1,2-Dichloropropane	ND	57	ug/kg	8.5
cis-1,3-Dichloropropene	ND	57	ug/kg	6.3
trans-1,3-Dichloropropene	ND	57	ug/kg	6.2
Ethylbenzene	ND	57	ug/kg	7.8
2-Hexanone	ND	2900	ug/kg	28
Isopropylbenzene	ND	290	ug/kg	5.8
Methyl acetate	ND	1400	ug/kg	60
Methylene chloride	ND	290	ug/kg	110
Methylcyclohexane	ND	1400	ug/kg	6.5
4-Methyl-2-pentanone	ND	2900	ug/kg	13
Methyl tert-butyl ether	ND	290	ug/kg	11
Styrene	ND	57	ug/kg	32

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-096

GC/MS Volatiles

Lot-Sample #...: A4G150200-019 **Work Order #...:** GK57T1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	9.4
Tetrachloroethene	ND	57	ug/kg	10
Toluene	ND	110	ug/kg	10
1,2,4-Trichloro-benzene	ND	290	ug/kg	14
1,1,1-Trichloroethane	ND	57	ug/kg	11
1,1,2-Trichloroethane	ND	57	ug/kg	11
Trichloroethene	**87**	**57**	**ug/kg**	**14**
Trichlorofluoromethane	ND	110	ug/kg	9.5
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	290	ug/kg	11
Vinyl chloride	ND	110	ug/kg	18
Xylenes (total)	ND	170	ug/kg	17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	64	(59 - 138)
1,2-Dichloroethane-d4	79	(61 - 130)
Toluene-d8	92	(60 - 143)
4-Bromofluorobenzene	84	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-097

GC/MS Volatiles

Lot-Sample #...:	A4G150200-020	**Work Order #...:**	GK57V1AA	**Matrix.....:**	SO
Date Sampled...:	07/14/04 14:45	**Date Received..:**	07/15/04		
Prep Date.....:	07/16/04	**Analysis Date..:**	07/20/04		
Prep Batch #...:	4202313				
Dilution Factor:	1.08	**Initial Wgt/Vol:**	23.2 g	**Final Wgt/Vol..:**	25 mL
% Moisture.....:	1.9	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	830	ug/kg	110
Benzene	ND	55	ug/kg	7.0
Bromodichloromethane	ND	110	ug/kg	13
Bromoform	ND	110	ug/kg	14
Bromomethane	ND	280	ug/kg	28
2-Butanone	ND	830	ug/kg	54
Carbon disulfide	ND	280	ug/kg	22
Carbon tetrachloride	ND	55	ug/kg	13
Chlorobenzene	ND	55	ug/kg	6.9
Chloroethane	ND	280	ug/kg	72
Chloroform	ND	55	ug/kg	13
Chloromethane	ND	280	ug/kg	5.7
Cyclohexane	ND	1300	ug/kg	8.5
Dibromochloromethane	ND	55	ug/kg	7.6
1,2-Dibromo-3-chloro-propane	ND	280	ug/kg	66
1,2-Dibromoethane	ND	280	ug/kg	11
1,2-Dichlorobenzene	ND	110	ug/kg	19
1,3-Dichlorobenzene	ND	110	ug/kg	7.9
1,4-Dichlorobenzene	ND	110	ug/kg	8.7
Dichlorodifluoromethane	ND	110	ug/kg	5.9
1,1-Dichloroethane	ND	55	ug/kg	8.0
1,2-Dichloroethane	ND	55	ug/kg	10
1,1-Dichloroethene	ND	55	ug/kg	9.1
cis-1,2-Dichloroethene	ND	55	ug/kg	15
trans-1,2-Dichloroethene	ND	55	ug/kg	12
1,2-Dichloropropane	ND	55	ug/kg	8.1
cis-1,3-Dichloropropene	ND	55	ug/kg	6.1
trans-1,3-Dichloropropene	ND	55	ug/kg	5.9
Ethylbenzene	ND	55	ug/kg	7.5
2-Hexanone	ND	2800	ug/kg	26
Isopropylbenzene	ND	280	ug/kg	5.6
Methyl acetate	ND	1300	ug/kg	57
Methylene chloride	ND	280	ug/kg	110
Methylcyclohexane	ND	1300	ug/kg	6.3
4-Methyl-2-pentanone	ND	2800	ug/kg	12
Methyl tert-butyl ether	ND	280	ug/kg	11
Styrene	ND	55	ug/kg	31

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-097

GC/MS Volatiles

Lot-Sample #...: A4G150200-020 **Work Order #...:** GK57V1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	9.0
Tetrachloroethene	ND	55	ug/kg	9.9
Toluene	ND	110	ug/kg	10
1,2,4-Trichloro-benzene	ND	280	ug/kg	13
1,1,1-Trichloroethane	ND	55	ug/kg	10
1,1,2-Trichloroethane	ND	55	ug/kg	11
Trichloroethene	**63**	**55**	**ug/kg**	**13**
Trichlorofluoromethane	ND	110	ug/kg	9.1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	280	ug/kg	11
Vinyl chloride	ND	110	ug/kg	18
Xylenes (total)	ND	170	ug/kg	17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	66	(59 - 138)
1,2-Dichloroethane-d4	82	(61 - 130)
Toluene-d8	93	(60 - 143)
4-Bromofluorobenzene	86	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-098

GC/MS Volatiles

Lot-Sample #...:	A4G150200-021	**Work Order #...:**	GK57W1AA	**Matrix.....:**	SO
Date Sampled...:	07/14/04 14:55	**Date Received..:**	07/15/04		
Prep Date.....:	07/16/04	**Analysis Date..:**	07/21/04		
Prep Batch #...:	4203414				
Dilution Factor:	1.15	**Initial Wgt/Vol:**	21.7 g	**Final Wgt/Vol..:**	25 mL
% Moisture.....:	3.0	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	890	ug/kg	120
Benzene	ND	59	ug/kg	7.6
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	15
Bromomethane	ND	300	ug/kg	30
2-Butanone	ND	890	ug/kg	58
Carbon disulfide	ND	300	ug/kg	24
Carbon tetrachloride	ND	59	ug/kg	14
Chlorobenzene	ND	59	ug/kg	7.5
Chloroethane	ND	300	ug/kg	77
Chloroform	ND	59	ug/kg	14
Chloromethane	ND	300	ug/kg	6.2
Cyclohexane	ND	1400	ug/kg	9.1
Dibromochloromethane	ND	59	ug/kg	8.2
1,2-Dibromo-3-chloro-propane	ND	300	ug/kg	71
1,2-Dibromoethane	ND	300	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.5
1,4-Dichlorobenzene	ND	120	ug/kg	9.4
Dichlorodifluoromethane	ND	120	ug/kg	6.4
1,1-Dichloroethane	ND	59	ug/kg	8.7
1,2-Dichloroethane	ND	59	ug/kg	11
1,1-Dichloroethene	ND	59	ug/kg	9.8
cis-1,2-Dichloroethene	ND	59	ug/kg	17
trans-1,2-Dichloroethene	ND	59	ug/kg	13
1,2-Dichloropropane	ND	59	ug/kg	8.8
cis-1,3-Dichloropropene	ND	59	ug/kg	6.5
trans-1,3-Dichloropropene	ND	59	ug/kg	6.4
Ethylbenzene	ND	59	ug/kg	8.1
2-Hexanone	ND	3000	ug/kg	28
Isopropylbenzene	ND	300	ug/kg	6.0
Methyl acetate	ND	1400	ug/kg	62
Methylene chloride	ND	300	ug/kg	120
Methylcyclohexane	ND	1400	ug/kg	6.8
4-Methyl-2-pentanone	ND	3000	ug/kg	13
Methyl tert-butyl ether	ND	300	ug/kg	12
Styrene	ND	59	ug/kg	33

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-098

GC/MS Volatiles

Lot-Sample #...: A4G150200-021 Work Order #...: GK57W1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.7
Tetrachloroethene	ND	59	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	300	ug/kg	14
1,1,1-Trichloroethane	ND	59	ug/kg	11
1,1,2-Trichloroethane	ND	59	ug/kg	12
Trichloroethene	**27 J**	**59**	**ug/kg**	**14**
Trichlorofluoromethane	ND	120	ug/kg	9.8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	300	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	ND	180	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	74	(59 - 138)
1,2-Dichloroethane-d4	84	(61 - 130)
Toluene-d8	96	(60 - 143)
4-Bromofluorobenzene	86	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-099

GC/MS Volatiles

Lot-Sample #...:	A4G150200-022	**Work Order #...:**	GK57X1AA	**Matrix.....:**	SO
Date Sampled...:	07/14/04 15:05	**Date Received..:**	07/15/04		
Prep Date.....:	07/16/04	**Analysis Date..:**	07/21/04		
Prep Batch #...:	4203414				
Dilution Factor:	1.08	**Initial Wgt/Vol:**	23.1 g	**Final Wgt/Vol..:**	25 mL
% Moisture.....:	2.5	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	830	ug/kg	110
Benzene	ND	55	ug/kg	7.1
Bromodichloromethane	ND	110	ug/kg	13
Bromoform	ND	110	ug/kg	14
Bromomethane	ND	280	ug/kg	28
2-Butanone	ND	830	ug/kg	54
Carbon disulfide	ND	280	ug/kg	22
Carbon tetrachloride	ND	55	ug/kg	13
Chlorobenzene	ND	55	ug/kg	7.0
Chloroethane	ND	280	ug/kg	72
Chloroform	ND	55	ug/kg	13
Chloromethane	ND	280	ug/kg	5.8
Cyclohexane	ND	1300	ug/kg	8.5
Dibromochloromethane	ND	55	ug/kg	7.6
1,2-Dibromo-3-chloro-propane	ND	280	ug/kg	66
1,2-Dibromoethane	ND	280	ug/kg	11
1,2-Dichlorobenzene	ND	110	ug/kg	19
1,3-Dichlorobenzene	ND	110	ug/kg	8.0
1,4-Dichlorobenzene	ND	110	ug/kg	8.7
Dichlorodifluoromethane	ND	110	ug/kg	6.0
1,1-Dichloroethane	ND	55	ug/kg	8.1
1,2-Dichloroethane	ND	55	ug/kg	10
1,1-Dichloroethene	ND	55	ug/kg	9.2
cis-1,2-Dichloroethene	ND	55	ug/kg	16
trans-1,2-Dichloroethene	ND	55	ug/kg	12
1,2-Dichloropropane	ND	55	ug/kg	8.2
cis-1,3-Dichloropropene	ND	55	ug/kg	6.1
trans-1,3-Dichloropropene	ND	55	ug/kg	6.0
Ethylbenzene	ND	55	ug/kg	7.5
2-Hexanone	ND	2800	ug/kg	27
Isopropylbenzene	ND	280	ug/kg	5.6
Methyl acetate	ND	1300	ug/kg	58
Methylene chloride	ND	280	ug/kg	110
Methylcyclohexane	ND	1300	ug/kg	6.3
4-Methyl-2-pentanone	ND	2800	ug/kg	12
Methyl tert-butyl ether	ND	280	ug/kg	11
Styrene	ND	55	ug/kg	31

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-099

GC/MS Volatiles

Lot-Sample #...: A4G150200-022 Work Order #...: GK57X1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	9.1
Tetrachloroethene	ND	55	ug/kg	10
Toluene	ND	110	ug/kg	10
1,2,4-Trichloro-benzene	ND	280	ug/kg	13
1,1,1-Trichloroethane	ND	55	ug/kg	11
1,1,2-Trichloroethane	ND	55	ug/kg	11
Trichloroethene	**46 J**	**55**	**ug/kg**	**13**
Trichlorofluoromethane	ND	110	ug/kg	9.2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	280	ug/kg	11
Vinyl chloride	ND	110	ug/kg	18
Xylenes (total)	ND	170	ug/kg	17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	68	(59 - 138)
1,2-Dichloroethane-d4	81	(61 - 130)
Toluene-d8	93	(60 - 143)
4-Bromofluorobenzene	86	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G150200 **Work Order #...:** GLE581AA **Matrix.....:** SOLID
MB Lot-Sample #: A4G200000-313

Prep Date.....: 07/16/04 **Final Wgt/Vol..:** 25 mL
Analysis Date..: 07/19/04 **Prep Batch #...:** 4202313
Dilution Factor: 1 **Initial Wgt/Vol:** 25 g

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	750	ug/kg	SW846 8260B
Benzene	ND	50	ug/kg	SW846 8260B
Bromodichloromethane	ND	100	ug/kg	SW846 8260B
Bromoform	ND	100	ug/kg	SW846 8260B
Bromomethane	ND	250	ug/kg	SW846 8260B
2-Butanone	ND	750	ug/kg	SW846 8260B
Carbon disulfide	ND	250	ug/kg	SW846 8260B
Carbon tetrachloride	ND	50	ug/kg	SW846 8260B
Chlorobenzene	ND	50	ug/kg	SW846 8260B
Chloroethane	ND	250	ug/kg	SW846 8260B
Chloroform	ND	50	ug/kg	SW846 8260B
Chloromethane	**24 J**	**250**	**ug/kg**	**SW846 8260B**
Cyclohexane	ND	1200	ug/kg	SW846 8260B
Dibromochloromethane	ND	50	ug/kg	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	250	ug/kg	SW846 8260B
1,2-Dibromoethane	ND	250	ug/kg	SW846 8260B
1,2-Dichlorobenzene	ND	100	ug/kg	SW846 8260B
1,3-Dichlorobenzene	ND	100	ug/kg	SW846 8260B
1,4-Dichlorobenzene	ND	100	ug/kg	SW846 8260B
Dichlorodifluoromethane	ND	100	ug/kg	SW846 8260B
1,1-Dichloroethane	ND	50	ug/kg	SW846 8260B
1,2-Dichloroethane	ND	50	ug/kg	SW846 8260B
1,1-Dichloroethene	ND	50	ug/kg	SW846 8260B
cis-1,2-Dichloroethene	ND	50	ug/kg	SW846 8260B
trans-1,2-Dichloroethene	ND	50	ug/kg	SW846 8260B
1,2-Dichloropropane	ND	50	ug/kg	SW846 8260B
cis-1,3-Dichloropropene	ND	50	ug/kg	SW846 8260B
trans-1,3-Dichloropropene	ND	50	ug/kg	SW846 8260B
Ethylbenzene	ND	50	ug/kg	SW846 8260B
2-Hexanone	ND	2500	ug/kg	SW846 8260B
Isopropylbenzene	ND	250	ug/kg	SW846 8260B
Methyl acetate	ND	1200	ug/kg	SW846 8260B
Methylene chloride	ND	250	ug/kg	SW846 8260B
Methylcyclohexane	ND	1200	ug/kg	SW846 8260B
4-Methyl-2-pentanone	ND	2500	ug/kg	SW846 8260B
Methyl tert-butyl ether	ND	250	ug/kg	SW846 8260B
Styrene	ND	50	ug/kg	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	100	ug/kg	SW846 8260B
Tetrachloroethene	ND	50	ug/kg	SW846 8260B
Toluene	ND	100	ug/kg	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G150200 **Work Order #...:** GLE581AA **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	250	ug/kg	SW846 8260B
1,1,1-Trichloroethane	ND	50	ug/kg	SW846 8260B
1,1,2-Trichloroethane	ND	50	ug/kg	SW846 8260B
Trichloroethene	ND	50	ug/kg	SW846 8260B
Trichlorofluoromethane	ND	100	ug/kg	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	250	ug/kg	SW846 8260B
Vinyl chloride	ND	100	ug/kg	SW846 8260B
Xylenes (total)	ND	150	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	82	(59 - 138)
1,2-Dichloroethane-d4	84	(61 - 130)
Toluene-d8	96	(60 - 143)
4-Bromofluorobenzene	89	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G150200 **Work Order #...:** GLJF51AA **Matrix.....:** SOLID
MB Lot-Sample #: A4G210000-414

Prep Date.....: 07/16/04 **Final Wgt/Vol..:** 25 mL
Analysis Date..: 07/21/04 **Prep Batch #...:** 4203414
Dilution Factor: 1 **Initial Wgt/Vol:** 25 g

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	750	ug/kg	SW846 8260B
Benzene	ND	50	ug/kg	SW846 8260B
Bromodichloromethane	ND	100	ug/kg	SW846 8260B
Bromoform	ND	100	ug/kg	SW846 8260B
Bromomethane	ND	250	ug/kg	SW846 8260B
2-Butanone	ND	750	ug/kg	SW846 8260B
Carbon disulfide	ND	250	ug/kg	SW846 8260B
Carbon tetrachloride	ND	50	ug/kg	SW846 8260B
Chlorobenzene	ND	50	ug/kg	SW846 8260B
Chloroethane	ND	250	ug/kg	SW846 8260B
Chloroform	ND	50	ug/kg	SW846 8260B
Chloromethane	**15 J**	**250**	**ug/kg**	**SW846 8260B**
Cyclohexane	ND	1200	ug/kg	SW846 8260B
Dibromochloromethane	ND	50	ug/kg	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	250	ug/kg	SW846 8260B
1,2-Dibromoethane	ND	250	ug/kg	SW846 8260B
1,2-Dichlorobenzene	ND	100	ug/kg	SW846 8260B
1,3-Dichlorobenzene	ND	100	ug/kg	SW846 8260B
1,4-Dichlorobenzene	ND	100	ug/kg	SW846 8260B
Dichlorodifluoromethane	ND	100	ug/kg	SW846 8260B
1,1-Dichloroethane	ND	50	ug/kg	SW846 8260B
1,2-Dichloroethane	ND	50	ug/kg	SW846 8260B
1,1-Dichloroethene	ND	50	ug/kg	SW846 8260B
cis-1,2-Dichloroethene	ND	50	ug/kg	SW846 8260B
trans-1,2-Dichloroethene	ND	50	ug/kg	SW846 8260B
1,2-Dichloropropane	ND	50	ug/kg	SW846 8260B
cis-1,3-Dichloropropene	ND	50	ug/kg	SW846 8260B
trans-1,3-Dichloropropene	ND	50	ug/kg	SW846 8260B
Ethylbenzene	ND	50	ug/kg	SW846 8260B
2-Hexanone	ND	2500	ug/kg	SW846 8260B
Isopropylbenzene	ND	250	ug/kg	SW846 8260B
Methyl acetate	ND	1200	ug/kg	SW846 8260B
Methylene chloride	ND	250	ug/kg	SW846 8260B
Methylcyclohexane	ND	1200	ug/kg	SW846 8260B
4-Methyl-2-pentanone	ND	2500	ug/kg	SW846 8260B
Methyl tert-butyl ether	ND	250	ug/kg	SW846 8260B
Styrene	ND	50	ug/kg	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	100	ug/kg	SW846 8260B
Tetrachloroethene	ND	50	ug/kg	SW846 8260B
Toluene	ND	100	ug/kg	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G150200 **Work Order #...:** GLJF51AA **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	**13 J**	**250**	**ug/kg**	**SW846 8260B**
1,1,1-Trichloroethane	ND	50	ug/kg	SW846 8260B
1,1,2-Trichloroethane	ND	50	ug/kg	SW846 8260B
Trichloroethene	ND	50	ug/kg	SW846 8260B
Trichlorofluoromethane	ND	100	ug/kg	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	250	ug/kg	SW846 8260B
Vinyl chloride	ND	100	ug/kg	SW846 8260B
Xylenes (total)	ND	150	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	82	(59 - 138)
1,2-Dichloroethane-d4	87	(61 - 130)
Toluene-d8	99	(60 - 143)
4-Bromofluorobenzene	91	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G150200 **Work Order #...:** GLE581AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A4G200000-313 GLE581AD-LCSD
Prep Date.....: 07/16/04 **Analysis Date..:** 07/19/04
Prep Batch #...: 4202313
Dilution Factor: 1 **Final Wgt/Vol..:** 25 mL
Initial Wgt/Vol: 25 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**200**	**190**	**ug/kg**	**95**		**SW846 8260B**
	200	**190**	**ug/kg**	**95**	**0.010**	**SW846 8260B**
Chlorobenzene	**200**	**200**	**ug/kg**	**99**		**SW846 8260B**
	200	**200**	**ug/kg**	**98**	**1.0**	**SW846 8260B**
1,1-Dichloroethene	**200**	**200**	**ug/kg**	**100**		**SW846 8260B**
	200	**200**	**ug/kg**	**100**	**0.080**	**SW846 8260B**
Toluene	**200**	**200**	**ug/kg**	**100**		**SW846 8260B**
	200	**200**	**ug/kg**	**101**	**0.96**	**SW846 8260B**
Trichloroethene	**200**	**190**	**ug/kg**	**93**		**SW846 8260B**
	200	**190**	**ug/kg**	**97**	**3.6**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(59 - 138)
	85	(59 - 138)
1,2-Dichloroethane-d4	89	(61 - 130)
	85	(61 - 130)
Toluene-d8	99	(60 - 143)
	94	(60 - 143)
4-Bromofluorobenzene	95	(47 - 158)
	87	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G150200 **Work Order #...:** GLE581AC-LCS **Matrix.....:** SOLID
GLE581AD-LCSD
LCS Lot-Sample#: A4G200000-313
Prep Date.....: 07/16/04 **Analysis Date..:** 07/19/04
Prep Batch #...: 4202313
Dilution Factor: 1 **Final Wgt/Vol..:** 25 mL
Initial Wgt/Vol: 25 g

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**95**	**(75 - 129)**			**SW846 8260B**
	95	**(75 - 129)**	**0.010**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**99**	**(75 - 127)**			**SW846 8260B**
	98	**(75 - 127)**	**1.0**	**(0-22)**	**SW846 8260B**
1,1-Dichloroethene	**100**	**(55 - 142)**			**SW846 8260B**
	100	**(55 - 142)**	**0.080**	**(0-27)**	**SW846 8260B**
Toluene	**100**	**(71 - 130)**			**SW846 8260B**
	101	**(71 - 130)**	**0.96**	**(0-24)**	**SW846 8260B**
Trichloroethene	**93**	**(70 - 131)**			**SW846 8260B**
	97	**(70 - 131)**	**3.6**	**(0-23)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(59 - 138)
	85	(59 - 138)
1,2-Dichloroethane-d4	89	(61 - 130)
	85	(61 - 130)
Toluene-d8	99	(60 - 143)
	94	(60 - 143)
4-Bromofluorobenzene	95	(47 - 158)
	87	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G150200 **Work Order #...:** GLJF51AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A4G210000-414 GLJF51AD-LCSD
Prep Date.....: 07/16/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203414
Dilution Factor: 1 **Final Wgt/Vol..:** 25 mL
Initial Wgt/Vol: 25 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**200**	**180**	**ug/kg**	**92**		**SW846 8260B**
	200	**200**	**ug/kg**	**99**	**7.2**	**SW846 8260B**
Chlorobenzene	**200**	**190**	**ug/kg**	**97**		**SW846 8260B**
	200	**200**	**ug/kg**	**101**	**4.6**	**SW846 8260B**
1,1-Dichloroethene	**200**	**180**	**ug/kg**	**91**		**SW846 8260B**
	200	**190**	**ug/kg**	**96**	**5.8**	**SW846 8260B**
Toluene	**200**	**200**	**ug/kg**	**99**		**SW846 8260B**
	200	**210**	**ug/kg**	**103**	**3.7**	**SW846 8260B**
Trichloroethene	**200**	**180**	**ug/kg**	**92**		**SW846 8260B**
	200	**200**	**ug/kg**	**99**	**7.2**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	84	(59 - 138)
	86	(59 - 138)
1,2-Dichloroethane-d4	84	(61 - 130)
	89	(61 - 130)
Toluene-d8	95	(60 - 143)
	100	(60 - 143)
4-Bromofluorobenzene	90	(47 - 158)
	92	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G150200 **Work Order #...:** GLJF51AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A4G210000-414 GLJF51AD-LCSD
Prep Date.....: 07/16/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203414
Dilution Factor: 1 **Final Wgt/Vol..:** 25 mL
Initial Wgt/Vol: 25 g

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**92**	**(75 - 129)**			**SW846 8260B**
	99	**(75 - 129)**	**7.2**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**97**	**(75 - 127)**			**SW846 8260B**
	101	**(75 - 127)**	**4.6**	**(0-22)**	**SW846 8260B**
1,1-Dichloroethene	**91**	**(55 - 142)**			**SW846 8260B**
	96	**(55 - 142)**	**5.8**	**(0-27)**	**SW846 8260B**
Toluene	**99**	**(71 - 130)**			**SW846 8260B**
	103	**(71 - 130)**	**3.7**	**(0-24)**	**SW846 8260B**
Trichloroethene	**92**	**(70 - 131)**			**SW846 8260B**
	99	**(70 - 131)**	**7.2**	**(0-23)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	84	(59 - 138)
	86	(59 - 138)
1,2-Dichloroethane-d4	84	(61 - 130)
	89	(61 - 130)
Toluene-d8	95	(60 - 143)
	100	(60 - 143)
4-Bromofluorobenzene	90	(47 - 158)
	92	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

GENERAL CHEMISTRY DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-078

General Chemistry

Lot-Sample #...: A4G150200-001 Work Order #...: GK5LT Matrix.....: SO
Date Sampled...: 07/14/04 10:50 Date Received..: 07/15/04
% Moisture.....: 4.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	95.8	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198072

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-079

General Chemistry

Lot-Sample #...: A4G150200-002 **Work Order #...:** GK5L7 **Matrix.....:** SO
Date Sampled...: 07/14/04 10:55 **Date Received..:** 07/15/04
% Moisture.....: 1.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	98.2	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198072
	Dilution Factor: 1			MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-080

General Chemistry

Lot-Sample #...: A4G150200-003 **Work Order #...:** GK5L9 **Matrix.....:** SO
Date Sampled...: 07/14/04 11:00 **Date Received..:** 07/15/04
% Moisture.....: 1.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	98.2	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198072

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-081

General Chemistry

Lot-Sample #...: A4G150200-004 **Work Order #...:** GK5MC **Matrix.....:** SO
Date Sampled...: 07/14/04 11:05 **Date Received..:** 07/15/04
% Moisture.....: 4.1

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	95.9	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198072

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-082

General Chemistry

Lot-Sample #...: A4G150200-005 Work Order #...: GK566 Matrix.....: SO
Date Sampled...: 07/14/04 11:10 Date Received..: 07/15/04
% Moisture.....: 1.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	98.1	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198072
	Dilution Factor: 1			MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-083

General Chemistry

Lot-Sample #...: A4G150200-006 Work Order #...: GK568 Matrix.....: SO
Date Sampled...: 07/14/04 11:15 Date Received..: 07/15/04
% Moisture.....: 2.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.7	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198072

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-084

General Chemistry

Lot-Sample #...: A4G150200-007 **Work Order #...:** GK57C **Matrix.....:** SO
Date Sampled...: 07/14/04 11:25 **Date Received..:** 07/15/04
% Moisture.....: 2.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.9	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198072

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-085

General Chemistry

Lot-Sample #...: A4G150200-008 Work Order #...: GK57D Matrix.....: SO
Date Sampled...: 07/14/04 11:30 Date Received..: 07/15/04
% Moisture.....: 2.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	98.0	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198072
	Dilution Factor: 1			MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-086

General Chemistry

Lot-Sample #...: A4G150200-009 **Work Order #...:** GK57E **Matrix.....:** SO
Date Sampled...: 07/14/04 11:40 **Date Received..:** 07/15/04
% Moisture.....: 2.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	98.0	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198072

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-087

General Chemistry

Lot-Sample #...: A4G150200-010 **Work Order #...:** GK57F **Matrix.....:** SO
Date Sampled...: 07/14/04 11:50 **Date Received..:** 07/15/04
% Moisture.....: 3.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	96.3	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198072

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-088

General Chemistry

Lot-Sample #...: A4G150200-011 Work Order #...: GK57H Matrix.....: SO
Date Sampled...: 07/14/04 12:00 Date Received..: 07/15/04
% Moisture.....: 3.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	96.7	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198072

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-089

General Chemistry

Lot-Sample #...: A4G150200-012 Work Order #...: GK57J Matrix.....: SO
Date Sampled...: 07/14/04 13:55 Date Received..: 07/15/04
% Moisture.....: 5.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	95.0	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198072

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-090

General Chemistry

Lot-Sample #...: A4G150200-013 **Work Order #...:** GK57K **Matrix.....:** SO
Date Sampled...: 07/14/04 14:00 **Date Received..:** 07/15/04
% Moisture.....: 2.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.5	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198072

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-091

General Chemistry

Lot-Sample #...: A4G150200-014 **Work Order #...:** GK57M **Matrix.....:** SO
Date Sampled...: 07/14/04 14:05 **Date Received..:** 07/15/04
% Moisture.....: 2.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.6	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198072

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-092

General Chemistry

Lot-Sample #...: A4G150200-015 Work Order #...: GK57N Matrix.....: SO
Date Sampled...: 07/14/04 14:10 Date Received..: 07/15/04
% Moisture.....: 3.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.0	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198073
		Dilution Factor: 1		MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-093

General Chemistry

Lot-Sample #...: A4G150200-016 **Work Order #...:** GK57P **Matrix.....:** SO
Date Sampled...: 07/14/04 14:15 **Date Received..:** 07/15/04
% Moisture.....: 5.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	95.0	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198073

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-094

General Chemistry

Lot-Sample #...: A4G150200-017 **Work Order #...:** GK57Q **Matrix.....:** SO
Date Sampled...: 07/14/04 14:20 **Date Received..:** 07/15/04
% Moisture.....: 1.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	98.1	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198073
	Dilution Factor: 1			MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-095

General Chemistry

Lot-Sample #...: A4G150200-018 Work Order #...: GK57R Matrix.....: SO
Date Sampled...: 07/14/04 14:30 Date Received..: 07/15/04
% Moisture.....: 3.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	96.3	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198073
	Dilution Factor: 1			MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-096

General Chemistry

Lot-Sample #...: A4G150200-019 Work Order #...: GK57T Matrix.....: SO
Date Sampled...: 07/14/04 14:40 Date Received..: 07/15/04
% Moisture.....: 3.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	96.8	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198073

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-097

General Chemistry

Lot-Sample #...: A4G150200-020 Work Order #...: GK57V Matrix.....: SO
Date Sampled...: 07/14/04 14:45 Date Received..: 07/15/04
% Moisture.....: 1.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	98.1	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198073

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071404-DCR-098

General Chemistry

Lot-Sample #...: A4G150200-021 Work Order #...: GK57W Matrix.....: SO
Date Sampled...: 07/14/04 14:55 Date Received..: 07/15/04
% Moisture.....: 3.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.0	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198073
		Dilution Factor: 1		MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071404-DCR-099

General Chemistry

Lot-Sample #...: A4G150200-022 Work Order #...: GK57X Matrix.....: SO
Date Sampled...: 07/14/04 15:05 Date Received..: 07/15/04
% Moisture.....: 2.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.5	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198073

Dilution Factor: 1 MDL.....: 10.0

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A4G150200 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids		Work Order #: GK7K51AA		MB Lot-Sample #:	A4G160000-072	
	ND	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198072
		Dilution Factor: 1				
Percent Solids		Work Order #: GK7K41AA		MB Lot-Sample #:	A4G160000-073	
	ND	10.0	%	MCAWW 160.3 MOD	07/16-07/19/04	4198073
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4G150200 **Work Order #...:** GK5LT-SMP GK5LT-DUP **Matrix.....:** SO

Date Sampled...: 07/14/04 10:50 **Date Received..:** 07/15/04

% Moisture.....: 4.2

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A4G150200-001		
	95.8	96.0	%	0.28	(0-20)	MCAWW 160.3 MOD	07/16-07/19/04	4198072

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4G150200 **Work Order #...:** GK57M-SMP GK57M-DUP **Matrix.....:** SO

Date Sampled...: 07/14/04 14:05 **Date Received..:** 07/15/04

% Moisture.....: 2.4

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A4G150200-014		
	97.6	97.4	%	0.25	(0-20)	MCAWW 160.3 MOD	07/16-07/19/04	4198072

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4G150200 **Work Order #...:** GK57N-SMP GK57N-DUP **Matrix.....:** SO

Date Sampled...: 07/14/04 14:10 **Date Received..:** 07/15/04

% Moisture.....: 3.0

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A4G150200-015		
	97.0	96.8	%	0.19	(0-20)	MCAWW 160.3 MOD	07/16-07/19/04	4198073

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4G150200 **Work Order #...:** GK57X-SMP GK57X-DUP **Matrix.....:** SO

Date Sampled...: 07/14/04 15:05 **Date Received..:** 07/15/04

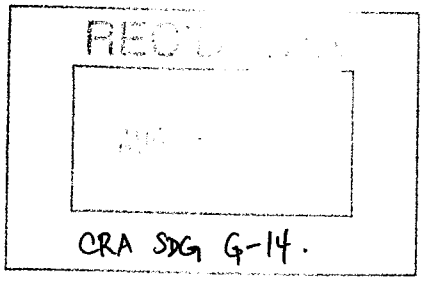
% Moisture.....: 2.5

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A4G150200-022		
	97.5	97.7	%	0.12	(0-20)	MCAWW 160.3 MOD	07/16-07/19/04	4198073

Dilution Factor: 1

SEVERN TRENT STL

END OF REPORT



SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A4G160169

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4G160169
Name: GM GRAND RAPIDS.

Description
Event: VAS Sampling
Samples: 33 Soils DCR 100-132.
Analysis: TCL VOCs.

TAT: STANDARD TAT
Lab: STL-NC

SEVERN TRENT LABORATORIES, IN

Amy L. McCormick
Project Manager

Checked Against Preliminary Data:
Date: N/A Init.: N/A.
Date of Validation Memo: 10/20/04
Invoice Approval Date:
Comments:

July 30, 2004

Cooler-MI 584 1 of 3

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL-North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	REMARKS
	7/15/04	800	S-17360-071504-DCR-100	Soil	2	X	STD TAT
		805	-101		2	X	
		810	-102		2	X	
		820	-103		2	X	
		825	-104		2	X	
		830	-105		2	X	
		835	-106		2	X	
		840	-107		2	X	
		845	-108		2	X	
		855	-109		2	X	
		900	-110		2	X	
		1050	-111		2	X	
		1055	-112		2	X	CRA Contact Paul Wiseman
		1100	-113		2	X	
TOTAL NUMBER OF CONTAINERS					28		

RELINQUISHED BY: 1. [signature]	DATE: 7-15-04 TIME: 1900	RECEIVED BY: 1.	DATE: TIME:
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 845068647947

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27172

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: [signature]
DATE: 7-16-04 TIME: 0925

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

Cooler - MI 584 2 of 3

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOA	REMARKS
	7/15/04	1105	S-17360-071504-DCR-114	Soil	2	X	STD TAT
		1110	-115		2	X	
		1120	-116		2	X	
		1125	-117		2	X	
		1130	-118		2	X	
		1140	-119		2	X	
		1150	-120		2	X	
		1200	-121		2	X	
		1235	-122		2	X	
		1240	-123		2	X	
		1245	-124		2	X	
		1250	-125		2	X	
		1330	-126		2	X	CRA Contact Paul Wiseman
		1335	-127		2	X	
TOTAL NUMBER OF CONTAINERS					28		

RELINQUISHED BY: 1. _____	DATE: 7-15-04 TIME: 1900	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FEDEX AIR BILL No. 8450 6864 7947

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27173

SAMPLE TEAM: David C. Rivers

RECEIVED FOR LABORATORY BY: _____
DATE: 7-16-04 TIME: 0925

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

Cooler - MI 584 3 of 3

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	REMARKS
	7/15/04	1340	S-17360-071504-DCR-128	Soil	2	X	STD TAT
		1345	-129		2	X	
		1350	-130		2	X	
		1400	-131		2	X	
		1410	-132		2	X	
							CRA contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		10		

RELINQUISHED BY: 1. _____	DATE: 7-15-04 TIME: 1900	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 845368647947

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27174

SAMPLE TEAM: David C. Rivers

RECEIVED FOR LABORATORY BY: Angela Matthews
DATE: 7-16-04 TIME: 0925

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4G160169

The following report contains the analytical results for thirty-three solid samples submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received July 16, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on July 30, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters which are never reported on a dry weight basis is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 4.6°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except uhder the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4G160169

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-17360-071504-DCR-100 07/15/04 08:00 001				
Benzene	33 J	200	ug/kg	SW846 8260B
Cyclohexane	31 J	4800	ug/kg	SW846 8260B
Isopropylbenzene	25 J	1000	ug/kg	SW846 8260B
Methylcyclohexane	200 J	4800	ug/kg	SW846 8260B
Toluene	140 J	400	ug/kg	SW846 8260B
Trichloroethene	5700	200	ug/kg	SW846 8260B
Xylenes (total)	200 J	600	ug/kg	SW846 8260B
Percent Solids	95.1	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-101 07/15/04 08:05 002				
Percent Solids	97.5	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-102 07/15/04 08:10 003				
Chloromethane	18 J,B	330	ug/kg	SW846 8260B
Percent Solids	97.9	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-103 07/15/04 08:20 004				
2-Butanone	59 J	910	ug/kg	SW846 8260B
Percent Solids	97.5	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-104 07/15/04 08:25 005				
Percent Solids	97.2	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-105 07/15/04 08:30 006				
Trichloroethene	25 J	56	ug/kg	SW846 8260B
Percent Solids	98.0	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-106 07/15/04 08:35 007				
Percent Solids	96.6	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-107 07/15/04 08:40 008				
Chloromethane	21 J,B	280	ug/kg	SW846 8260B
Trichloroethene	20 J	56	ug/kg	SW846 8260B
Percent Solids	97.7	10.0	%	MCAWW 160.3 MOD

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G160169

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-17360-071504-DCR-108 07/15/04 08:45 009				
Trichloroethene	25 J	55	ug/kg	SW846 8260B
Percent Solids	97.4	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-109 07/15/04 08:55 010				
Percent Solids	97.0	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-110 07/15/04 09:00 011				
Percent Solids	93.0	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-111 07/15/04 10:50 012				
Trichloroethene	190	66	ug/kg	SW846 8260B
Percent Solids	94.3	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-112 07/15/04 10:55 013				
Chloromethane	27 J	380	ug/kg	SW846 8260B
Percent Solids	96.8	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-113 07/15/04 11:00 014				
Percent Solids	98.3	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-114 07/15/04 11:05 015				
Percent Solids	98.1	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-115 07/15/04 11:10 016				
Percent Solids	97.1	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-116 07/15/04 11:20 017				
Chloromethane	21 J	330	ug/kg	SW846 8260B
Percent Solids	95.2	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-117 07/15/04 11:25 018				
Chloromethane	18 J	280	ug/kg	SW846 8260B
Percent Solids	96.2	10.0	%	MCAWW 160.3 MOD

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G160169

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-17360-071504-DCR-118 07/15/04 11:30 019				
Trichloroethene	41 J	61	ug/kg	SW846 8260B
Percent Solids	97.2	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-119 07/15/04 11:40 020				
Percent Solids	98.5	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-120 07/15/04 11:50 021				
Percent Solids	97.4	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-121 07/15/04 12:00 022				
Chloromethane	23 J	270	ug/kg	SW846 8260B
Trichloroethene	18 J	53	ug/kg	SW846 8260B
Percent Solids	95.5	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-122 07/15/04 12:35 023				
Methylcyclohexane	39 J	1400	ug/kg	SW846 8260B
Toluene	21 J	120	ug/kg	SW846 8260B
Trichloroethene	2000	59	ug/kg	SW846 8260B
Xylenes (total)	38 J	180	ug/kg	SW846 8260B
Percent Solids	94.7	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-123 07/15/04 12:40 024				
Percent Solids	96.9	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-124 07/15/04 12:45 025				
Chloromethane	24 J,B	280	ug/kg	SW846 8260B
Percent Solids	98.1	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-125 07/15/04 12:50 026				
Percent Solids	98.1	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-126 07/15/04 13:30 027				
1,2,4-Trichloro-benzene	30 J	300	ug/kg	SW846 8260B
Percent Solids	97.7	10.0	%	MCAWW 160.3 MOD

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4G160169

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-17360-071504-DCR-127 07/15/04 13:35 028				
Percent Solids	95.8	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-128 07/15/04 13:40 029				
Chloromethane	19 J,B	290	ug/kg	SW846 8260B
Trichloroethene	16 J	58	ug/kg	SW846 8260B
Percent Solids	97.5	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-129 07/15/04 13:45 030				
Trichloroethene	14 J	57	ug/kg	SW846 8260B
Percent Solids	96.7	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-130 07/15/04 13:50 031				
Percent Solids	97.6	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-131 07/15/04 14:00 032				
Percent Solids	98.0	10.0	%	MCAWW 160.3 MOD
S-17360-071504-DCR-132 07/15/04 14:10 033				
Percent Solids	87.1	10.0	%	MCAWW 160.3 MOD

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4G160169

PARAMETER	ANALYTICAL METHOD
Total Residue as Percent Solids	MCAWW 160.3 MOD
Volatile Organics by GC/MS	SW846 8260B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4G160169

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GK78C	001	S-17360-071504-DCR-100	07/15/04	08:00
GK78G	002	S-17360-071504-DCR-101	07/15/04	08:05
GK78L	003	S-17360-071504-DCR-102	07/15/04	08:10
GK78N	004	S-17360-071504-DCR-103	07/15/04	08:20
GK78R	005	S-17360-071504-DCR-104	07/15/04	08:25
GK78W	006	S-17360-071504-DCR-105	07/15/04	08:30
GK78X	007	S-17360-071504-DCR-106	07/15/04	08:35
GK781	008	S-17360-071504-DCR-107	07/15/04	08:40
GK783	009	S-17360-071504-DCR-108	07/15/04	08:45
GK784	010	S-17360-071504-DCR-109	07/15/04	08:55
GK786	011	S-17360-071504-DCR-110	07/15/04	09:00
GK788	012	S-17360-071504-DCR-111	07/15/04	10:50
GK789	013	S-17360-071504-DCR-112	07/15/04	10:55
GK79C	014	S-17360-071504-DCR-113	07/15/04	11:00
GK79D	015	S-17360-071504-DCR-114	07/15/04	11:05
GK79H	016	S-17360-071504-DCR-115	07/15/04	11:10
GK79J	017	S-17360-071504-DCR-116	07/15/04	11:20
GK79K	018	S-17360-071504-DCR-117	07/15/04	11:25
GK79M	019	S-17360-071504-DCR-118	07/15/04	11:30
GK79P	020	S-17360-071504-DCR-119	07/15/04	11:40
GK79T	021	S-17360-071504-DCR-120	07/15/04	11:50
GK79W	022	S-17360-071504-DCR-121	07/15/04	12:00
GK791	023	S-17360-071504-DCR-122	07/15/04	12:35
GK793	024	S-17360-071504-DCR-123	07/15/04	12:40
GK795	025	S-17360-071504-DCR-124	07/15/04	12:45
GK798	026	S-17360-071504-DCR-125	07/15/04	12:50
GK8AD	027	S-17360-071504-DCR-126	07/15/04	13:30
GK8AE	028	S-17360-071504-DCR-127	07/15/04	13:35
GK8AF	029	S-17360-071504-DCR-128	07/15/04	13:40
GK8AG	030	S-17360-071504-DCR-129	07/15/04	13:45
GK8AH	031	S-17360-071504-DCR-130	07/15/04	13:50
GK8AJ	032	S-17360-071504-DCR-131	07/15/04	14:00
GK8AK	033	S-17360-071504-DCR-132	07/15/04	14:10

(Continued on next page)

SAMPLE SUMMARY

A4G160169

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

Cooler-MI 584 1 of 3

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL- North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM- Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	REMARKS
	7/15/04	800	S-17360-071504-DCR-100	Soil	2	X	STD TAT
		805	-101		2	X	
		810	-102		2	X	
		820	-103		2	X	
		825	-104		2	X	
		830	-105		2	X	
		835	-106		2	X	
		840	-107		2	X	
		845	-108		2	X	
		855	-109		2	X	
		900	-110		2	X	
		1050	-111		2	X	
		1055	-112		2	X	CRA Contact Paul Wiseman
		1100	-113		2	X	
			TOTAL NUMBER OF CONTAINERS		28		

RELINQUISHED BY: 1. _____	DATE: 7-15-04 TIME: 1900	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 845068647947

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27172

SAMPLE TEAM: David C Rivers

RECEIVED FOR LABORATORY BY: _____
DATE: 7-16-04 TIME: 0925

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

STL North Canton

Cooler - MI 584 2 of 3

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	REMARKS
	7/15/04	1105	S-17360-071504-DCR-114	Soil	2	X	STD TAT
		1110	-115		2	X	
		1120	-116		2	X	
		1125	-117		2	X	
		1130	-118		2	X	
		1140	-119		2	X	
		1150	-120		2	X	
		1200	-121		2	X	
		1235	-122		2	X	
		1240	-123		2	X	
		1245	-124		2	X	
		1250	-125		2	X	
		1320	-126		2	X	
		1335	-127		2	X	CRA Contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		28		

RELINQUISHED BY: 1. _____	DATE: 7-15-04 TIME: 1900	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FEDEX

AIR BILL No. 8450 6864 7947

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27173

SAMPLE TEAM: David C. Rivers

RECEIVED FOR LABORATORY BY: _____

DATE: 7-16-04 TIME: 0925

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

STL North Canton

Cooler - ML584 3 of 3

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL North Canton

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	REMARKS
	7/15/04	1340	S-17360-071504-DCR-128	Soil	2	X	STD TAT
		1345	-129		2	X	
		1350	-130		2	X	
		1400	-131		2	X	
		1410	-132		2	X	
							CRA contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		10		

RELINQUISHED BY: 1. _____	DATE: 7-15-04 TIME: 1900	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 845868647947

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27174

SAMPLE TEAM: David C. Rivers

RECEIVED FOR LABORATORY BY: Angela Matthews
DATE: 7-16-04 TIME: 0925

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

STL North Canton

RSR280

Client: 57787

Lot #: A4G160169

Case Number/SDG: 17360-09

Storage Location: C119 MS

Severn Trent Laboratories, Inc.
Sample Control Record

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GK78C	STILLERJ	7/16/04	Yes		Storage	
GK78G	STILLERJ	7/16/04	Yes		Storage	
GK78L	STILLERJ	7/16/04	Yes		Storage	
GK78N	STILLERJ	7/16/04	Yes		Storage	
GK78R	STILLERJ	7/16/04	Yes		Storage	
GK78W	STILLERJ	7/16/04	Yes		Storage	
GK78X	STILLERJ	7/16/04	Yes		Storage	
GK781	STILLERJ	7/16/04	Yes		Storage	
GK783	STILLERJ	7/16/04	Yes		Storage	
GK784	STILLERJ	7/16/04	Yes		Storage	
GK786	STILLERJ	7/16/04	Yes		Storage	
GK788	STILLERJ	7/16/04	Yes		Storage	
GK789	STILLERJ	7/16/04	Yes		Storage	
GK79C	STILLERJ	7/16/04	Yes		Storage	
GK79D	STILLERJ	7/16/04	Yes		Storage	
GK79H	STILLERJ	7/16/04	Yes		Storage	
GK79J	STILLERJ	7/16/04	Yes		Storage	
GK79K	STILLERJ	7/16/04	Yes		Storage	
GK79M	STILLERJ	7/16/04	Yes		Storage	
GK79P	STILLERJ	7/16/04	Yes		Storage	
GK79T	STILLERJ	7/16/04	Yes		Storage	
GK79W	STILLERJ	7/16/04	Yes		Storage	
GK791	STILLERJ	7/16/04	Yes		Storage	

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4G160169

Case Number/SDG: 17360-09

Storage Location: C119 MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GK793	STILLERJ	7/16/04	Yes		Storage	
GK795	STILLERJ	7/16/04	Yes		Storage	
GK798	STILLERJ	7/16/04	Yes		Storage	
GK8AD	STILLERJ	7/16/04	Yes		Storage	
GK8AE	STILLERJ	7/16/04	Yes		Storage	
GK8AF	STILLERJ	7/16/04	Yes		Storage	
GK8AG	STILLERJ	7/16/04	Yes		Storage	
GK8AH	STILLERJ	7/16/04	Yes		Storage	
GK8AJ	STILLERJ	7/16/04	Yes		Storage	
GK8AK	STILLERJ	7/16/04	Yes		Storage	

STL Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: A4G160169

Client: CRA Project: GM-Grand Rapids Quote#: 50154

Cooler Received on: 7-16-04 Opened on: 7-16-04 by: Angela Matthews (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other: _____

STL Cooler No# M1584 Foam Box ☐ Client Cooler ☒ Other ___

1. Were custody seals on the outside of the cooler? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity _____
   Were the custody seals signed and dated? Yes ☐ No ☒ NA ☐
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other : _____
6. Cooler temperature upon receipt 4.6 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☒ No ☐ NA ☒
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☒
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning: _____

√	

1. CHAIN OF CUSTODY

The following discrepancies occurred:

_____

_____

_____

_____

2. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #122603-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # 111401-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*

Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

SOP: NC-SC-0005, Sample Receiving
N:\QAQC\NARRATIV\STL\Cooler Receipt STL\COOLER_STL_Rev19 061104.doc

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-100

GC/MS Volatiles

Lot-Sample #...:	A4G160169-001	**Work Order #...:**	GK78C1AA	**Matrix.....:**	SO
Date Sampled...:	07/15/04 08:00	**Date Received..:**	07/16/04		
Prep Date.....:	07/16/04	**Analysis Date..:**	07/22/04		
Prep Batch #...:	4203414				
Dilution Factor:	3.82	**Initial Wgt/Vol:**	21.8 g	**Final Wgt/Vol..:**	25 mL
% Moisture.....:	4.9	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	3000	ug/kg	400
Benzene	**33 J**	**200**	**ug/kg**	**26**
Bromodichloromethane	ND	400	ug/kg	48
Bromoform	ND	400	ug/kg	52
Bromomethane	ND	1000	ug/kg	100
2-Butanone	ND	3000	ug/kg	200
Carbon disulfide	ND	1000	ug/kg	80
Carbon tetrachloride	ND	200	ug/kg	48
Chlorobenzene	ND	200	ug/kg	25
Chloroethane	ND	1000	ug/kg	260
Chloroform	ND	200	ug/kg	48
Chloromethane	ND	1000	ug/kg	21
Cyclohexane	**31 J**	**4800**	**ug/kg**	**31**
Dibromochloromethane	ND	200	ug/kg	28
1,2-Dibromo-3-chloro-propane	ND	1000	ug/kg	240
1,2-Dibromoethane	ND	1000	ug/kg	40
1,2-Dichlorobenzene	ND	400	ug/kg	68
1,3-Dichlorobenzene	ND	400	ug/kg	29
1,4-Dichlorobenzene	ND	400	ug/kg	32
Dichlorodifluoromethane	ND	400	ug/kg	22
1,1-Dichloroethane	ND	200	ug/kg	29
1,2-Dichloroethane	ND	200	ug/kg	37
1,1-Dichloroethene	ND	200	ug/kg	33
cis-1,2-Dichloroethene	ND	200	ug/kg	56
trans-1,2-Dichloroethene	ND	200	ug/kg	44
1,2-Dichloropropane	ND	200	ug/kg	30
cis-1,3-Dichloropropene	ND	200	ug/kg	22
trans-1,3-Dichloropropene	ND	200	ug/kg	22
Ethylbenzene	ND	200	ug/kg	27
2-Hexanone	ND	10000	ug/kg	96
Isopropylbenzene	**25 J**	**1000**	**ug/kg**	**20**
Methyl acetate	ND	4800	ug/kg	210
Methylene chloride	ND	1000	ug/kg	400
Methylcyclohexane	**200 J**	**4800**	**ug/kg**	**23**
4-Methyl-2-pentanone	ND	10000	ug/kg	44
Methyl tert-butyl ether	ND	1000	ug/kg	40
Styrene	ND	200	ug/kg	110

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-100

GC/MS Volatiles

Lot-Sample #...: A4G160169-001 Work Order #...: GK78C1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	400	ug/kg	33
Tetrachloroethene	ND	200	ug/kg	36
Toluene	**140 J**	**400**	**ug/kg**	**37**
1,2,4-Trichloro-benzene	ND	1000	ug/kg	48
1,1,1-Trichloroethane	ND	200	ug/kg	38
1,1,2-Trichloroethane	ND	200	ug/kg	40
Trichloroethene	**5700**	**200**	**ug/kg**	**48**
Trichlorofluoromethane	ND	400	ug/kg	33
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1000	ug/kg	40
Vinyl chloride	ND	400	ug/kg	64
Xylenes (total)	**200 J**	**600**	**ug/kg**	**60**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	75 DIL	(59 - 138)
1,2-Dichloroethane-d4	81 DIL	(61 - 130)
Toluene-d8	91 DIL	(60 - 143)
4-Bromofluorobenzene	83 DIL	(47 - 158)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-101

GC/MS Volatiles

Lot-Sample #...: A4G160169-002 **Work Order #...:** GK78G1AA **Matrix.....:** SO
Date Sampled...: 07/15/04 08:05 **Date Received..:** 07/16/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203414
Dilution Factor: 2.21 **Initial Wgt/Vol:** 11.3 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 2.5 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	1700	ug/kg	220
Benzene	ND	110	ug/kg	15
Bromodichloromethane	ND	230	ug/kg	27
Bromoform	ND	230	ug/kg	29
Bromomethane	ND	570	ug/kg	57
2-Butanone	ND	1700	ug/kg	110
Carbon disulfide	ND	570	ug/kg	45
Carbon tetrachloride	ND	110	ug/kg	27
Chlorobenzene	ND	110	ug/kg	14
Chloroethane	ND	570	ug/kg	150
Chloroform	ND	110	ug/kg	27
Chloromethane	ND	570	ug/kg	12
Cyclohexane	ND	2700	ug/kg	17
Dibromochloromethane	ND	110	ug/kg	16
1,2-Dibromo-3-chloro-propane	ND	570	ug/kg	140
1,2-Dibromoethane	ND	570	ug/kg	22
1,2-Dichlorobenzene	ND	230	ug/kg	39
1,3-Dichlorobenzene	ND	230	ug/kg	16
1,4-Dichlorobenzene	ND	230	ug/kg	18
Dichlorodifluoromethane	ND	230	ug/kg	12
1,1-Dichloroethane	ND	110	ug/kg	17
1,2-Dichloroethane	ND	110	ug/kg	21
1,1-Dichloroethene	ND	110	ug/kg	19
cis-1,2-Dichloroethene	ND	110	ug/kg	32
trans-1,2-Dichloroethene	ND	110	ug/kg	25
1,2-Dichloropropane	ND	110	ug/kg	17
cis-1,3-Dichloropropene	ND	110	ug/kg	12
trans-1,3-Dichloropropene	ND	110	ug/kg	12
Ethylbenzene	ND	110	ug/kg	15
2-Hexanone	ND	5700	ug/kg	54
Isopropylbenzene	ND	570	ug/kg	12
Methyl acetate	ND	2700	ug/kg	120
Methylene chloride	ND	570	ug/kg	220
Methylcyclohexane	ND	2700	ug/kg	13
4-Methyl-2-pentanone	ND	5700	ug/kg	25
Methyl tert-butyl ether	ND	570	ug/kg	23
Styrene	ND	110	ug/kg	63

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-101

GC/MS Volatiles

Lot-Sample #...: A4G160169-002 **Work Order #...:** GK78G1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	230	ug/kg	19
Tetrachloroethene	ND	110	ug/kg	20
Toluene	ND	230	ug/kg	21
1,2,4-Trichloro-benzene	ND	570	ug/kg	27
1,1,1-Trichloroethane	ND	110	ug/kg	22
1,1,2-Trichloroethane	ND	110	ug/kg	22
Trichloroethene	ND	110	ug/kg	27
Trichlorofluoromethane	ND	230	ug/kg	19
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	570	ug/kg	23
Vinyl chloride	ND	230	ug/kg	36
Xylenes (total)	ND	340	ug/kg	34

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	75	(59 - 138)
1,2-Dichloroethane-d4	84	(61 - 130)
Toluene-d8	96	(60 - 143)
4-Bromofluorobenzene	88	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-102

GC/MS Volatiles

Lot-Sample #...:	A4G160169-003	**Work Order #...:**	GK78L1AA	**Matrix.....:**	SO
Date Sampled...:	07/15/04 08:10	**Date Received..:**	07/16/04		
Prep Date.....:	07/16/04	**Analysis Date..:**	07/21/04		
Prep Batch #...:	4203414				
Dilution Factor:	1.29	**Initial Wgt/Vol:**	19.4 g	**Final Wgt/Vol..:**	25 mL
% Moisture.....:	2.1	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	990	ug/kg	130
Benzene	ND	66	ug/kg	8.4
Bromodichloromethane	ND	130	ug/kg	16
Bromoform	ND	130	ug/kg	17
Bromomethane	ND	330	ug/kg	33
2-Butanone	ND	990	ug/kg	65
Carbon disulfide	ND	330	ug/kg	26
Carbon tetrachloride	ND	66	ug/kg	16
Chlorobenzene	ND	66	ug/kg	8.3
Chloroethane	ND	330	ug/kg	86
Chloroform	ND	66	ug/kg	16
Chloromethane	**18 J,B**	**330**	**ug/kg**	**6.9**
Cyclohexane	ND	1600	ug/kg	10
Dibromochloromethane	ND	66	ug/kg	9.1
1,2-Dibromo-3-chloro-propane	ND	330	ug/kg	79
1,2-Dibromoethane	ND	330	ug/kg	13
1,2-Dichlorobenzene	ND	130	ug/kg	22
1,3-Dichlorobenzene	ND	130	ug/kg	9.5
1,4-Dichlorobenzene	ND	130	ug/kg	10
Dichlorodifluoromethane	ND	130	ug/kg	7.1
1,1-Dichloroethane	ND	66	ug/kg	9.6
1,2-Dichloroethane	ND	66	ug/kg	12
1,1-Dichloroethene	ND	66	ug/kg	11
cis-1,2-Dichloroethene	ND	66	ug/kg	18
trans-1,2-Dichloroethene	ND	66	ug/kg	14
1,2-Dichloropropane	ND	66	ug/kg	9.7
cis-1,3-Dichloropropene	ND	66	ug/kg	7.2
trans-1,3-Dichloropropene	ND	66	ug/kg	7.1
Ethylbenzene	ND	66	ug/kg	9.0
2-Hexanone	ND	3300	ug/kg	32
Isopropylbenzene	ND	330	ug/kg	6.7
Methyl acetate	ND	1600	ug/kg	69
Methylene chloride	ND	330	ug/kg	130
Methylcyclohexane	ND	1600	ug/kg	7.5
4-Methyl-2-pentanone	ND	3300	ug/kg	14
Methyl tert-butyl ether	ND	330	ug/kg	13
Styrene	ND	66	ug/kg	37

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-102

GC/MS Volatiles

Lot-Sample #...: A4G160169-003 **Work Order #...:** GK78L1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	130	ug/kg	11
Tetrachloroethene	ND	66	ug/kg	12
Toluene	ND	130	ug/kg	12
1,2,4-Trichloro-benzene	ND	330	ug/kg	16
1,1,1-Trichloroethane	ND	66	ug/kg	13
1,1,2-Trichloroethane	ND	66	ug/kg	13
Trichloroethene	ND	66	ug/kg	16
Trichlorofluoromethane	ND	130	ug/kg	11
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	330	ug/kg	13
Vinyl chloride	ND	130	ug/kg	21
Xylenes (total)	ND	200	ug/kg	20

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	76	(59 - 138)
1,2-Dichloroethane-d4	83	(61 - 130)
Toluene-d8	94	(60 - 143)
4-Bromofluorobenzene	86	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-103

GC/MS Volatiles

Lot-Sample #...: A4G160169-004 **Work Order #...:** GK78N1AA **Matrix.....:** SO
Date Sampled...: 07/15/04 08:20 **Date Received..:** 07/16/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203414
Dilution Factor: 1.18 **Initial Wgt/Vol:** 21.1 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 2.5 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	910	ug/kg	120
Benzene	ND	61	ug/kg	7.7
Bromodichloromethane	ND	120	ug/kg	15
Bromoform	ND	120	ug/kg	16
Bromomethane	ND	300	ug/kg	30
2-Butanone	**59 J**	**910**	**ug/kg**	**59**
Carbon disulfide	ND	300	ug/kg	24
Carbon tetrachloride	ND	61	ug/kg	15
Chlorobenzene	ND	61	ug/kg	7.6
Chloroethane	ND	300	ug/kg	79
Chloroform	ND	61	ug/kg	15
Chloromethane	ND	300	ug/kg	6.3
Cyclohexane	ND	1500	ug/kg	9.3
Dibromochloromethane	ND	61	ug/kg	8.3
1,2-Dibromo-3-chloro-propane	ND	300	ug/kg	73
1,2-Dibromoethane	ND	300	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	21
1,3-Dichlorobenzene	ND	120	ug/kg	8.7
1,4-Dichlorobenzene	ND	120	ug/kg	9.6
Dichlorodifluoromethane	ND	120	ug/kg	6.5
1,1-Dichloroethane	ND	61	ug/kg	8.8
1,2-Dichloroethane	ND	61	ug/kg	11
1,1-Dichloroethene	ND	61	ug/kg	10
cis-1,2-Dichloroethene	ND	61	ug/kg	17
trans-1,2-Dichloroethene	ND	61	ug/kg	13
1,2-Dichloropropane	ND	61	ug/kg	9.0
cis-1,3-Dichloropropene	ND	61	ug/kg	6.7
trans-1,3-Dichloropropene	ND	61	ug/kg	6.5
Ethylbenzene	ND	61	ug/kg	8.2
2-Hexanone	ND	3000	ug/kg	29
Isopropylbenzene	ND	300	ug/kg	6.2
Methyl acetate	ND	1500	ug/kg	63
Methylene chloride	ND	300	ug/kg	120
Methylcyclohexane	ND	1500	ug/kg	6.9
4-Methyl-2-pentanone	ND	3000	ug/kg	13
Methyl tert-butyl ether	ND	300	ug/kg	12
Styrene	ND	61	ug/kg	34

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-103

GC/MS Volatiles

Lot-Sample #...: A4G160169-004 Work Order #...: GK78N1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.9
Tetrachloroethene	ND	61	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	300	ug/kg	15
1,1,1-Trichloroethane	ND	61	ug/kg	11
1,1,2-Trichloroethane	ND	61	ug/kg	12
Trichloroethene	ND	61	ug/kg	15
Trichlorofluoromethane	ND	120	ug/kg	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	300	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	ND	180	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	78	(59 - 138)
1,2-Dichloroethane-d4	83	(61 - 130)
Toluene-d8	97	(60 - 143)
4-Bromofluorobenzene	88	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-104

GC/MS Volatiles

Lot-Sample #...: A4G160169-005	**Work Order #...:** GK78R1AA		**Matrix.....:** SO
Date Sampled...: 07/15/04 08:25	**Date Received..:** 07/16/04		
Prep Date.....: 07/16/04	**Analysis Date..:** 07/21/04		
Prep Batch #...: 4203414			
Dilution Factor: 1.17	**Initial Wgt/Vol:** 21.4 g		**Final Wgt/Vol..:** 25 mL
% Moisture.....: 2.8	**Method.....:** SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	900	ug/kg	120
Benzene	ND	60	ug/kg	7.7
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	16
Bromomethane	ND	300	ug/kg	30
2-Butanone	ND	900	ug/kg	59
Carbon disulfide	ND	300	ug/kg	24
Carbon tetrachloride	ND	60	ug/kg	14
Chlorobenzene	ND	60	ug/kg	7.6
Chloroethane	ND	300	ug/kg	78
Chloroform	ND	60	ug/kg	14
Chloromethane	ND	300	ug/kg	6.3
Cyclohexane	ND	1400	ug/kg	9.3
Dibromochloromethane	ND	60	ug/kg	8.3
1,2-Dibromo-3-chloro-propane	ND	300	ug/kg	72
1,2-Dibromoethane	ND	300	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.7
1,4-Dichlorobenzene	ND	120	ug/kg	9.5
Dichlorodifluoromethane	ND	120	ug/kg	6.5
1,1-Dichloroethane	ND	60	ug/kg	8.8
1,2-Dichloroethane	ND	60	ug/kg	11
1,1-Dichloroethene	ND	60	ug/kg	10
cis-1,2-Dichloroethene	ND	60	ug/kg	17
trans-1,2-Dichloroethene	ND	60	ug/kg	13
1,2-Dichloropropane	ND	60	ug/kg	8.9
cis-1,3-Dichloropropene	ND	60	ug/kg	6.6
trans-1,3-Dichloropropene	ND	60	ug/kg	6.5
Ethylbenzene	ND	60	ug/kg	8.2
2-Hexanone	ND	3000	ug/kg	29
Isopropylbenzene	ND	300	ug/kg	6.1
Methyl acetate	ND	1400	ug/kg	63
Methylene chloride	ND	300	ug/kg	120
Methylcyclohexane	ND	1400	ug/kg	6.9
4-Methyl-2-pentanone	ND	3000	ug/kg	13
Methyl tert-butyl ether	ND	300	ug/kg	12
Styrene	ND	60	ug/kg	34

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-104

GC/MS Volatiles

Lot-Sample #...: A4G160169-005 Work Order #...: GK78R1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.9
Tetrachloroethene	ND	60	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	300	ug/kg	14
1,1,1-Trichloroethane	ND	60	ug/kg	11
1,1,2-Trichloroethane	ND	60	ug/kg	12
Trichloroethene	ND	60	ug/kg	14
Trichlorofluoromethane	ND	120	ug/kg	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	300	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	ND	180	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	75	(59 - 138)
1,2-Dichloroethane-d4	83	(61 - 130)
Toluene-d8	95	(60 - 143)
4-Bromofluorobenzene	87	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-105

GC/MS Volatiles

Lot-Sample #...: A4G160169-006 **Work Order #...:** GK78W1AA **Matrix.....:** SO
Date Sampled...: 07/15/04 08:30 **Date Received..:** 07/16/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203414
Dilution Factor: 1.09 **Initial Wgt/Vol:** 23 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 2.0 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	830	ug/kg	110
Benzene	ND	56	ug/kg	7.1
Bromodichloromethane	ND	110	ug/kg	13
Bromoform	ND	110	ug/kg	14
Bromomethane	ND	280	ug/kg	28
2-Butanone	ND	830	ug/kg	54
Carbon disulfide	ND	280	ug/kg	22
Carbon tetrachloride	ND	56	ug/kg	13
Chlorobenzene	ND	56	ug/kg	7.0
Chloroethane	ND	280	ug/kg	72
Chloroform	ND	56	ug/kg	13
Chloromethane	ND	280	ug/kg	5.8
Cyclohexane	ND	1300	ug/kg	8.6
Dibromochloromethane	ND	56	ug/kg	7.7
1,2-Dibromo-3-chloro-propane	ND	280	ug/kg	67
1,2-Dibromoethane	ND	280	ug/kg	11
1,2-Dichlorobenzene	ND	110	ug/kg	19
1,3-Dichlorobenzene	ND	110	ug/kg	8.0
1,4-Dichlorobenzene	ND	110	ug/kg	8.8
Dichlorodifluoromethane	ND	110	ug/kg	6.0
1,1-Dichloroethane	ND	56	ug/kg	8.1
1,2-Dichloroethane	ND	56	ug/kg	10
1,1-Dichloroethene	ND	56	ug/kg	9.2
cis-1,2-Dichloroethene	ND	56	ug/kg	16
trans-1,2-Dichloroethene	ND	56	ug/kg	12
1,2-Dichloropropane	ND	56	ug/kg	8.2
cis-1,3-Dichloropropene	ND	56	ug/kg	6.1
trans-1,3-Dichloropropene	ND	56	ug/kg	6.0
Ethylbenzene	ND	56	ug/kg	7.6
2-Hexanone	ND	2800	ug/kg	27
Isopropylbenzene	ND	280	ug/kg	5.7
Methyl acetate	ND	1300	ug/kg	58
Methylene chloride	ND	280	ug/kg	110
Methylcyclohexane	ND	1300	ug/kg	6.3
4-Methyl-2-pentanone	ND	2800	ug/kg	12
Methyl tert-butyl ether	ND	280	ug/kg	11
Styrene	ND	56	ug/kg	31

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-105

GC/MS Volatiles

Lot-Sample #...: A4G160169-006 **Work Order #...:** GK78W1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	9.1
Tetrachloroethene	ND	56	ug/kg	10
Toluene	ND	110	ug/kg	10
1,2,4-Trichloro-benzene	ND	280	ug/kg	13
1,1,1-Trichloroethane	ND	56	ug/kg	11
1,1,2-Trichloroethane	ND	56	ug/kg	11
Trichloroethene	**25 J**	**56**	**ug/kg**	**13**
Trichlorofluoromethane	ND	110	ug/kg	9.2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	280	ug/kg	11
Vinyl chloride	ND	110	ug/kg	18
Xylenes (total)	ND	170	ug/kg	17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	74	(59 - 138)
1,2-Dichloroethane-d4	81	(61 - 130)
Toluene-d8	94	(60 - 143)
4-Bromofluorobenzene	86	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-106

GC/MS Volatiles

Lot-Sample #...:	A4G160169-007	**Work Order #...:**	GK78X1AA	**Matrix.....:**	SO
Date Sampled...:	07/15/04 08:35	**Date Received..:**	07/16/04		
Prep Date.....:	07/16/04	**Analysis Date..:**	07/21/04		
Prep Batch #...:	4203414				
Dilution Factor:	0.96	**Initial Wgt/Vol:**	26.1 g	**Final Wgt/Vol..:**	25 mL
% Moisture.....:	3.4	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	750	ug/kg	98
Benzene	ND	50	ug/kg	6.4
Bromodichloromethane	ND	99	ug/kg	12
Bromoform	ND	99	ug/kg	13
Bromomethane	ND	250	ug/kg	25
2-Butanone	ND	750	ug/kg	49
Carbon disulfide	ND	250	ug/kg	20
Carbon tetrachloride	ND	50	ug/kg	12
Chlorobenzene	ND	50	ug/kg	6.3
Chloroethane	ND	250	ug/kg	65
Chloroform	ND	50	ug/kg	12
Chloromethane	ND	250	ug/kg	5.2
Cyclohexane	ND	1200	ug/kg	7.6
Dibromochloromethane	ND	50	ug/kg	6.9
1,2-Dibromo-3-chloro-propane	ND	250	ug/kg	60
1,2-Dibromoethane	ND	250	ug/kg	9.8
1,2-Dichlorobenzene	ND	99	ug/kg	17
1,3-Dichlorobenzene	ND	99	ug/kg	7.2
1,4-Dichlorobenzene	ND	99	ug/kg	7.8
Dichlorodifluoromethane	ND	99	ug/kg	5.4
1,1-Dichloroethane	ND	50	ug/kg	7.3
1,2-Dichloroethane	ND	50	ug/kg	9.2
1,1-Dichloroethene	ND	50	ug/kg	8.2
cis-1,2-Dichloroethene	ND	50	ug/kg	14
trans-1,2-Dichloroethene	ND	50	ug/kg	11
1,2-Dichloropropane	ND	50	ug/kg	7.4
cis-1,3-Dichloropropene	ND	50	ug/kg	5.5
trans-1,3-Dichloropropene	ND	50	ug/kg	5.4
Ethylbenzene	ND	50	ug/kg	6.8
2-Hexanone	ND	2500	ug/kg	24
Isopropylbenzene	ND	250	ug/kg	5.1
Methyl acetate	ND	1200	ug/kg	52
Methylene chloride	ND	250	ug/kg	98
Methylcyclohexane	ND	1200	ug/kg	5.7
4-Methyl-2-pentanone	ND	2500	ug/kg	11
Methyl tert-butyl ether	ND	250	ug/kg	9.9
Styrene	ND	50	ug/kg	28

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-106

GC/MS Volatiles

Lot-Sample #...: A4G160169-007 **Work Order #...:** GK78X1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	99	ug/kg	8.1
Tetrachloroethene	ND	50	ug/kg	8.9
Toluene	ND	99	ug/kg	9.0
1,2,4-Trichloro-benzene	ND	250	ug/kg	12
1,1,1-Trichloroethane	ND	50	ug/kg	9.4
1,1,2-Trichloroethane	ND	50	ug/kg	9.8
Trichloroethene	ND	50	ug/kg	12
Trichlorofluoromethane	ND	99	ug/kg	8.2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	250	ug/kg	9.9
Vinyl chloride	ND	99	ug/kg	16
Xylenes (total)	ND	150	ug/kg	15

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	71	(59 - 138)
1,2-Dichloroethane-d4	82	(61 - 130)
Toluene-d8	93	(60 - 143)
4-Bromofluorobenzene	85	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-107

GC/MS Volatiles

Lot-Sample #...:	A4G160169-008	**Work Order #...:**	GK7811AA	**Matrix.....:**	SO
Date Sampled...:	07/15/04 08:40	**Date Received..:**	07/16/04		
Prep Date.....:	07/16/04	**Analysis Date..:**	07/21/04		
Prep Batch #...:	4203414				
Dilution Factor:	1.09	**Initial Wgt/Vol:**	23 g	**Final Wgt/Vol..:**	25 mL
% Moisture.....:	2.3	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	840	ug/kg	110
Benzene	ND	56	ug/kg	7.1
Bromodichloromethane	ND	110	ug/kg	13
Bromoform	ND	110	ug/kg	15
Bromomethane	ND	280	ug/kg	28
2-Butanone	ND	840	ug/kg	55
Carbon disulfide	ND	280	ug/kg	22
Carbon tetrachloride	ND	56	ug/kg	13
Chlorobenzene	ND	56	ug/kg	7.0
Chloroethane	ND	280	ug/kg	73
Chloroform	ND	56	ug/kg	13
Chloromethane	**21 J,B**	**280**	**ug/kg**	**5.8**
Cyclohexane	ND	1300	ug/kg	8.6
Dibromochloromethane	ND	56	ug/kg	7.7
1,2-Dibromo-3-chloro-propane	ND	280	ug/kg	67
1,2-Dibromoethane	ND	280	ug/kg	11
1,2-Dichlorobenzene	ND	110	ug/kg	19
1,3-Dichlorobenzene	ND	110	ug/kg	8.0
1,4-Dichlorobenzene	ND	110	ug/kg	8.8
Dichlorodifluoromethane	ND	110	ug/kg	6.0
1,1-Dichloroethane	ND	56	ug/kg	8.1
1,2-Dichloroethane	ND	56	ug/kg	10
1,1-Dichloroethene	ND	56	ug/kg	9.3
cis-1,2-Dichloroethene	ND	56	ug/kg	16
trans-1,2-Dichloroethene	ND	56	ug/kg	12
1,2-Dichloropropane	ND	56	ug/kg	8.3
cis-1,3-Dichloropropene	ND	56	ug/kg	6.1
trans-1,3-Dichloropropene	ND	56	ug/kg	6.0
Ethylbenzene	ND	56	ug/kg	7.6
2-Hexanone	ND	2800	ug/kg	27
Isopropylbenzene	ND	280	ug/kg	5.7
Methyl acetate	ND	1300	ug/kg	58
Methylene chloride	ND	280	ug/kg	110
Methylcyclohexane	ND	1300	ug/kg	6.4
4-Methyl-2-pentanone	ND	2800	ug/kg	12
Methyl tert-butyl ether	ND	280	ug/kg	11
Styrene	ND	56	ug/kg	31

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-107

GC/MS Volatiles

Lot-Sample #...: A4G160169-008 Work Order #...: GK7811AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	9.1
Tetrachloroethene	ND	56	ug/kg	10
Toluene	ND	110	ug/kg	10
1,2,4-Trichloro-benzene	ND	280	ug/kg	13
1,1,1-Trichloroethane	ND	56	ug/kg	11
1,1,2-Trichloroethane	ND	56	ug/kg	11
Trichloroethene	**20 J**	**56**	**ug/kg**	**13**
Trichlorofluoromethane	ND	110	ug/kg	9.3
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	280	ug/kg	11
Vinyl chloride	ND	110	ug/kg	18
Xylenes (total)	ND	170	ug/kg	17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	68	(59 - 138)
1,2-Dichloroethane-d4	80	(61 - 130)
Toluene-d8	93	(60 - 143)
4-Bromofluorobenzene	84	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-108

GC/MS Volatiles

Lot-Sample #...: A4G160169-009 **Work Order #...:** GK7831AA **Matrix.....:** SO
Date Sampled...: 07/15/04 08:45 **Date Received..:** 07/16/04
Prep Date.....: 07/16/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203414
Dilution Factor: 1.07 **Initial Wgt/Vol:** 23.4 g **Final Wgt/Vol..:** 25 mL
% Moisture.....: 2.6 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	820	ug/kg	110
Benzene	ND	55	ug/kg	7.0
Bromodichloromethane	ND	110	ug/kg	13
Bromoform	ND	110	ug/kg	14
Bromomethane	ND	270	ug/kg	27
2-Butanone	ND	820	ug/kg	54
Carbon disulfide	ND	270	ug/kg	22
Carbon tetrachloride	ND	55	ug/kg	13
Chlorobenzene	ND	55	ug/kg	6.9
Chloroethane	ND	270	ug/kg	71
Chloroform	ND	55	ug/kg	13
Chloromethane	ND	270	ug/kg	5.7
Cyclohexane	ND	1300	ug/kg	8.5
Dibromochloromethane	ND	55	ug/kg	7.6
1,2-Dibromo-3-chloro-propane	ND	270	ug/kg	66
1,2-Dibromoethane	ND	270	ug/kg	11
1,2-Dichlorobenzene	ND	110	ug/kg	19
1,3-Dichlorobenzene	ND	110	ug/kg	7.9
1,4-Dichlorobenzene	ND	110	ug/kg	8.7
Dichlorodifluoromethane	ND	110	ug/kg	5.9
1,1-Dichloroethane	ND	55	ug/kg	8.0
1,2-Dichloroethane	ND	55	ug/kg	10
1,1-Dichloroethene	ND	55	ug/kg	9.1
cis-1,2-Dichloroethene	ND	55	ug/kg	15
trans-1,2-Dichloroethene	ND	55	ug/kg	12
1,2-Dichloropropane	ND	55	ug/kg	8.1
cis-1,3-Dichloropropene	ND	55	ug/kg	6.0
trans-1,3-Dichloropropene	ND	55	ug/kg	5.9
Ethylbenzene	ND	55	ug/kg	7.5
2-Hexanone	ND	2700	ug/kg	26
Isopropylbenzene	ND	270	ug/kg	5.6
Methyl acetate	ND	1300	ug/kg	57
Methylene chloride	ND	270	ug/kg	110
Methylcyclohexane	ND	1300	ug/kg	6.3
4-Methyl-2-pentanone	ND	2700	ug/kg	12
Methyl tert-butyl ether	ND	270	ug/kg	11
Styrene	ND	55	ug/kg	31

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-108

GC/MS Volatiles

Lot-Sample #...: A4G160169-009 **Work Order #...:** GK7831AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	9.0
Tetrachloroethene	ND	55	ug/kg	9.9
Toluene	ND	110	ug/kg	10
1,2,4-Trichloro-benzene	ND	270	ug/kg	13
1,1,1-Trichloroethane	ND	55	ug/kg	10
1,1,2-Trichloroethane	ND	55	ug/kg	11
Trichloroethene	**25 J**	**55**	**ug/kg**	**13**
Trichlorofluoromethane	ND	110	ug/kg	9.1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	270	ug/kg	11
Vinyl chloride	ND	110	ug/kg	18
Xylenes (total)	ND	160	ug/kg	16

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	71	(59 - 138)
1,2-Dichloroethane-d4	83	(61 - 130)
Toluene-d8	97	(60 - 143)
4-Bromofluorobenzene	86	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-109

GC/MS Volatiles

Lot-Sample #...:	A4G160169-010	**Work Order #...:**	GK7841AA	**Matrix.....:**	SO
Date Sampled...:	07/15/04 08:55	**Date Received..:**	07/16/04		
Prep Date.....:	07/16/04	**Analysis Date..:**	07/21/04		
Prep Batch #...:	4203414				
Dilution Factor:	1.2	**Initial Wgt/Vol:**	20.9 g	**Final Wgt/Vol..:**	25 mL
% Moisture.....:	3.0	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	930	ug/kg	120
Benzene	ND	62	ug/kg	7.9
Bromodichloromethane	ND	120	ug/kg	15
Bromoform	ND	120	ug/kg	16
Bromomethane	ND	310	ug/kg	31
2-Butanone	ND	930	ug/kg	61
Carbon disulfide	ND	310	ug/kg	25
Carbon tetrachloride	ND	62	ug/kg	15
Chlorobenzene	ND	62	ug/kg	7.8
Chloroethane	ND	310	ug/kg	80
Chloroform	ND	62	ug/kg	15
Chloromethane	ND	310	ug/kg	6.4
Cyclohexane	ND	1500	ug/kg	9.5
Dibromochloromethane	ND	62	ug/kg	8.5
1,2-Dibromo-3-chloro-propane	ND	310	ug/kg	74
1,2-Dibromoethane	ND	310	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	21
1,3-Dichlorobenzene	ND	120	ug/kg	8.9
1,4-Dichlorobenzene	ND	120	ug/kg	9.8
Dichlorodifluoromethane	ND	120	ug/kg	6.7
1,1-Dichloroethane	ND	62	ug/kg	9.0
1,2-Dichloroethane	ND	62	ug/kg	12
1,1-Dichloroethene	ND	62	ug/kg	10
cis-1,2-Dichloroethene	ND	62	ug/kg	17
trans-1,2-Dichloroethene	ND	62	ug/kg	14
1,2-Dichloropropane	ND	62	ug/kg	9.2
cis-1,3-Dichloropropene	ND	62	ug/kg	6.8
trans-1,3-Dichloropropene	ND	62	ug/kg	6.7
Ethylbenzene	ND	62	ug/kg	8.4
2-Hexanone	ND	3100	ug/kg	30
Isopropylbenzene	ND	310	ug/kg	6.3
Methyl acetate	ND	1500	ug/kg	64
Methylene chloride	ND	310	ug/kg	120
Methylcyclohexane	ND	1500	ug/kg	7.1
4-Methyl-2-pentanone	ND	3100	ug/kg	14
Methyl tert-butyl ether	ND	310	ug/kg	12
Styrene	ND	62	ug/kg	35

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-109

GC/MS Volatiles

Lot-Sample #...: A4G160169-010 Work Order #...: GK7841AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	10
Tetrachloroethene	ND	62	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	310	ug/kg	15
1,1,1-Trichloroethane	ND	62	ug/kg	12
1,1,2-Trichloroethane	ND	62	ug/kg	12
Trichloroethene	ND	62	ug/kg	15
Trichlorofluoromethane	ND	120	ug/kg	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	310	ug/kg	12
Vinyl chloride	ND	120	ug/kg	20
Xylenes (total)	ND	190	ug/kg	19

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	67	(59 - 138)
1,2-Dichloroethane-d4	81	(61 - 130)
Toluene-d8	94	(60 - 143)
4-Bromofluorobenzene	86	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-110

GC/MS Volatiles

Lot-Sample #...: A4G160169-011 **Work Order #...:** GK7861AA **Matrix.....:** SO
Date Sampled...: 07/15/04 09:00 **Date Received..:** 07/16/04
Prep Date.....: 07/17/04 **Analysis Date..:** 07/20/04
Prep Batch #...: 4203401
Dilution Factor: 1.32 **Initial Wgt/Vol:** 3.8 g **Final Wgt/Vol..:** 5 mL
% Moisture.....: 7.0 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	1100	ug/kg	140
Benzene	ND	71	ug/kg	9.1
Bromodichloromethane	ND	140	ug/kg	17
Bromoform	ND	140	ug/kg	18
Bromomethane	ND	350	ug/kg	35
2-Butanone	ND	1100	ug/kg	70
Carbon disulfide	ND	350	ug/kg	28
Carbon tetrachloride	ND	71	ug/kg	17
Chlorobenzene	ND	71	ug/kg	8.9
Chloroethane	ND	350	ug/kg	92
Chloroform	ND	71	ug/kg	17
Chloromethane	ND	350	ug/kg	7.4
Cyclohexane	ND	1700	ug/kg	11
Dibromochloromethane	ND	71	ug/kg	9.8
1,2-Dibromo-3-chloro-propane	ND	350	ug/kg	85
1,2-Dibromoethane	ND	350	ug/kg	14
1,2-Dichlorobenzene	ND	140	ug/kg	24
1,3-Dichlorobenzene	ND	140	ug/kg	10
1,4-Dichlorobenzene	ND	140	ug/kg	11
Dichlorodifluoromethane	ND	140	ug/kg	7.7
1,1-Dichloroethane	ND	71	ug/kg	10
1,2-Dichloroethane	ND	71	ug/kg	13
1,1-Dichloroethene	ND	71	ug/kg	12
cis-1,2-Dichloroethene	ND	71	ug/kg	20
trans-1,2-Dichloroethene	ND	71	ug/kg	16
1,2-Dichloropropane	ND	71	ug/kg	11
cis-1,3-Dichloropropene	ND	71	ug/kg	7.8
trans-1,3-Dichloropropene	ND	71	ug/kg	7.7
Ethylbenzene	ND	71	ug/kg	9.7
2-Hexanone	ND	3500	ug/kg	34
Isopropylbenzene	ND	350	ug/kg	7.2
Methyl acetate	ND	1700	ug/kg	74
Methylene chloride	ND	350	ug/kg	140
Methylcyclohexane	ND	1700	ug/kg	8.1
4-Methyl-2-pentanone	ND	3500	ug/kg	16
Methyl tert-butyl ether	ND	350	ug/kg	14
Styrene	ND	71	ug/kg	40

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-110

GC/MS Volatiles

Lot-Sample #...: A4G160169-011 **Work Order #...:** GK7861AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	140	ug/kg	12
Tetrachloroethene	ND	71	ug/kg	13
Toluene	ND	140	ug/kg	13
1,2,4-Trichloro-benzene	ND	350	ug/kg	17
1,1,1-Trichloroethane	ND	71	ug/kg	13
1,1,2-Trichloroethane	ND	71	ug/kg	14
Trichloroethene	ND	71	ug/kg	17
Trichlorofluoromethane	ND	140	ug/kg	12
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	350	ug/kg	14
Vinyl chloride	ND	140	ug/kg	23
Xylenes (total)	ND	210	ug/kg	21

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	81	(59 - 138)
1,2-Dichloroethane-d4	82	(61 - 130)
Toluene-d8	98	(60 - 143)
4-Bromofluorobenzene	89	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-111

GC/MS Volatiles

Lot-Sample #...: A4G160169-012 **Work Order #...:** GK7881AA **Matrix.....:** SO
Date Sampled...: 07/15/04 10:50 **Date Received..:** 07/16/04
Prep Date.....: 07/17/04 **Analysis Date..:** 07/20/04
Prep Batch #...: 4203401
Dilution Factor: 1.25 **Initial Wgt/Vol:** 4 g **Final Wgt/Vol..:** 5 mL
% Moisture.....: 5.7 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	990	ug/kg	130
Benzene	ND	66	ug/kg	8.5
Bromodichloromethane	ND	130	ug/kg	16
Bromoform	ND	130	ug/kg	17
Bromomethane	ND	330	ug/kg	33
2-Butanone	ND	990	ug/kg	65
Carbon disulfide	ND	330	ug/kg	27
Carbon tetrachloride	ND	66	ug/kg	16
Chlorobenzene	ND	66	ug/kg	8.3
Chloroethane	ND	330	ug/kg	86
Chloroform	ND	66	ug/kg	16
Chloromethane	ND	330	ug/kg	6.9
Cyclohexane	ND	1600	ug/kg	10
Dibromochloromethane	ND	66	ug/kg	9.1
1,2-Dibromo-3-chloro-propane	ND	330	ug/kg	80
1,2-Dibromoethane	ND	330	ug/kg	13
1,2-Dichlorobenzene	ND	130	ug/kg	23
1,3-Dichlorobenzene	ND	130	ug/kg	9.5
1,4-Dichlorobenzene	ND	130	ug/kg	10
Dichlorodifluoromethane	ND	130	ug/kg	7.2
1,1-Dichloroethane	ND	66	ug/kg	9.7
1,2-Dichloroethane	ND	66	ug/kg	12
1,1-Dichloroethene	ND	66	ug/kg	11
cis-1,2-Dichloroethene	ND	66	ug/kg	19
trans-1,2-Dichloroethene	ND	66	ug/kg	15
1,2-Dichloropropane	ND	66	ug/kg	9.8
cis-1,3-Dichloropropene	ND	66	ug/kg	7.3
trans-1,3-Dichloropropene	ND	66	ug/kg	7.2
Ethylbenzene	ND	66	ug/kg	9.0
2-Hexanone	ND	3300	ug/kg	32
Isopropylbenzene	ND	330	ug/kg	6.8
Methyl acetate	ND	1600	ug/kg	69
Methylene chloride	ND	330	ug/kg	130
Methylcyclohexane	ND	1600	ug/kg	7.6
4-Methyl-2-pentanone	ND	3300	ug/kg	15
Methyl tert-butyl ether	ND	330	ug/kg	13
Styrene	ND	66	ug/kg	37

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-111

GC/MS Volatiles

Lot-Sample #...: A4G160169-012 Work Order #...: GK7881AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	130	ug/kg	11
Tetrachloroethene	ND	66	ug/kg	12
Toluene	ND	130	ug/kg	12
1,2,4-Trichloro-benzene	ND	330	ug/kg	16
1,1,1-Trichloroethane	ND	66	ug/kg	13
1,1,2-Trichloroethane	ND	66	ug/kg	13
Trichloroethene	**190**	**66**	**ug/kg**	**16**
Trichlorofluoromethane	ND	130	ug/kg	11
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	330	ug/kg	13
Vinyl chloride	ND	130	ug/kg	21
Xylenes (total)	ND	200	ug/kg	20

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	79	(59 - 138)
1,2-Dichloroethane-d4	86	(61 - 130)
Toluene-d8	100	(60 - 143)
4-Bromofluorobenzene	93	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-112

GC/MS Volatiles

Lot-Sample #...:	A4G160169-013	**Work Order #...:**	GK7891AA	**Matrix.....:**	SO
Date Sampled...:	07/15/04 10:55	**Date Received..:**	07/16/04		
Prep Date.....:	07/17/04	**Analysis Date..:**	07/20/04		
Prep Batch #...:	4203401				
Dilution Factor:	1.47	**Initial Wgt/Vol:**	3.4 g	**Final Wgt/Vol..:**	5 mL
% Moisture.....:	3.2	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	1100	ug/kg	150
Benzene	ND	76	ug/kg	9.7
Bromodichloromethane	ND	150	ug/kg	18
Bromoform	ND	150	ug/kg	20
Bromomethane	ND	380	ug/kg	38
2-Butanone	ND	1100	ug/kg	74
Carbon disulfide	ND	380	ug/kg	30
Carbon tetrachloride	ND	76	ug/kg	18
Chlorobenzene	ND	76	ug/kg	9.6
Chloroethane	ND	380	ug/kg	99
Chloroform	ND	76	ug/kg	18
Chloromethane	**27 J**	**380**	**ug/kg**	**7.9**
Cyclohexane	ND	1800	ug/kg	12
Dibromochloromethane	ND	76	ug/kg	10
1,2-Dibromo-3-chloro-propane	ND	380	ug/kg	91
1,2-Dibromoethane	ND	380	ug/kg	15
1,2-Dichlorobenzene	ND	150	ug/kg	26
1,3-Dichlorobenzene	ND	150	ug/kg	11
1,4-Dichlorobenzene	ND	150	ug/kg	12
Dichlorodifluoromethane	ND	150	ug/kg	8.2
1,1-Dichloroethane	ND	76	ug/kg	11
1,2-Dichloroethane	ND	76	ug/kg	14
1,1-Dichloroethene	ND	76	ug/kg	13
cis-1,2-Dichloroethene	ND	76	ug/kg	21
trans-1,2-Dichloroethene	ND	76	ug/kg	17
1,2-Dichloropropane	ND	76	ug/kg	11
cis-1,3-Dichloropropene	ND	76	ug/kg	8.3
trans-1,3-Dichloropropene	ND	76	ug/kg	8.2
Ethylbenzene	ND	76	ug/kg	10
2-Hexanone	ND	3800	ug/kg	36
Isopropylbenzene	ND	380	ug/kg	7.7
Methyl acetate	ND	1800	ug/kg	79
Methylene chloride	ND	380	ug/kg	150
Methylcyclohexane	ND	1800	ug/kg	8.7
4-Methyl-2-pentanone	ND	3800	ug/kg	17
Methyl tert-butyl ether	ND	380	ug/kg	15
Styrene	ND	76	ug/kg	43

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-112

GC/MS Volatiles

Lot-Sample #...: A4G160169-013 **Work Order #...:** GK7891AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	150	ug/kg	12
Tetrachloroethene	ND	76	ug/kg	14
Toluene	ND	150	ug/kg	14
1,2,4-Trichloro-benzene	ND	380	ug/kg	18
1,1,1-Trichloroethane	ND	76	ug/kg	14
1,1,2-Trichloroethane	ND	76	ug/kg	15
Trichloroethene	ND	76	ug/kg	18
Trichlorofluoromethane	ND	150	ug/kg	13
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	380	ug/kg	15
Vinyl chloride	ND	150	ug/kg	24
Xylenes (total)	ND	230	ug/kg	23

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	82	(59 - 138)
1,2-Dichloroethane-d4	88	(61 - 130)
Toluene-d8	104	(60 - 143)
4-Bromofluorobenzene	93	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-113

GC/MS Volatiles

Lot-Sample #...:	A4G160169-014	**Work Order #...:**	GK79C1AA	**Matrix.....:**	SO
Date Sampled...:	07/15/04 11:00	**Date Received..:**	07/16/04		
Prep Date.....:	07/17/04	**Analysis Date..:**	07/20/04		
Prep Batch #...:	4203401				
Dilution Factor:	1.61	**Initial Wgt/Vol:**	3.1 g	**Final Wgt/Vol..:**	5 mL
% Moisture.....:	1.7	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	1200	ug/kg	160
Benzene	ND	82	ug/kg	10
Bromodichloromethane	ND	160	ug/kg	20
Bromoform	ND	160	ug/kg	21
Bromomethane	ND	410	ug/kg	41
2-Butanone	ND	1200	ug/kg	80
Carbon disulfide	ND	410	ug/kg	33
Carbon tetrachloride	ND	82	ug/kg	20
Chlorobenzene	ND	82	ug/kg	10
Chloroethane	ND	410	ug/kg	110
Chloroform	ND	82	ug/kg	20
Chloromethane	ND	410	ug/kg	8.5
Cyclohexane	ND	2000	ug/kg	13
Dibromochloromethane	ND	82	ug/kg	11
1,2-Dibromo-3-chloro-propane	ND	410	ug/kg	98
1,2-Dibromoethane	ND	410	ug/kg	16
1,2-Dichlorobenzene	ND	160	ug/kg	28
1,3-Dichlorobenzene	ND	160	ug/kg	12
1,4-Dichlorobenzene	ND	160	ug/kg	13
Dichlorodifluoromethane	ND	160	ug/kg	8.8
1,1-Dichloroethane	ND	82	ug/kg	12
1,2-Dichloroethane	ND	82	ug/kg	15
1,1-Dichloroethene	ND	82	ug/kg	14
cis-1,2-Dichloroethene	ND	82	ug/kg	23
trans-1,2-Dichloroethene	ND	82	ug/kg	18
1,2-Dichloropropane	ND	82	ug/kg	12
cis-1,3-Dichloropropene	ND	82	ug/kg	9.0
trans-1,3-Dichloropropene	ND	82	ug/kg	8.8
Ethylbenzene	ND	82	ug/kg	11
2-Hexanone	ND	4100	ug/kg	39
Isopropylbenzene	ND	410	ug/kg	8.4
Methyl acetate	ND	2000	ug/kg	85
Methylene chloride	ND	410	ug/kg	160
Methylcyclohexane	ND	2000	ug/kg	9.3
4-Methyl-2-pentanone	ND	4100	ug/kg	18
Methyl tert-butyl ether	ND	410	ug/kg	16
Styrene	ND	82	ug/kg	46

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-113

GC/MS Volatiles

Lot-Sample #...: A4G160169-014 **Work Order #...:** GK79C1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	160	ug/kg	13
Tetrachloroethene	ND	82	ug/kg	15
Toluene	ND	160	ug/kg	15
1,2,4-Trichloro-benzene	ND	410	ug/kg	20
1,1,1-Trichloroethane	ND	82	ug/kg	16
1,1,2-Trichloroethane	ND	82	ug/kg	16
Trichloroethene	ND	82	ug/kg	20
Trichlorofluoromethane	ND	160	ug/kg	14
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	410	ug/kg	16
Vinyl chloride	ND	160	ug/kg	26
Xylenes (total)	ND	250	ug/kg	25

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	83	(59 - 138)
1,2-Dichloroethane-d4	89	(61 - 130)
Toluene-d8	107	(60 - 143)
4-Bromofluorobenzene	97	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-114

GC/MS Volatiles

Lot-Sample #...: A4G160169-015	**Work Order #...:** GK79D1AA	**Matrix.....:** SO	
Date Sampled...: 07/15/04 11:05	**Date Received..:** 07/16/04		
Prep Date.....: 07/17/04	**Analysis Date..:** 07/20/04		
Prep Batch #...: 4203401			
Dilution Factor: 1.16	**Initial Wgt/Vol:** 4.3 g	**Final Wgt/Vol..:** 5 mL	
% Moisture.....: 1.9	**Method.....:** SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	890	ug/kg	120
Benzene	ND	59	ug/kg	7.6
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	15
Bromomethane	ND	300	ug/kg	30
2-Butanone	ND	890	ug/kg	58
Carbon disulfide	ND	300	ug/kg	24
Carbon tetrachloride	ND	59	ug/kg	14
Chlorobenzene	ND	59	ug/kg	7.4
Chloroethane	ND	300	ug/kg	77
Chloroform	ND	59	ug/kg	14
Chloromethane	ND	300	ug/kg	6.1
Cyclohexane	ND	1400	ug/kg	9.1
Dibromochloromethane	ND	59	ug/kg	8.2
1,2-Dibromo-3-chloro-propane	ND	300	ug/kg	71
1,2-Dibromoethane	ND	300	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.5
1,4-Dichlorobenzene	ND	120	ug/kg	9.3
Dichlorodifluoromethane	ND	120	ug/kg	6.4
1,1-Dichloroethane	ND	59	ug/kg	8.6
1,2-Dichloroethane	ND	59	ug/kg	11
1,1-Dichloroethene	ND	59	ug/kg	9.8
cis-1,2-Dichloroethene	ND	59	ug/kg	17
trans-1,2-Dichloroethene	ND	59	ug/kg	13
1,2-Dichloropropane	ND	59	ug/kg	8.7
cis-1,3-Dichloropropene	ND	59	ug/kg	6.5
trans-1,3-Dichloropropene	ND	59	ug/kg	6.4
Ethylbenzene	ND	59	ug/kg	8.0
2-Hexanone	ND	3000	ug/kg	28
Isopropylbenzene	ND	300	ug/kg	6.0
Methyl acetate	ND	1400	ug/kg	61
Methylene chloride	ND	300	ug/kg	120
Methylcyclohexane	ND	1400	ug/kg	6.7
4-Methyl-2-pentanone	ND	3000	ug/kg	13
Methyl tert-butyl ether	ND	300	ug/kg	12
Styrene	ND	59	ug/kg	33

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-114

GC/MS Volatiles

Lot-Sample #...: A4G160169-015 Work Order #...: GK79D1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.7
Tetrachloroethene	ND	59	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	300	ug/kg	14
1,1,1-Trichloroethane	ND	59	ug/kg	11
1,1,2-Trichloroethane	ND	59	ug/kg	12
Trichloroethene	ND	59	ug/kg	14
Trichlorofluoromethane	ND	120	ug/kg	9.8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	300	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	ND	180	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	82	(59 - 138)
1,2-Dichloroethane-d4	92	(61 - 130)
Toluene-d8	106	(60 - 143)
4-Bromofluorobenzene	97	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-115

GC/MS Volatiles

Lot-Sample #...: A4G160169-016 Work Order #...: GK79H1AA Matrix.....: SO
Date Sampled...: 07/15/04 11:10 Date Received..: 07/16/04
Prep Date.....: 07/17/04 Analysis Date..: 07/20/04
Prep Batch #...: 4203401
Dilution Factor: 1.14 Initial Wgt/Vol: 4.4 g Final Wgt/Vol..: 5 mL
% Moisture.....: 2.9 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	880	ug/kg	120
Benzene	ND	59	ug/kg	7.5
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	15
Bromomethane	ND	290	ug/kg	29
2-Butanone	ND	880	ug/kg	58
Carbon disulfide	ND	290	ug/kg	23
Carbon tetrachloride	ND	59	ug/kg	14
Chlorobenzene	ND	59	ug/kg	7.4
Chloroethane	ND	290	ug/kg	76
Chloroform	ND	59	ug/kg	14
Chloromethane	ND	290	ug/kg	6.1
Cyclohexane	ND	1400	ug/kg	9.0
Dibromochloromethane	ND	59	ug/kg	8.1
1,2-Dibromo-3-chloro-propane	ND	290	ug/kg	70
1,2-Dibromoethane	ND	290	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.4
1,4-Dichlorobenzene	ND	120	ug/kg	9.3
Dichlorodifluoromethane	ND	120	ug/kg	6.3
1,1-Dichloroethane	ND	59	ug/kg	8.6
1,2-Dichloroethane	ND	59	ug/kg	11
1,1-Dichloroethene	ND	59	ug/kg	9.7
cis-1,2-Dichloroethene	ND	59	ug/kg	16
trans-1,2-Dichloroethene	ND	59	ug/kg	13
1,2-Dichloropropane	ND	59	ug/kg	8.7
cis-1,3-Dichloropropene	ND	59	ug/kg	6.5
trans-1,3-Dichloropropene	ND	59	ug/kg	6.3
Ethylbenzene	ND	59	ug/kg	8.0
2-Hexanone	ND	2900	ug/kg	28
Isopropylbenzene	ND	290	ug/kg	6.0
Methyl acetate	ND	1400	ug/kg	61
Methylene chloride	ND	290	ug/kg	120
Methylcyclohexane	ND	1400	ug/kg	6.7
4-Methyl-2-pentanone	ND	2900	ug/kg	13
Methyl tert-butyl ether	ND	290	ug/kg	12
Styrene	ND	59	ug/kg	33

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-115

GC/MS Volatiles

Lot-Sample #...: A4G160169-016 **Work Order #...:** GK79H1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.6
Tetrachloroethene	ND	59	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	290	ug/kg	14
1,1,1-Trichloroethane	ND	59	ug/kg	11
1,1,2-Trichloroethane	ND	59	ug/kg	12
Trichloroethene	ND	59	ug/kg	14
Trichlorofluoromethane	ND	120	ug/kg	9.7
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	290	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	ND	180	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	86	(59 - 138)
1,2-Dichloroethane-d4	94	(61 - 130)
Toluene-d8	107	(60 - 143)
4-Bromofluorobenzene	95	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-116

GC/MS Volatiles

Lot-Sample #...:	A4G160169-017	Work Order #...:	GK79J1AA	Matrix.....:	SO
Date Sampled...:	07/15/04 11:20	Date Received..:	07/16/04		
Prep Date.....:	07/17/04	Analysis Date..:	07/20/04		
Prep Batch #...:	4203401				
Dilution Factor:	1.25	Initial Wgt/Vol:	4 g	Final Wgt/Vol..:	5 mL
% Moisture.....:	4.8	Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	980	ug/kg	130
Benzene	ND	66	ug/kg	8.4
Bromodichloromethane	ND	130	ug/kg	16
Bromoform	ND	130	ug/kg	17
Bromomethane	ND	330	ug/kg	33
2-Butanone	ND	980	ug/kg	64
Carbon disulfide	ND	330	ug/kg	26
Carbon tetrachloride	ND	66	ug/kg	16
Chlorobenzene	ND	66	ug/kg	8.3
Chloroethane	ND	330	ug/kg	85
Chloroform	ND	66	ug/kg	16
Chloromethane	**21 J**	**330**	**ug/kg**	**6.8**
Cyclohexane	ND	1600	ug/kg	10
Dibromochloromethane	ND	66	ug/kg	9.1
1,2-Dibromo-3-chloro-propane	ND	330	ug/kg	79
1,2-Dibromoethane	ND	330	ug/kg	13
1,2-Dichlorobenzene	ND	130	ug/kg	22
1,3-Dichlorobenzene	ND	130	ug/kg	9.5
1,4-Dichlorobenzene	ND	130	ug/kg	10
Dichlorodifluoromethane	ND	130	ug/kg	7.1
1,1-Dichloroethane	ND	66	ug/kg	9.6
1,2-Dichloroethane	ND	66	ug/kg	12
1,1-Dichloroethene	ND	66	ug/kg	11
cis-1,2-Dichloroethene	ND	66	ug/kg	18
trans-1,2-Dichloroethene	ND	66	ug/kg	14
1,2-Dichloropropane	ND	66	ug/kg	9.7
cis-1,3-Dichloropropene	ND	66	ug/kg	7.2
trans-1,3-Dichloropropene	ND	66	ug/kg	7.1
Ethylbenzene	ND	66	ug/kg	8.9
2-Hexanone	ND	3300	ug/kg	32
Isopropylbenzene	ND	330	ug/kg	6.7
Methyl acetate	ND	1600	ug/kg	68
Methylene chloride	ND	330	ug/kg	130
Methylcyclohexane	ND	1600	ug/kg	7.5
4-Methyl-2-pentanone	ND	3300	ug/kg	14
Methyl tert-butyl ether	ND	330	ug/kg	13
Styrene	ND	66	ug/kg	37

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-116

GC/MS Volatiles

Lot-Sample #...: A4G160169-017 Work Order #...: GK79J1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	130	ug/kg	11
Tetrachloroethene	ND	66	ug/kg	12
Toluene	ND	130	ug/kg	12
1,2,4-Trichloro-benzene	ND	330	ug/kg	16
1,1,1-Trichloroethane	ND	66	ug/kg	12
1,1,2-Trichloroethane	ND	66	ug/kg	13
Trichloroethene	ND	66	ug/kg	16
Trichlorofluoromethane	ND	130	ug/kg	11
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	330	ug/kg	13
Vinyl chloride	ND	130	ug/kg	21
Xylenes (total)	ND	200	ug/kg	20

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	81	(59 - 138)
1,2-Dichloroethane-d4	88	(61 - 130)
Toluene-d8	103	(60 - 143)
4-Bromofluorobenzene	93	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-117

GC/MS Volatiles

Lot-Sample #...: A4G160169-018 **Work Order #...:** GK79K1AA **Matrix.....:** SO
Date Sampled...: 07/15/04 11:25 **Date Received..:** 07/16/04
Prep Date.....: 07/17/04 **Analysis Date..:** 07/20/04
Prep Batch #...: 4203401
Dilution Factor: 1.09 **Initial Wgt/Vol:** 4.6 g **Final Wgt/Vol..:** 5 mL
% Moisture.....: 3.8 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	850	ug/kg	110
Benzene	ND	57	ug/kg	7.3
Bromodichloromethane	ND	110	ug/kg	14
Bromoform	ND	110	ug/kg	15
Bromomethane	ND	280	ug/kg	28
2-Butanone	ND	850	ug/kg	56
Carbon disulfide	ND	280	ug/kg	23
Carbon tetrachloride	ND	57	ug/kg	14
Chlorobenzene	ND	57	ug/kg	7.1
Chloroethane	ND	280	ug/kg	74
Chloroform	ND	57	ug/kg	14
Chloromethane	**18 J**	**280**	**ug/kg**	**5.9**
Cyclohexane	ND	1400	ug/kg	8.7
Dibromochloromethane	ND	57	ug/kg	7.8
1,2-Dibromo-3-chloro-propane	ND	280	ug/kg	68
1,2-Dibromoethane	ND	280	ug/kg	11
1,2-Dichlorobenzene	ND	110	ug/kg	19
1,3-Dichlorobenzene	ND	110	ug/kg	8.2
1,4-Dichlorobenzene	ND	110	ug/kg	9.0
Dichlorodifluoromethane	ND	110	ug/kg	6.1
1,1-Dichloroethane	ND	57	ug/kg	8.3
1,2-Dichloroethane	ND	57	ug/kg	11
1,1-Dichloroethene	ND	57	ug/kg	9.4
cis-1,2-Dichloroethene	ND	57	ug/kg	16
trans-1,2-Dichloroethene	ND	57	ug/kg	12
1,2-Dichloropropane	ND	57	ug/kg	8.4
cis-1,3-Dichloropropene	ND	57	ug/kg	6.2
trans-1,3-Dichloropropene	ND	57	ug/kg	6.1
Ethylbenzene	ND	57	ug/kg	7.7
2-Hexanone	ND	2800	ug/kg	27
Isopropylbenzene	ND	280	ug/kg	5.8
Methyl acetate	ND	1400	ug/kg	59
Methylene chloride	ND	280	ug/kg	110
Methylcyclohexane	ND	1400	ug/kg	6.5
4-Methyl-2-pentanone	ND	2800	ug/kg	12
Methyl tert-butyl ether	ND	280	ug/kg	11
Styrene	ND	57	ug/kg	32

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-117

GC/MS Volatiles

Lot-Sample #...: A4G160169-018 **Work Order #...:** GK79K1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	9.3
Tetrachloroethene	ND	57	ug/kg	10
Toluene	ND	110	ug/kg	10
1,2,4-Trichloro-benzene	ND	280	ug/kg	14
1,1,1-Trichloroethane	ND	57	ug/kg	11
1,1,2-Trichloroethane	ND	57	ug/kg	11
Trichloroethene	ND	57	ug/kg	14
Trichlorofluoromethane	ND	110	ug/kg	9.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	280	ug/kg	11
Vinyl chloride	ND	110	ug/kg	18
Xylenes (total)	ND	170	ug/kg	17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	77	(59 - 138)
1,2-Dichloroethane-d4	86	(61 - 130)
Toluene-d8	100	(60 - 143)
4-Bromofluorobenzene	92	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-118

GC/MS Volatiles

Lot-Sample #...: A4G160169-019 Work Order #...: GK79M1AA Matrix.....: SO
Date Sampled...: 07/15/04 11:30 Date Received..: 07/16/04
Prep Date.....: 07/17/04 Analysis Date..: 07/20/04
Prep Batch #...: 4203401
Dilution Factor: 1.19
% Moisture.....: 2.8 Initial Wgt/Vol: 4.2 g Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	920	ug/kg	120
Benzene	ND	61	ug/kg	7.8
Bromodichloromethane	ND	120	ug/kg	15
Bromoform	ND	120	ug/kg	16
Bromomethane	ND	310	ug/kg	31
2-Butanone	ND	920	ug/kg	60
Carbon disulfide	ND	310	ug/kg	24
Carbon tetrachloride	ND	61	ug/kg	15
Chlorobenzene	ND	61	ug/kg	7.7
Chloroethane	ND	310	ug/kg	80
Chloroform	ND	61	ug/kg	15
Chloromethane	ND	310	ug/kg	6.4
Cyclohexane	ND	1500	ug/kg	9.4
Dibromochloromethane	ND	61	ug/kg	8.4
1,2-Dibromo-3-chloro-propane	ND	310	ug/kg	73
1,2-Dibromoethane	ND	310	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	21
1,3-Dichlorobenzene	ND	120	ug/kg	8.8
1,4-Dichlorobenzene	ND	120	ug/kg	9.7
Dichlorodifluoromethane	ND	120	ug/kg	6.6
1,1-Dichloroethane	ND	61	ug/kg	8.9
1,2-Dichloroethane	ND	61	ug/kg	11
1,1-Dichloroethene	ND	61	ug/kg	10
cis-1,2-Dichloroethene	ND	61	ug/kg	17
trans-1,2-Dichloroethene	ND	61	ug/kg	13
1,2-Dichloropropane	ND	61	ug/kg	9.1
cis-1,3-Dichloropropene	ND	61	ug/kg	6.7
trans-1,3-Dichloropropene	ND	61	ug/kg	6.6
Ethylbenzene	ND	61	ug/kg	8.3
2-Hexanone	ND	3100	ug/kg	29
Isopropylbenzene	ND	310	ug/kg	6.2
Methyl acetate	ND	1500	ug/kg	64
Methylene chloride	ND	310	ug/kg	120
Methylcyclohexane	ND	1500	ug/kg	7.0
4-Methyl-2-pentanone	ND	3100	ug/kg	13
Methyl tert-butyl ether	ND	310	ug/kg	12
Styrene	ND	61	ug/kg	34

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-118

GC/MS Volatiles

Lot-Sample #...: A4G160169-019 Work Order #...: GK79M1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	10
Tetrachloroethene	ND	61	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	310	ug/kg	15
1,1,1-Trichloroethane	ND	61	ug/kg	12
1,1,2-Trichloroethane	ND	61	ug/kg	12
Trichloroethene	**41 J**	**61**	**ug/kg**	**15**
Trichlorofluoromethane	ND	120	ug/kg	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	310	ug/kg	12
Vinyl chloride	ND	120	ug/kg	20
Xylenes (total)	ND	180	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	79	(59 - 138)
1,2-Dichloroethane-d4	87	(61 - 130)
Toluene-d8	102	(60 - 143)
4-Bromofluorobenzene	93	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-119

GC/MS Volatiles

Lot-Sample #...:	A4G160169-020	Work Order #...:	GK79P1AA	Matrix.....:	SO
Date Sampled...:	07/15/04 11:40	Date Received..:	07/16/04		
Prep Date.....:	07/17/04	Analysis Date..:	07/20/04		
Prep Batch #...:	4203401				
Dilution Factor:	1.16	Initial Wgt/Vol:	4.3 g	Final Wgt/Vol..:	5 mL
% Moisture.....:	1.5	Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	880	ug/kg	120
Benzene	ND	59	ug/kg	7.5
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	15
Bromomethane	ND	290	ug/kg	29
2-Butanone	ND	880	ug/kg	58
Carbon disulfide	ND	290	ug/kg	24
Carbon tetrachloride	ND	59	ug/kg	14
Chlorobenzene	ND	59	ug/kg	7.4
Chloroethane	ND	290	ug/kg	77
Chloroform	ND	59	ug/kg	14
Chloromethane	ND	290	ug/kg	6.1
Cyclohexane	ND	1400	ug/kg	9.1
Dibromochloromethane	ND	59	ug/kg	8.1
1,2-Dibromo-3-chloro-propane	ND	290	ug/kg	71
1,2-Dibromoethane	ND	290	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.5
1,4-Dichlorobenzene	ND	120	ug/kg	9.3
Dichlorodifluoromethane	ND	120	ug/kg	6.4
1,1-Dichloroethane	ND	59	ug/kg	8.6
1,2-Dichloroethane	ND	59	ug/kg	11
1,1-Dichloroethene	ND	59	ug/kg	9.8
cis-1,2-Dichloroethene	ND	59	ug/kg	16
trans-1,2-Dichloroethene	ND	59	ug/kg	13
1,2-Dichloropropane	ND	59	ug/kg	8.7
cis-1,3-Dichloropropene	ND	59	ug/kg	6.5
trans-1,3-Dichloropropene	ND	59	ug/kg	6.4
Ethylbenzene	ND	59	ug/kg	8.0
2-Hexanone	ND	2900	ug/kg	28
Isopropylbenzene	ND	290	ug/kg	6.0
Methyl acetate	ND	1400	ug/kg	61
Methylene chloride	ND	290	ug/kg	120
Methylcyclohexane	ND	1400	ug/kg	6.7
4-Methyl-2-pentanone	ND	2900	ug/kg	13
Methyl tert-butyl ether	ND	290	ug/kg	12
Styrene	ND	59	ug/kg	33

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-119

GC/MS Volatiles

Lot-Sample #...: A4G160169-020 **Work Order #...:** GK79P1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.7
Tetrachloroethene	ND	59	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	290	ug/kg	14
1,1,1-Trichloroethane	ND	59	ug/kg	11
1,1,2-Trichloroethane	ND	59	ug/kg	12
Trichloroethene	ND	59	ug/kg	14
Trichlorofluoromethane	ND	120	ug/kg	9.8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	290	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	ND	180	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	77	(59 - 138)
1,2-Dichloroethane-d4	89	(61 - 130)
Toluene-d8	102	(60 - 143)
4-Bromofluorobenzene	94	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-120

GC/MS Volatiles

Lot-Sample #...: A4G160169-021 Work Order #...: GK79T1AA Matrix.....: SO
Date Sampled...: 07/15/04 11:50 Date Received..: 07/16/04
Prep Date.....: 07/17/04 Analysis Date..: 07/20/04
Prep Batch #...: 4203401
Dilution Factor: 1.04 Initial Wgt/Vol: 4.8 g Final Wgt/Vol..: 5 mL
% Moisture.....: 2.6 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	800	ug/kg	110
Benzene	ND	53	ug/kg	6.8
Bromodichloromethane	ND	110	ug/kg	13
Bromoform	ND	110	ug/kg	14
Bromomethane	ND	270	ug/kg	27
2-Butanone	ND	800	ug/kg	52
Carbon disulfide	ND	270	ug/kg	21
Carbon tetrachloride	ND	53	ug/kg	13
Chlorobenzene	ND	53	ug/kg	6.7
Chloroethane	ND	270	ug/kg	69
Chloroform	ND	53	ug/kg	13
Chloromethane	ND	270	ug/kg	5.6
Cyclohexane	ND	1300	ug/kg	8.2
Dibromochloromethane	ND	53	ug/kg	7.4
1,2-Dibromo-3-chloro-propane	ND	270	ug/kg	64
1,2-Dibromoethane	ND	270	ug/kg	11
1,2-Dichlorobenzene	ND	110	ug/kg	18
1,3-Dichlorobenzene	ND	110	ug/kg	7.7
1,4-Dichlorobenzene	ND	110	ug/kg	8.4
Dichlorodifluoromethane	ND	110	ug/kg	5.8
1,1-Dichloroethane	ND	53	ug/kg	7.8
1,2-Dichloroethane	ND	53	ug/kg	9.9
1,1-Dichloroethene	ND	53	ug/kg	8.9
cis-1,2-Dichloroethene	ND	53	ug/kg	15
trans-1,2-Dichloroethene	ND	53	ug/kg	12
1,2-Dichloropropane	ND	53	ug/kg	7.9
cis-1,3-Dichloropropene	ND	53	ug/kg	5.9
trans-1,3-Dichloropropene	ND	53	ug/kg	5.8
Ethylbenzene	ND	53	ug/kg	7.3
2-Hexanone	ND	2700	ug/kg	26
Isopropylbenzene	ND	270	ug/kg	5.4
Methyl acetate	ND	1300	ug/kg	56
Methylene chloride	ND	270	ug/kg	110
Methylcyclohexane	ND	1300	ug/kg	6.1
4-Methyl-2-pentanone	ND	2700	ug/kg	12
Methyl tert-butyl ether	ND	270	ug/kg	11
Styrene	ND	53	ug/kg	30

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-120

GC/MS Volatiles

Lot-Sample #...: A4G160169-021 Work Order #...: GK79T1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	8.8
Tetrachloroethene	ND	53	ug/kg	9.6
Toluene	ND	110	ug/kg	9.7
1,2,4-Trichloro-benzene	ND	270	ug/kg	13
1,1,1-Trichloroethane	ND	53	ug/kg	10
1,1,2-Trichloroethane	ND	53	ug/kg	11
Trichloroethene	ND	53	ug/kg	13
Trichlorofluoromethane	ND	110	ug/kg	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	270	ug/kg	11
Vinyl chloride	ND	110	ug/kg	17
Xylenes (total)	ND	160	ug/kg	16

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	74	(59 - 138)
1,2-Dichloroethane-d4	84	(61 - 130)
Toluene-d8	96	(60 - 143)
4-Bromofluorobenzene	87	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-121

GC/MS Volatiles

Lot-Sample #...: A4G160169-022	Work Order #...: GK79W1AA	Matrix.....: SO	
Date Sampled...: 07/15/04 12:00	Date Received..: 07/16/04		
Prep Date.....: 07/17/04	Analysis Date..: 07/20/04		
Prep Batch #...: 4203401			
Dilution Factor: 1.02	Initial Wgt/Vol: 4.9 g	Final Wgt/Vol..: 5 mL	
% Moisture.....: 4.6	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	800	ug/kg	110
Benzene	ND	53	ug/kg	6.8
Bromodichloromethane	ND	110	ug/kg	13
Bromoform	ND	110	ug/kg	14
Bromomethane	ND	270	ug/kg	27
2-Butanone	ND	800	ug/kg	52
Carbon disulfide	ND	270	ug/kg	21
Carbon tetrachloride	ND	53	ug/kg	13
Chlorobenzene	ND	53	ug/kg	6.7
Chloroethane	ND	270	ug/kg	69
Chloroform	ND	53	ug/kg	13
Chloromethane	**23 J**	**270**	**ug/kg**	**5.6**
Cyclohexane	ND	1300	ug/kg	8.2
Dibromochloromethane	ND	53	ug/kg	7.4
1,2-Dibromo-3-chloro-propane	ND	270	ug/kg	64
1,2-Dibromoethane	ND	270	ug/kg	11
1,2-Dichlorobenzene	ND	110	ug/kg	18
1,3-Dichlorobenzene	ND	110	ug/kg	7.7
1,4-Dichlorobenzene	ND	110	ug/kg	8.4
Dichlorodifluoromethane	ND	110	ug/kg	5.8
1,1-Dichloroethane	ND	53	ug/kg	7.8
1,2-Dichloroethane	ND	53	ug/kg	9.9
1,1-Dichloroethene	ND	53	ug/kg	8.9
cis-1,2-Dichloroethene	ND	53	ug/kg	15
trans-1,2-Dichloroethene	ND	53	ug/kg	12
1,2-Dichloropropane	ND	53	ug/kg	7.9
cis-1,3-Dichloropropene	ND	53	ug/kg	5.9
trans-1,3-Dichloropropene	ND	53	ug/kg	5.8
Ethylbenzene	ND	53	ug/kg	7.3
2-Hexanone	ND	2700	ug/kg	26
Isopropylbenzene	ND	270	ug/kg	5.4
Methyl acetate	ND	1300	ug/kg	56
Methylene chloride	ND	270	ug/kg	110
Methylcyclohexane	ND	1300	ug/kg	6.1
4-Methyl-2-pentanone	ND	2700	ug/kg	12
Methyl tert-butyl ether	ND	270	ug/kg	11
Styrene	ND	53	ug/kg	30

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-121

GC/MS Volatiles

Lot-Sample #...: A4G160169-022 Work Order #...: GK79W1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	8.8
Tetrachloroethene	ND	53	ug/kg	9.6
Toluene	ND	110	ug/kg	9.7
1,2,4-Trichloro-benzene	ND	270	ug/kg	13
1,1,1-Trichloroethane	ND	53	ug/kg	10
1,1,2-Trichloroethane	ND	53	ug/kg	11
Trichloroethene	**18 J**	**53**	**ug/kg**	**13**
Trichlorofluoromethane	ND	110	ug/kg	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	270	ug/kg	11
Vinyl chloride	ND	110	ug/kg	17
Xylenes (total)	ND	160	ug/kg	16

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	78	(59 - 138)
1,2-Dichloroethane-d4	85	(61 - 130)
Toluene-d8	97	(60 - 143)
4-Bromofluorobenzene	90	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-122

GC/MS Volatiles

Lot-Sample #...: A4G160169-023 **Work Order #...:** GK7911AA **Matrix.....:** SO
Date Sampled...: 07/15/04 12:35 **Date Received..:** 07/16/04
Prep Date.....: 07/17/04 **Analysis Date..:** 07/20/04
Prep Batch #...: 4203401
Dilution Factor: 1.11 **Initial Wgt/Vol:** 4.5 g **Final Wgt/Vol..:** 5 mL
% Moisture.....: 5.4 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	880	ug/kg	120
Benzene	ND	59	ug/kg	7.5
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	15
Bromomethane	ND	290	ug/kg	29
2-Butanone	ND	880	ug/kg	57
Carbon disulfide	ND	290	ug/kg	23
Carbon tetrachloride	ND	59	ug/kg	14
Chlorobenzene	ND	59	ug/kg	7.4
Chloroethane	ND	290	ug/kg	76
Chloroform	ND	59	ug/kg	14
Chloromethane	ND	290	ug/kg	6.1
Cyclohexane	ND	1400	ug/kg	9.0
Dibromochloromethane	ND	59	ug/kg	8.1
1,2-Dibromo-3-chloro-propane	ND	290	ug/kg	70
1,2-Dibromoethane	ND	290	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.4
1,4-Dichlorobenzene	ND	120	ug/kg	9.3
Dichlorodifluoromethane	ND	120	ug/kg	6.3
1,1-Dichloroethane	ND	59	ug/kg	8.6
1,2-Dichloroethane	ND	59	ug/kg	11
1,1-Dichloroethene	ND	59	ug/kg	9.7
cis-1,2-Dichloroethene	ND	59	ug/kg	16
trans-1,2-Dichloroethene	ND	59	ug/kg	13
1,2-Dichloropropane	ND	59	ug/kg	8.7
cis-1,3-Dichloropropene	ND	59	ug/kg	6.5
trans-1,3-Dichloropropene	ND	59	ug/kg	6.3
Ethylbenzene	ND	59	ug/kg	8.0
2-Hexanone	ND	2900	ug/kg	28
Isopropylbenzene	ND	290	ug/kg	6.0
Methyl acetate	ND	1400	ug/kg	61
Methylene chloride	ND	290	ug/kg	120
Methylcyclohexane	**39 J**	**1400**	**ug/kg**	**6.7**
4-Methyl-2-pentanone	ND	2900	ug/kg	13
Methyl tert-butyl ether	ND	290	ug/kg	12
Styrene	ND	59	ug/kg	33

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-122

GC/MS Volatiles

Lot-Sample #...: A4G160169-023 Work Order #...: GK7911AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.6
Tetrachloroethene	ND	59	ug/kg	11
Toluene	**21 J**	**120**	**ug/kg**	**11**
1,2,4-Trichloro-benzene	ND	290	ug/kg	14
1,1,1-Trichloroethane	ND	59	ug/kg	11
1,1,2-Trichloroethane	ND	59	ug/kg	12
Trichloroethene	**2000**	**59**	**ug/kg**	**14**
Trichlorofluoromethane	ND	120	ug/kg	9.7
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	290	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	**38 J**	**180**	**ug/kg**	**18**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	78	(59 - 138)
1,2-Dichloroethane-d4	87	(61 - 130)
Toluene-d8	100	(60 - 143)
4-Bromofluorobenzene	91	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-123

GC/MS Volatiles

Lot-Sample #...: A4G160169-024 **Work Order #...:** GK7931AA **Matrix.....:** SO
Date Sampled...: 07/15/04 12:40 **Date Received..:** 07/16/04
Prep Date.....: 07/17/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203412
Dilution Factor: 1.09 **Initial Wgt/Vol:** 4.6 g **Final Wgt/Vol..:** 5 mL
% Moisture.....: 3.1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	840	ug/kg	110
Benzene	ND	56	ug/kg	7.2
Bromodichloromethane	ND	110	ug/kg	14
Bromoform	ND	110	ug/kg	15
Bromomethane	ND	280	ug/kg	28
2-Butanone	ND	840	ug/kg	55
Carbon disulfide	ND	280	ug/kg	23
Carbon tetrachloride	ND	56	ug/kg	14
Chlorobenzene	ND	56	ug/kg	7.1
Chloroethane	ND	280	ug/kg	73
Chloroform	ND	56	ug/kg	14
Chloromethane	ND	280	ug/kg	5.9
Cyclohexane	ND	1400	ug/kg	8.7
Dibromochloromethane	ND	56	ug/kg	7.8
1,2-Dibromo-3-chloro-propane	ND	280	ug/kg	68
1,2-Dibromoethane	ND	280	ug/kg	11
1,2-Dichlorobenzene	ND	110	ug/kg	19
1,3-Dichlorobenzene	ND	110	ug/kg	8.1
1,4-Dichlorobenzene	ND	110	ug/kg	8.9
Dichlorodifluoromethane	ND	110	ug/kg	6.1
1,1-Dichloroethane	ND	56	ug/kg	8.2
1,2-Dichloroethane	ND	56	ug/kg	10
1,1-Dichloroethene	ND	56	ug/kg	9.3
cis-1,2-Dichloroethene	ND	56	ug/kg	16
trans-1,2-Dichloroethene	ND	56	ug/kg	12
1,2-Dichloropropane	ND	56	ug/kg	8.3
cis-1,3-Dichloropropene	ND	56	ug/kg	6.2
trans-1,3-Dichloropropene	ND	56	ug/kg	6.1
Ethylbenzene	ND	56	ug/kg	7.7
2-Hexanone	ND	2800	ug/kg	27
Isopropylbenzene	ND	280	ug/kg	5.7
Methyl acetate	ND	1400	ug/kg	59
Methylene chloride	ND	280	ug/kg	110
Methylcyclohexane	ND	1400	ug/kg	6.4
4-Methyl-2-pentanone	ND	2800	ug/kg	12
Methyl tert-butyl ether	ND	280	ug/kg	11
Styrene	ND	56	ug/kg	32

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-123

GC/MS Volatiles

Lot-Sample #...: A4G160169-024 **Work Order #...:** GK7931AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	9.2
Tetrachloroethene	ND	56	ug/kg	10
Toluene	ND	110	ug/kg	10
1,2,4-Trichloro-benzene	ND	280	ug/kg	14
1,1,1-Trichloroethane	ND	56	ug/kg	11
1,1,2-Trichloroethane	ND	56	ug/kg	11
Trichloroethene	ND	56	ug/kg	14
Trichlorofluoromethane	ND	110	ug/kg	9.3
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	280	ug/kg	11
Vinyl chloride	ND	110	ug/kg	18
Xylenes (total)	ND	170	ug/kg	17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	84	(59 - 138)
1,2-Dichloroethane-d4	89	(61 - 130)
Toluene-d8	102	(60 - 143)
4-Bromofluorobenzene	94	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-124

GC/MS Volatiles

Lot-Sample #...:	A4G160169-025	**Work Order #...:**	GK7951AA	**Matrix.....:**	SO
Date Sampled...:	07/15/04 12:45	**Date Received..:**	07/16/04		
Prep Date.....:	07/17/04	**Analysis Date..:**	07/21/04		
Prep Batch #...:	4203412				
Dilution Factor:	1.11	**Initial Wgt/Vol:**	4.5 g	**Final Wgt/Vol..:**	5 mL
% Moisture.....:	1.9	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	850	ug/kg	110
Benzene	ND	57	ug/kg	7.2
Bromodichloromethane	ND	110	ug/kg	14
Bromoform	ND	110	ug/kg	15
Bromomethane	ND	280	ug/kg	28
2-Butanone	ND	850	ug/kg	55
Carbon disulfide	ND	280	ug/kg	23
Carbon tetrachloride	ND	57	ug/kg	14
Chlorobenzene	ND	57	ug/kg	7.1
Chloroethane	ND	280	ug/kg	74
Chloroform	ND	57	ug/kg	14
Chloromethane	**24 J,B**	**280**	**ug/kg**	**5.9**
Cyclohexane	ND	1400	ug/kg	8.7
Dibromochloromethane	ND	57	ug/kg	7.8
1,2-Dibromo-3-chloro-propane	ND	280	ug/kg	68
1,2-Dibromoethane	ND	280	ug/kg	11
1,2-Dichlorobenzene	ND	110	ug/kg	19
1,3-Dichlorobenzene	ND	110	ug/kg	8.1
1,4-Dichlorobenzene	ND	110	ug/kg	8.9
Dichlorodifluoromethane	ND	110	ug/kg	6.1
1,1-Dichloroethane	ND	57	ug/kg	8.3
1,2-Dichloroethane	ND	57	ug/kg	11
1,1-Dichloroethene	ND	57	ug/kg	9.4
cis-1,2-Dichloroethene	ND	57	ug/kg	16
trans-1,2-Dichloroethene	ND	57	ug/kg	12
1,2-Dichloropropane	ND	57	ug/kg	8.4
cis-1,3-Dichloropropene	ND	57	ug/kg	6.2
trans-1,3-Dichloropropene	ND	57	ug/kg	6.1
Ethylbenzene	ND	57	ug/kg	7.7
2-Hexanone	ND	2800	ug/kg	27
Isopropylbenzene	ND	280	ug/kg	5.8
Methyl acetate	ND	1400	ug/kg	59
Methylene chloride	ND	280	ug/kg	110
Methylcyclohexane	ND	1400	ug/kg	6.5
4-Methyl-2-pentanone	ND	2800	ug/kg	12
Methyl tert-butyl ether	ND	280	ug/kg	11
Styrene	ND	57	ug/kg	32

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-124

GC/MS Volatiles

Lot-Sample #...: A4G160169-025 Work Order #...: GK7951AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	9.3
Tetrachloroethene	ND	57	ug/kg	10
Toluene	ND	110	ug/kg	10
1,2,4-Trichloro-benzene	ND	280	ug/kg	14
1,1,1-Trichloroethane	ND	57	ug/kg	11
1,1,2-Trichloroethane	ND	57	ug/kg	11
Trichloroethene	ND	57	ug/kg	14
Trichlorofluoromethane	ND	110	ug/kg	9.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	280	ug/kg	11
Vinyl chloride	ND	110	ug/kg	18
Xylenes (total)	ND	170	ug/kg	17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	83	(59 - 138)
1,2-Dichloroethane-d4	91	(61 - 130)
Toluene-d8	103	(60 - 143)
4-Bromofluorobenzene	94	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-125

GC/MS Volatiles

Lot-Sample #...:	A4G160169-026	Work Order #...:	GK7981AA	Matrix.....:	SO
Date Sampled...:	07/15/04 12:50	Date Received..:	07/16/04		
Prep Date.....:	07/17/04	Analysis Date..:	07/21/04		
Prep Batch #...:	4203412				
Dilution Factor:	1.14	Initial Wgt/Vol:	4.4 g	Final Wgt/Vol..:	5 mL
% Moisture.....:	1.9	Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	870	ug/kg	120
Benzene	ND	58	ug/kg	7.4
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	15
Bromomethane	ND	290	ug/kg	29
2-Butanone	ND	870	ug/kg	57
Carbon disulfide	ND	290	ug/kg	23
Carbon tetrachloride	ND	58	ug/kg	14
Chlorobenzene	ND	58	ug/kg	7.3
Chloroethane	ND	290	ug/kg	76
Chloroform	ND	58	ug/kg	14
Chloromethane	ND	290	ug/kg	6.0
Cyclohexane	ND	1400	ug/kg	8.9
Dibromochloromethane	ND	58	ug/kg	8.0
1,2-Dibromo-3-chloro-propane	ND	290	ug/kg	70
1,2-Dibromoethane	ND	290	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.4
1,4-Dichlorobenzene	ND	120	ug/kg	9.2
Dichlorodifluoromethane	ND	120	ug/kg	6.3
1,1-Dichloroethane	ND	58	ug/kg	8.5
1,2-Dichloroethane	ND	58	ug/kg	11
1,1-Dichloroethene	ND	58	ug/kg	9.6
cis-1,2-Dichloroethene	ND	58	ug/kg	16
trans-1,2-Dichloroethene	ND	58	ug/kg	13
1,2-Dichloropropane	ND	58	ug/kg	8.6
cis-1,3-Dichloropropene	ND	58	ug/kg	6.4
trans-1,3-Dichloropropene	ND	58	ug/kg	6.3
Ethylbenzene	ND	58	ug/kg	7.9
2-Hexanone	ND	2900	ug/kg	28
Isopropylbenzene	ND	290	ug/kg	5.9
Methyl acetate	ND	1400	ug/kg	60
Methylene chloride	ND	290	ug/kg	120
Methylcyclohexane	ND	1400	ug/kg	6.6
4-Methyl-2-pentanone	ND	2900	ug/kg	13
Methyl tert-butyl ether	ND	290	ug/kg	12
Styrene	ND	58	ug/kg	33

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-125

GC/MS Volatiles

Lot-Sample #...: A4G160169-026 Work Order #...: GK7981AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.5
Tetrachloroethene	ND	58	ug/kg	10
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	290	ug/kg	14
1,1,1-Trichloroethane	ND	58	ug/kg	11
1,1,2-Trichloroethane	ND	58	ug/kg	12
Trichloroethene	ND	58	ug/kg	14
Trichlorofluoromethane	ND	120	ug/kg	9.6
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	290	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	ND	170	ug/kg	17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	84	(59 - 138)
1,2-Dichloroethane-d4	90	(61 - 130)
Toluene-d8	105	(60 - 143)
4-Bromofluorobenzene	99	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-126

GC/MS Volatiles

Lot-Sample #...:	A4G160169-027	Work Order #...:	GK8AD1AA	Matrix.....:	SO
Date Sampled...:	07/15/04 13:30	Date Received..:	07/16/04		
Prep Date.....:	07/17/04	Analysis Date..:	07/22/04		
Prep Batch #...:	4203412				
Dilution Factor:	1.16	Initial Wgt/Vol:	4.3 g	Final Wgt/Vol..:	5 mL
% Moisture.....:	2.3	Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	890	ug/kg	120
Benzene	ND	59	ug/kg	7.6
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	15
Bromomethane	ND	300	ug/kg	30
2-Butanone	ND	890	ug/kg	58
Carbon disulfide	ND	300	ug/kg	24
Carbon tetrachloride	ND	59	ug/kg	14
Chlorobenzene	ND	59	ug/kg	7.5
Chloroethane	ND	300	ug/kg	77
Chloroform	ND	59	ug/kg	14
Chloromethane	ND	300	ug/kg	6.2
Cyclohexane	ND	1400	ug/kg	9.1
Dibromochloromethane	ND	59	ug/kg	8.2
1,2-Dibromo-3-chloro-propane	ND	300	ug/kg	71
1,2-Dibromoethane	ND	300	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.5
1,4-Dichlorobenzene	ND	120	ug/kg	9.4
Dichlorodifluoromethane	ND	120	ug/kg	6.4
1,1-Dichloroethane	ND	59	ug/kg	8.7
1,2-Dichloroethane	ND	59	ug/kg	11
1,1-Dichloroethene	ND	59	ug/kg	9.9
cis-1,2-Dichloroethene	ND	59	ug/kg	17
trans-1,2-Dichloroethene	ND	59	ug/kg	13
1,2-Dichloropropane	ND	59	ug/kg	8.8
cis-1,3-Dichloropropene	ND	59	ug/kg	6.5
trans-1,3-Dichloropropene	ND	59	ug/kg	6.4
Ethylbenzene	ND	59	ug/kg	8.1
2-Hexanone	ND	3000	ug/kg	28
Isopropylbenzene	ND	300	ug/kg	6.1
Methyl acetate	ND	1400	ug/kg	62
Methylene chloride	ND	300	ug/kg	120
Methylcyclohexane	ND	1400	ug/kg	6.8
4-Methyl-2-pentanone	ND	3000	ug/kg	13
Methyl tert-butyl ether	ND	300	ug/kg	12
Styrene	ND	59	ug/kg	33

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-126

GC/MS Volatiles

Lot-Sample #...: A4G160169-027 Work Order #...: GK8AD1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.7
Tetrachloroethene	ND	59	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	**30 J**	**300**	**ug/kg**	**14**
1,1,1-Trichloroethane	ND	59	ug/kg	11
1,1,2-Trichloroethane	ND	59	ug/kg	12
Trichloroethene	ND	59	ug/kg	14
Trichlorofluoromethane	ND	120	ug/kg	9.9
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	300	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	ND	180	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(59 - 138)
1,2-Dichloroethane-d4	91	(61 - 130)
Toluene-d8	108	(60 - 143)
4-Bromofluorobenzene	96	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-127

GC/MS Volatiles

Lot-Sample #...: A4G160169-028	**Work Order #...:** GK8AE1AA	**Matrix.....:** SO
Date Sampled...: 07/15/04 13:35	**Date Received..:** 07/16/04	
Prep Date.....: 07/17/04	**Analysis Date..:** 07/21/04	
Prep Batch #...: 4203412		
Dilution Factor: 1.11	**Initial Wgt/Vol:** 4.5 g	**Final Wgt/Vol..:** 5 mL
% Moisture.....: 4.2	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	870	ug/kg	110
Benzene	ND	58	ug/kg	7.4
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	15
Bromomethane	ND	290	ug/kg	29
2-Butanone	ND	870	ug/kg	57
Carbon disulfide	ND	290	ug/kg	23
Carbon tetrachloride	ND	58	ug/kg	14
Chlorobenzene	ND	58	ug/kg	7.3
Chloroethane	ND	290	ug/kg	75
Chloroform	ND	58	ug/kg	14
Chloromethane	ND	290	ug/kg	6.0
Cyclohexane	ND	1400	ug/kg	8.9
Dibromochloromethane	ND	58	ug/kg	8.0
1,2-Dibromo-3-chloro-propane	ND	290	ug/kg	69
1,2-Dibromoethane	ND	290	ug/kg	11
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.3
1,4-Dichlorobenzene	ND	120	ug/kg	9.2
Dichlorodifluoromethane	ND	120	ug/kg	6.3
1,1-Dichloroethane	ND	58	ug/kg	8.5
1,2-Dichloroethane	ND	58	ug/kg	11
1,1-Dichloroethene	ND	58	ug/kg	9.6
cis-1,2-Dichloroethene	ND	58	ug/kg	16
trans-1,2-Dichloroethene	ND	58	ug/kg	13
1,2-Dichloropropane	ND	58	ug/kg	8.6
cis-1,3-Dichloropropene	ND	58	ug/kg	6.4
trans-1,3-Dichloropropene	ND	58	ug/kg	6.3
Ethylbenzene	ND	58	ug/kg	7.9
2-Hexanone	ND	2900	ug/kg	28
Isopropylbenzene	ND	290	ug/kg	5.9
Methyl acetate	ND	1400	ug/kg	60
Methylene chloride	ND	290	ug/kg	110
Methylcyclohexane	ND	1400	ug/kg	6.6
4-Methyl-2-pentanone	ND	2900	ug/kg	13
Methyl tert-butyl ether	ND	290	ug/kg	12
Styrene	ND	58	ug/kg	32

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-127

GC/MS Volatiles

Lot-Sample #...: A4G160169-028 Work Order #...: GK8AE1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.5
Tetrachloroethene	ND	58	ug/kg	10
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	290	ug/kg	14
1,1,1-Trichloroethane	ND	58	ug/kg	11
1,1,2-Trichloroethane	ND	58	ug/kg	11
Trichloroethene	ND	58	ug/kg	14
Trichlorofluoromethane	ND	120	ug/kg	9.6
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	290	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	ND	170	ug/kg	17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	76	(59 - 138)
1,2-Dichloroethane-d4	83	(61 - 130)
Toluene-d8	99	(60 - 143)
4-Bromofluorobenzene	88	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-128

GC/MS Volatiles

Lot-Sample #...:	A4G160169-029	**Work Order #...:**	GK8AF1AA	**Matrix.....:**	SO
Date Sampled...:	07/15/04 13:40	**Date Received..:**	07/16/04		
Prep Date.....:	07/17/04	**Analysis Date..:**	07/21/04		
Prep Batch #...:	4203412				
Dilution Factor:	1.14	**Initial Wgt/Vol:**	4.4 g	**Final Wgt/Vol..:**	5 mL
% Moisture.....:	2.5	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	880	ug/kg	120
Benzene	ND	58	ug/kg	7.5
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	15
Bromomethane	ND	290	ug/kg	29
2-Butanone	ND	880	ug/kg	57
Carbon disulfide	ND	290	ug/kg	23
Carbon tetrachloride	ND	58	ug/kg	14
Chlorobenzene	ND	58	ug/kg	7.4
Chloroethane	ND	290	ug/kg	76
Chloroform	ND	58	ug/kg	14
Chloromethane	**19 J,B**	**290**	**ug/kg**	**6.1**
Cyclohexane	ND	1400	ug/kg	9.0
Dibromochloromethane	ND	58	ug/kg	8.1
1,2-Dibromo-3-chloro-propane	ND	290	ug/kg	70
1,2-Dibromoethane	ND	290	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.4
1,4-Dichlorobenzene	ND	120	ug/kg	9.2
Dichlorodifluoromethane	ND	120	ug/kg	6.3
1,1-Dichloroethane	ND	58	ug/kg	8.5
1,2-Dichloroethane	ND	58	ug/kg	11
1,1-Dichloroethene	ND	58	ug/kg	9.7
cis-1,2-Dichloroethene	ND	58	ug/kg	16
trans-1,2-Dichloroethene	ND	58	ug/kg	13
1,2-Dichloropropane	ND	58	ug/kg	8.7
cis-1,3-Dichloropropene	ND	58	ug/kg	6.4
trans-1,3-Dichloropropene	ND	58	ug/kg	6.3
Ethylbenzene	ND	58	ug/kg	7.9
2-Hexanone	ND	2900	ug/kg	28
Isopropylbenzene	ND	290	ug/kg	6.0
Methyl acetate	ND	1400	ug/kg	61
Methylene chloride	ND	290	ug/kg	120
Methylcyclohexane	ND	1400	ug/kg	6.7
4-Methyl-2-pentanone	ND	2900	ug/kg	13
Methyl tert-butyl ether	ND	290	ug/kg	12
Styrene	ND	58	ug/kg	33

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-128

GC/MS Volatiles

Lot-Sample #...: A4G160169-029 Work Order #...: GK8AF1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.6
Tetrachloroethene	ND	58	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	290	ug/kg	14
1,1,1-Trichloroethane	ND	58	ug/kg	11
1,1,2-Trichloroethane	ND	58	ug/kg	12
Trichloroethene	**16 J**	**58**	**ug/kg**	**14**
Trichlorofluoromethane	ND	120	ug/kg	9.7
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	290	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	ND	180	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	78	(59 - 138)
1,2-Dichloroethane-d4	86	(61 - 130)
Toluene-d8	100	(60 - 143)
4-Bromofluorobenzene	93	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-129

GC/MS Volatiles

Lot-Sample #...: A4G160169-030	**Work Order #...:** GK8AG1AA	**Matrix.....:** SO
Date Sampled...: 07/15/04 13:45	**Date Received..:** 07/16/04	
Prep Date.....: 07/17/04	**Analysis Date..:** 07/21/04	
Prep Batch #...: 4203412		
Dilution Factor: 1.11	**Initial Wgt/Vol:** 4.5 g	**Final Wgt/Vol..:** 5 mL
% Moisture.....: 3.4	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	860	ug/kg	110
Benzene	ND	57	ug/kg	7.4
Bromodichloromethane	ND	110	ug/kg	14
Bromoform	ND	110	ug/kg	15
Bromomethane	ND	290	ug/kg	29
2-Butanone	ND	860	ug/kg	56
Carbon disulfide	ND	290	ug/kg	23
Carbon tetrachloride	ND	57	ug/kg	14
Chlorobenzene	ND	57	ug/kg	7.2
Chloroethane	ND	290	ug/kg	75
Chloroform	ND	57	ug/kg	14
Chloromethane	ND	290	ug/kg	6.0
Cyclohexane	ND	1400	ug/kg	8.8
Dibromochloromethane	ND	57	ug/kg	7.9
1,2-Dibromo-3-chloro-propane	ND	290	ug/kg	69
1,2-Dibromoethane	ND	290	ug/kg	11
1,2-Dichlorobenzene	ND	110	ug/kg	20
1,3-Dichlorobenzene	ND	110	ug/kg	8.3
1,4-Dichlorobenzene	ND	110	ug/kg	9.1
Dichlorodifluoromethane	ND	110	ug/kg	6.2
1,1-Dichloroethane	ND	57	ug/kg	8.4
1,2-Dichloroethane	ND	57	ug/kg	11
1,1-Dichloroethene	ND	57	ug/kg	9.5
cis-1,2-Dichloroethene	ND	57	ug/kg	16
trans-1,2-Dichloroethene	ND	57	ug/kg	13
1,2-Dichloropropane	ND	57	ug/kg	8.5
cis-1,3-Dichloropropene	ND	57	ug/kg	6.3
trans-1,3-Dichloropropene	ND	57	ug/kg	6.2
Ethylbenzene	ND	57	ug/kg	7.8
2-Hexanone	ND	2900	ug/kg	28
Isopropylbenzene	ND	290	ug/kg	5.9
Methyl acetate	ND	1400	ug/kg	60
Methylene chloride	ND	290	ug/kg	110
Methylcyclohexane	ND	1400	ug/kg	6.5
4-Methyl-2-pentanone	ND	2900	ug/kg	13
Methyl tert-butyl ether	ND	290	ug/kg	11
Styrene	ND	57	ug/kg	32

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-129

GC/MS Volatiles

Lot-Sample #...: A4G160169-030 **Work Order #...:** GK8AG1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	110	ug/kg	9.4
Tetrachloroethene	ND	57	ug/kg	10
Toluene	ND	110	ug/kg	10
1,2,4-Trichloro-benzene	ND	290	ug/kg	14
1,1,1-Trichloroethane	ND	57	ug/kg	11
1,1,2-Trichloroethane	ND	57	ug/kg	11
Trichloroethene	**14 J**	**57**	**ug/kg**	**14**
Trichlorofluoromethane	ND	110	ug/kg	9.5
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	290	ug/kg	11
Vinyl chloride	ND	110	ug/kg	18
Xylenes (total)	ND	170	ug/kg	17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	72	(59 - 138)
1,2-Dichloroethane-d4	81	(61 - 130)
Toluene-d8	98	(60 - 143)
4-Bromofluorobenzene	88	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-130

GC/MS Volatiles

Lot-Sample #...: A4G160169-031	Work Order #...: GK8AH1AA	Matrix.....: SO	
Date Sampled...: 07/15/04 13:50	Date Received..: 07/16/04		
Prep Date.....: 07/17/04	Analysis Date..: 07/21/04		
Prep Batch #...: 4203412			
Dilution Factor: 1.47	Initial Wgt/Vol: 3.4 g	Final Wgt/Vol..: 5 mL	
% Moisture.....: 2.4	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	1100	ug/kg	150
Benzene	ND	75	ug/kg	9.6
Bromodichloromethane	ND	150	ug/kg	18
Bromoform	ND	150	ug/kg	20
Bromomethane	ND	380	ug/kg	38
2-Butanone	ND	1100	ug/kg	74
Carbon disulfide	ND	380	ug/kg	30
Carbon tetrachloride	ND	75	ug/kg	18
Chlorobenzene	ND	75	ug/kg	9.5
Chloroethane	ND	380	ug/kg	98
Chloroform	ND	75	ug/kg	18
Chloromethane	ND	380	ug/kg	7.8
Cyclohexane	ND	1800	ug/kg	12
Dibromochloromethane	ND	75	ug/kg	10
1,2-Dibromo-3-chloro-propane	ND	380	ug/kg	90
1,2-Dibromoethane	ND	380	ug/kg	15
1,2-Dichlorobenzene	ND	150	ug/kg	26
1,3-Dichlorobenzene	ND	150	ug/kg	11
1,4-Dichlorobenzene	ND	150	ug/kg	12
Dichlorodifluoromethane	ND	150	ug/kg	8.1
1,1-Dichloroethane	ND	75	ug/kg	11
1,2-Dichloroethane	ND	75	ug/kg	14
1,1-Dichloroethene	ND	75	ug/kg	12
cis-1,2-Dichloroethene	ND	75	ug/kg	21
trans-1,2-Dichloroethene	ND	75	ug/kg	17
1,2-Dichloropropane	ND	75	ug/kg	11
cis-1,3-Dichloropropene	ND	75	ug/kg	8.3
trans-1,3-Dichloropropene	ND	75	ug/kg	8.1
Ethylbenzene	ND	75	ug/kg	10
2-Hexanone	ND	3800	ug/kg	36
Isopropylbenzene	ND	380	ug/kg	7.7
Methyl acetate	ND	1800	ug/kg	78
Methylene chloride	ND	380	ug/kg	150
Methylcyclohexane	ND	1800	ug/kg	8.6
4-Methyl-2-pentanone	ND	3800	ug/kg	17
Methyl tert-butyl ether	ND	380	ug/kg	15
Styrene	ND	75	ug/kg	42

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-130

GC/MS Volatiles

Lot-Sample #...: A4G160169-031 Work Order #...: GK8AH1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	150	ug/kg	12
Tetrachloroethene	ND	75	ug/kg	14
Toluene	ND	150	ug/kg	14
1,2,4-Trichloro-benzene	ND	380	ug/kg	18
1,1,1-Trichloroethane	ND	75	ug/kg	14
1,1,2-Trichloroethane	ND	75	ug/kg	15
Trichloroethene	ND	75	ug/kg	18
Trichlorofluoromethane	ND	150	ug/kg	12
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	380	ug/kg	15
Vinyl chloride	ND	150	ug/kg	24
Xylenes (total)	ND	230	ug/kg	23

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	79	(59 - 138)
1,2-Dichloroethane-d4	89	(61 - 130)
Toluene-d8	107	(60 - 143)
4-Bromofluorobenzene	97	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-131

GC/MS Volatiles

Lot-Sample #...:	A4G160169-032	**Work Order #...:**	GK8AJ1AA	**Matrix.....:**	SO
Date Sampled...:	07/15/04 14:00	**Date Received..:**	07/16/04		
Prep Date.....:	07/17/04	**Analysis Date..:**	07/21/04		
Prep Batch #...:	4203412				
Dilution Factor:	1.02	**Initial Wgt/Vol:**	4.9 g	**Final Wgt/Vol..:**	5 mL
% Moisture.....:	2.0	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	780	ug/kg	100
Benzene	ND	52	ug/kg	6.7
Bromodichloromethane	ND	100	ug/kg	12
Bromoform	ND	100	ug/kg	14
Bromomethane	ND	260	ug/kg	26
2-Butanone	ND	780	ug/kg	51
Carbon disulfide	ND	260	ug/kg	21
Carbon tetrachloride	ND	52	ug/kg	12
Chlorobenzene	ND	52	ug/kg	6.6
Chloroethane	ND	260	ug/kg	68
Chloroform	ND	52	ug/kg	12
Chloromethane	ND	260	ug/kg	5.4
Cyclohexane	ND	1200	ug/kg	8.0
Dibromochloromethane	ND	52	ug/kg	7.2
1,2-Dibromo-3-chloro-propane	ND	260	ug/kg	62
1,2-Dibromoethane	ND	260	ug/kg	10
1,2-Dichlorobenzene	ND	100	ug/kg	18
1,3-Dichlorobenzene	ND	100	ug/kg	7.5
1,4-Dichlorobenzene	ND	100	ug/kg	8.2
Dichlorodifluoromethane	ND	100	ug/kg	5.6
1,1-Dichloroethane	ND	52	ug/kg	7.6
1,2-Dichloroethane	ND	52	ug/kg	9.7
1,1-Dichloroethene	ND	52	ug/kg	8.6
cis-1,2-Dichloroethene	ND	52	ug/kg	15
trans-1,2-Dichloroethene	ND	52	ug/kg	11
1,2-Dichloropropane	ND	52	ug/kg	7.7
cis-1,3-Dichloropropene	ND	52	ug/kg	5.7
trans-1,3-Dichloropropene	ND	52	ug/kg	5.6
Ethylbenzene	ND	52	ug/kg	7.1
2-Hexanone	ND	2600	ug/kg	25
Isopropylbenzene	ND	260	ug/kg	5.3
Methyl acetate	ND	1200	ug/kg	54
Methylene chloride	ND	260	ug/kg	100
Methylcyclohexane	ND	1200	ug/kg	5.9
4-Methyl-2-pentanone	ND	2600	ug/kg	11
Methyl tert-butyl ether	ND	260	ug/kg	10
Styrene	ND	52	ug/kg	29

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-131

GC/MS Volatiles

Lot-Sample #...: A4G160169-032 **Work Order #...:** GK8AJ1AA **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	100	ug/kg	8.5
Tetrachloroethene	ND	52	ug/kg	9.4
Toluene	ND	100	ug/kg	9.5
1,2,4-Trichloro-benzene	ND	260	ug/kg	12
1,1,1-Trichloroethane	ND	52	ug/kg	9.9
1,1,2-Trichloroethane	ND	52	ug/kg	10
Trichloroethene	ND	52	ug/kg	12
Trichlorofluoromethane	ND	100	ug/kg	8.6
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	260	ug/kg	10
Vinyl chloride	ND	100	ug/kg	17
Xylenes (total)	ND	160	ug/kg	16

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	71	(59 - 138)
1,2-Dichloroethane-d4	81	(61 - 130)
Toluene-d8	96	(60 - 143)
4-Bromofluorobenzene	87	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-132

GC/MS Volatiles

Lot-Sample #...:	A4G160169-033	**Work Order #...:**	GK8AK1AA	**Matrix.....:**	SO
Date Sampled...:	07/15/04 14:10	**Date Received..:**	07/16/04		
Prep Date.....:	07/17/04	**Analysis Date..:**	07/21/04		
Prep Batch #...:	4203412				
Dilution Factor:	1.02	**Initial Wgt/Vol:**	4.9 g	**Final Wgt/Vol..:**	5 mL
% Moisture.....:	13	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	880	ug/kg	120
Benzene	ND	59	ug/kg	7.5
Bromodichloromethane	ND	120	ug/kg	14
Bromoform	ND	120	ug/kg	15
Bromomethane	ND	290	ug/kg	29
2-Butanone	ND	880	ug/kg	57
Carbon disulfide	ND	290	ug/kg	23
Carbon tetrachloride	ND	59	ug/kg	14
Chlorobenzene	ND	59	ug/kg	7.4
Chloroethane	ND	290	ug/kg	76
Chloroform	ND	59	ug/kg	14
Chloromethane	ND	290	ug/kg	6.1
Cyclohexane	ND	1400	ug/kg	9.0
Dibromochloromethane	ND	59	ug/kg	8.1
1,2-Dibromo-3-chloro-propane	ND	290	ug/kg	70
1,2-Dibromoethane	ND	290	ug/kg	12
1,2-Dichlorobenzene	ND	120	ug/kg	20
1,3-Dichlorobenzene	ND	120	ug/kg	8.4
1,4-Dichlorobenzene	ND	120	ug/kg	9.2
Dichlorodifluoromethane	ND	120	ug/kg	6.3
1,1-Dichloroethane	ND	59	ug/kg	8.5
1,2-Dichloroethane	ND	59	ug/kg	11
1,1-Dichloroethene	ND	59	ug/kg	9.7
cis-1,2-Dichloroethene	ND	59	ug/kg	16
trans-1,2-Dichloroethene	ND	59	ug/kg	13
1,2-Dichloropropane	ND	59	ug/kg	8.7
cis-1,3-Dichloropropene	ND	59	ug/kg	6.4
trans-1,3-Dichloropropene	ND	59	ug/kg	6.3
Ethylbenzene	ND	59	ug/kg	8.0
2-Hexanone	ND	2900	ug/kg	28
Isopropylbenzene	ND	290	ug/kg	6.0
Methyl acetate	ND	1400	ug/kg	61
Methylene chloride	ND	290	ug/kg	120
Methylcyclohexane	ND	1400	ug/kg	6.7
4-Methyl-2-pentanone	ND	2900	ug/kg	13
Methyl tert-butyl ether	ND	290	ug/kg	12
Styrene	ND	59	ug/kg	33

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-132

GC/MS Volatiles

Lot-Sample #...: A4G160169-033 Work Order #...: GK8AK1AA Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	120	ug/kg	9.6
Tetrachloroethene	ND	59	ug/kg	11
Toluene	ND	120	ug/kg	11
1,2,4-Trichloro-benzene	ND	290	ug/kg	14
1,1,1-Trichloroethane	ND	59	ug/kg	11
1,1,2-Trichloroethane	ND	59	ug/kg	12
Trichloroethene	ND	59	ug/kg	14
Trichlorofluoromethane	ND	120	ug/kg	9.7
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	290	ug/kg	12
Vinyl chloride	ND	120	ug/kg	19
Xylenes (total)	ND	180	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	74	(59 - 138)
1,2-Dichloroethane-d4	83	(61 - 130)
Toluene-d8	95	(60 - 143)
4-Bromofluorobenzene	89	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G160169
MB Lot-Sample #: A4G210000-401
Work Order #...: GLJEG1AA
Matrix.....: SOLID

Analysis Date..: 07/20/04
Dilution Factor: 1
Prep Date.....: 07/17/04
Prep Batch #...: 4203401
Initial Wgt/Vol: 5 g
Final Wgt/Vol..: 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	750	ug/kg	SW846 8260B
Benzene	ND	50	ug/kg	SW846 8260B
Bromodichloromethane	ND	100	ug/kg	SW846 8260B
Bromoform	ND	100	ug/kg	SW846 8260B
Bromomethane	ND	250	ug/kg	SW846 8260B
2-Butanone	ND	750	ug/kg	SW846 8260B
Carbon disulfide	ND	250	ug/kg	SW846 8260B
Carbon tetrachloride	ND	50	ug/kg	SW846 8260B
Chlorobenzene	ND	50	ug/kg	SW846 8260B
Chloroethane	ND	250	ug/kg	SW846 8260B
Chloroform	ND	50	ug/kg	SW846 8260B
Chloromethane	ND	250	ug/kg	SW846 8260B
Cyclohexane	ND	1200	ug/kg	SW846 8260B
Dibromochloromethane	ND	50	ug/kg	SW846 8260B
1,2-Dibromo-3-chloropropane	ND	250	ug/kg	SW846 8260B
1,2-Dibromoethane	ND	250	ug/kg	SW846 8260B
1,2-Dichlorobenzene	ND	100	ug/kg	SW846 8260B
1,3-Dichlorobenzene	ND	100	ug/kg	SW846 8260B
1,4-Dichlorobenzene	ND	100	ug/kg	SW846 8260B
Dichlorodifluoromethane	ND	100	ug/kg	SW846 8260B
1,1-Dichloroethane	ND	50	ug/kg	SW846 8260B
1,2-Dichloroethane	ND	50	ug/kg	SW846 8260B
1,1-Dichloroethene	ND	50	ug/kg	SW846 8260B
cis-1,2-Dichloroethene	ND	50	ug/kg	SW846 8260B
trans-1,2-Dichloroethene	ND	50	ug/kg	SW846 8260B
1,2-Dichloropropane	ND	50	ug/kg	SW846 8260B
cis-1,3-Dichloropropene	ND	50	ug/kg	SW846 8260B
trans-1,3-Dichloropropene	ND	50	ug/kg	SW846 8260B
Ethylbenzene	ND	50	ug/kg	SW846 8260B
2-Hexanone	ND	2500	ug/kg	SW846 8260B
Isopropylbenzene	ND	250	ug/kg	SW846 8260B
Methyl acetate	ND	1200	ug/kg	SW846 8260B
Methylene chloride	ND	250	ug/kg	SW846 8260B
Methylcyclohexane	ND	1200	ug/kg	SW846 8260B
4-Methyl-2-pentanone	ND	2500	ug/kg	SW846 8260B
Methyl tert-butyl ether	ND	250	ug/kg	SW846 8260B
Styrene	ND	50	ug/kg	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	100	ug/kg	SW846 8260B
Tetrachloroethene	ND	50	ug/kg	SW846 8260B
Toluene	ND	100	ug/kg	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G160169 **Work Order #...:** GLJEG1AA **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	250	ug/kg	SW846 8260B
1,1,1-Trichloroethane	ND	50	ug/kg	SW846 8260B
1,1,2-Trichloroethane	ND	50	ug/kg	SW846 8260B
Trichloroethene	ND	50	ug/kg	SW846 8260B
Trichlorofluoromethane	ND	100	ug/kg	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	250	ug/kg	SW846 8260B
Vinyl chloride	ND	100	ug/kg	SW846 8260B
Xylenes (total)	ND	150	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(59 - 138)
1,2-Dichloroethane-d4	92	(61 - 130)
Toluene-d8	105	(60 - 143)
4-Bromofluorobenzene	97	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G160169 **Work Order #...:** GLJFE1AA **Matrix.....:** SOLID
MB Lot-Sample #: A4G210000-412

Prep Date.....: 07/17/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 07/21/04 **Prep Batch #...:** 4203412
Dilution Factor: 1 **Initial Wgt/Vol:** 5 g

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	750	ug/kg	SW846 8260B
Benzene	ND	50	ug/kg	SW846 8260B
Bromodichloromethane	ND	100	ug/kg	SW846 8260B
Bromoform	ND	100	ug/kg	SW846 8260B
Bromomethane	ND	250	ug/kg	SW846 8260B
2-Butanone	ND	750	ug/kg	SW846 8260B
Carbon disulfide	ND	250	ug/kg	SW846 8260B
Carbon tetrachloride	ND	50	ug/kg	SW846 8260B
Chlorobenzene	ND	50	ug/kg	SW846 8260B
Chloroethane	ND	250	ug/kg	SW846 8260B
Chloroform	ND	50	ug/kg	SW846 8260B
Chloromethane	**21 J**	**250**	**ug/kg**	**SW846 8260B**
Cyclohexane	ND	1200	ug/kg	SW846 8260B
Dibromochloromethane	ND	50	ug/kg	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	250	ug/kg	SW846 8260B
1,2-Dibromoethane	ND	250	ug/kg	SW846 8260B
1,2-Dichlorobenzene	ND	100	ug/kg	SW846 8260B
1,3-Dichlorobenzene	ND	100	ug/kg	SW846 8260B
1,4-Dichlorobenzene	ND	100	ug/kg	SW846 8260B
Dichlorodifluoromethane	ND	100	ug/kg	SW846 8260B
1,1-Dichloroethane	ND	50	ug/kg	SW846 8260B
1,2-Dichloroethane	ND	50	ug/kg	SW846 8260B
1,1-Dichloroethene	ND	50	ug/kg	SW846 8260B
cis-1,2-Dichloroethene	ND	50	ug/kg	SW846 8260B
trans-1,2-Dichloroethene	ND	50	ug/kg	SW846 8260B
1,2-Dichloropropane	ND	50	ug/kg	SW846 8260B
cis-1,3-Dichloropropene	ND	50	ug/kg	SW846 8260B
trans-1,3-Dichloropropene	ND	50	ug/kg	SW846 8260B
Ethylbenzene	ND	50	ug/kg	SW846 8260B
2-Hexanone	ND	2500	ug/kg	SW846 8260B
Isopropylbenzene	ND	250	ug/kg	SW846 8260B
Methyl acetate	ND	1200	ug/kg	SW846 8260B
Methylene chloride	ND	250	ug/kg	SW846 8260B
Methylcyclohexane	ND	1200	ug/kg	SW846 8260B
4-Methyl-2-pentanone	ND	2500	ug/kg	SW846 8260B
Methyl tert-butyl ether	ND	250	ug/kg	SW846 8260B
Styrene	ND	50	ug/kg	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	100	ug/kg	SW846 8260B
Tetrachloroethene	ND	50	ug/kg	SW846 8260B
Toluene	ND	100	ug/kg	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G160169 **Work Order #...:** GLJFE1AA **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	250	ug/kg	SW846 8260B
1,1,1-Trichloroethane	ND	50	ug/kg	SW846 8260B
1,1,2-Trichloroethane	ND	50	ug/kg	SW846 8260B
Trichloroethene	ND	50	ug/kg	SW846 8260B
Trichlorofluoromethane	ND	100	ug/kg	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	250	ug/kg	SW846 8260B
Vinyl chloride	ND	100	ug/kg	SW846 8260B
Xylenes (total)	ND	150	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	85	(59 - 138)
1,2-Dichloroethane-d4	91	(61 - 130)
Toluene-d8	106	(60 - 143)
4-Bromofluorobenzene	98	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G160169 **Work Order #...:** GLJF51AA **Matrix.....:** SOLID
MB Lot-Sample #: A4G210000-414

Prep Date.....: 07/16/04 **Final Wgt/Vol..:** 25 mL
Analysis Date..: 07/21/04 **Prep Batch #...:** 4203414
Dilution Factor: 1 **Initial Wgt/Vol:** 25 g

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	750	ug/kg	SW846 8260B
Benzene	ND	50	ug/kg	SW846 8260B
Bromodichloromethane	ND	100	ug/kg	SW846 8260B
Bromoform	ND	100	ug/kg	SW846 8260B
Bromomethane	ND	250	ug/kg	SW846 8260B
2-Butanone	ND	750	ug/kg	SW846 8260B
Carbon disulfide	ND	250	ug/kg	SW846 8260B
Carbon tetrachloride	ND	50	ug/kg	SW846 8260B
Chlorobenzene	ND	50	ug/kg	SW846 8260B
Chloroethane	ND	250	ug/kg	SW846 8260B
Chloroform	ND	50	ug/kg	SW846 8260B
Chloromethane	**15 J**	**250**	**ug/kg**	**SW846 8260B**
Cyclohexane	ND	1200	ug/kg	SW846 8260B
Dibromochloromethane	ND	50	ug/kg	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	250	ug/kg	SW846 8260B
1,2-Dibromoethane	ND	250	ug/kg	SW846 8260B
1,2-Dichlorobenzene	ND	100	ug/kg	SW846 8260B
1,3-Dichlorobenzene	ND	100	ug/kg	SW846 8260B
1,4-Dichlorobenzene	ND	100	ug/kg	SW846 8260B
Dichlorodifluoromethane	ND	100	ug/kg	SW846 8260B
1,1-Dichloroethane	ND	50	ug/kg	SW846 8260B
1,2-Dichloroethane	ND	50	ug/kg	SW846 8260B
1,1-Dichloroethene	ND	50	ug/kg	SW846 8260B
cis-1,2-Dichloroethene	ND	50	ug/kg	SW846 8260B
trans-1,2-Dichloroethene	ND	50	ug/kg	SW846 8260B
1,2-Dichloropropane	ND	50	ug/kg	SW846 8260B
cis-1,3-Dichloropropene	ND	50	ug/kg	SW846 8260B
trans-1,3-Dichloropropene	ND	50	ug/kg	SW846 8260B
Ethylbenzene	ND	50	ug/kg	SW846 8260B
2-Hexanone	ND	2500	ug/kg	SW846 8260B
Isopropylbenzene	ND	250	ug/kg	SW846 8260B
Methyl acetate	ND	1200	ug/kg	SW846 8260B
Methylene chloride	ND	250	ug/kg	SW846 8260B
Methylcyclohexane	ND	1200	ug/kg	SW846 8260B
4-Methyl-2-pentanone	ND	2500	ug/kg	SW846 8260B
Methyl tert-butyl ether	ND	250	ug/kg	SW846 8260B
Styrene	ND	50	ug/kg	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	100	ug/kg	SW846 8260B
Tetrachloroethene	ND	50	ug/kg	SW846 8260B
Toluene	ND	100	ug/kg	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4G160169 **Work Order #...:** GLJF51AA **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	**13 J**	**250**	**ug/kg**	**SW846 8260B**
1,1,1-Trichloroethane	ND	50	ug/kg	SW846 8260B
1,1,2-Trichloroethane	ND	50	ug/kg	SW846 8260B
Trichloroethene	ND	50	ug/kg	SW846 8260B
Trichlorofluoromethane	ND	100	ug/kg	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	250	ug/kg	SW846 8260B
Vinyl chloride	ND	100	ug/kg	SW846 8260B
Xylenes (total)	ND	150	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	82	(59 - 138)
1,2-Dichloroethane-d4	87	(61 - 130)
Toluene-d8	99	(60 - 143)
4-Bromofluorobenzene	91	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G160169 **Work Order #...:** GLJEG1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A4G210000-401 GLJEG1AD-LCSD
Prep Date.....: 07/17/04 **Analysis Date..:** 07/20/04
Prep Batch #...: 4203401
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	200	180	ug/kg	92		SW846 8260B
	200	180	ug/kg	92	0.49	SW846 8260B
Chlorobenzene	200	200	ug/kg	98		SW846 8260B
	200	190	ug/kg	97	0.68	SW846 8260B
1,1-Dichloroethene	200	190	ug/kg	96		SW846 8260B
	200	180	ug/kg	91	5.0	SW846 8260B
Toluene	200	200	ug/kg	100		SW846 8260B
	200	200	ug/kg	99	1.6	SW846 8260B
Trichloroethene	200	200	ug/kg	100		SW846 8260B
	200	190	ug/kg	97	3.7	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(59 - 138)
	90	(59 - 138)
1,2-Dichloroethane-d4	95	(61 - 130)
	89	(61 - 130)
Toluene-d8	106	(60 - 143)
	105	(60 - 143)
4-Bromofluorobenzene	101	(47 - 158)
	98	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G160169 **Work Order #...:** GLJEG1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A4G210000-401 GLJEG1AD-LCSD
Prep Date.....: 07/17/04 **Analysis Date..:** 07/20/04
Prep Batch #...: 4203401
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 g

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**92**	**(75 - 129)**			**SW846 8260B**
	92	**(75 - 129)**	**0.49**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**98**	**(75 - 127)**			**SW846 8260B**
	97	**(75 - 127)**	**0.68**	**(0-22)**	**SW846 8260B**
1,1-Dichloroethene	**96**	**(55 - 142)**			**SW846 8260B**
	91	**(55 - 142)**	**5.0**	**(0-27)**	**SW846 8260B**
Toluene	**100**	**(71 - 130)**			**SW846 8260B**
	99	**(71 - 130)**	**1.6**	**(0-24)**	**SW846 8260B**
Trichloroethene	**100**	**(70 - 131)**			**SW846 8260B**
	97	**(70 - 131)**	**3.7**	**(0-23)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(59 - 138)
	90	(59 - 138)
1,2-Dichloroethane-d4	95	(61 - 130)
	89	(61 - 130)
Toluene-d8	106	(60 - 143)
	105	(60 - 143)
4-Bromofluorobenzene	101	(47 - 158)
	98	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G160169 **Work Order #...:** GLJFE1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A4G210000-412 GLJFE1AD-LCSD
Prep Date.....: 07/17/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203412
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**200**	**180**	**ug/kg**	**90**		**SW846 8260B**
	200	**180**	**ug/kg**	**90**	**0.11**	**SW846 8260B**
Chlorobenzene	**200**	**190**	**ug/kg**	**94**		**SW846 8260B**
	200	**190**	**ug/kg**	**97**	**2.5**	**SW846 8260B**
1,1-Dichloroethene	**200**	**180**	**ug/kg**	**88**		**SW846 8260B**
	200	**170**	**ug/kg**	**87**	**0.96**	**SW846 8260B**
Toluene	**200**	**190**	**ug/kg**	**96**		**SW846 8260B**
	200	**200**	**ug/kg**	**98**	**2.3**	**SW846 8260B**
Trichloroethene	**200**	**200**	**ug/kg**	**98**		**SW846 8260B**
	200	**190**	**ug/kg**	**93**	**4.9**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(59 - 138)
	85	(59 - 138)
1,2-Dichloroethane-d4	91	(61 - 130)
	89	(61 - 130)
Toluene-d8	103	(60 - 143)
	102	(60 - 143)
4-Bromofluorobenzene	97	(47 - 158)
	95	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G160169 **Work Order #...:** GLJFE1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A4G210000-412 GLJFE1AD-LCSD
Prep Date.....: 07/17/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203412
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 g

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**90**	**(75 - 129)**			**SW846 8260B**
	90	**(75 - 129)**	**0.11**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**94**	**(75 - 127)**			**SW846 8260B**
	97	**(75 - 127)**	**2.5**	**(0-22)**	**SW846 8260B**
1,1-Dichloroethene	**88**	**(55 - 142)**			**SW846 8260B**
	87	**(55 - 142)**	**0.96**	**(0-27)**	**SW846 8260B**
Toluene	**96**	**(71 - 130)**			**SW846 8260B**
	98	**(71 - 130)**	**2.3**	**(0-24)**	**SW846 8260B**
Trichloroethene	**98**	**(70 - 131)**			**SW846 8260B**
	93	**(70 - 131)**	**4.9**	**(0-23)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(59 - 138)
	85	(59 - 138)
1,2-Dichloroethane-d4	91	(61 - 130)
	89	(61 - 130)
Toluene-d8	103	(60 - 143)
	102	(60 - 143)
4-Bromofluorobenzene	97	(47 - 158)
	95	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4G160169 **Work Order #...:** GLJF51AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A4G210000-414 GLJF51AD-LCSD
Prep Date.....: 07/16/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203414
Dilution Factor: 1 **Final Wgt/Vol..:** 25 mL
Initial Wgt/Vol: 25 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**200**	**180**	**ug/kg**	**92**		**SW846 8260B**
	200	**200**	**ug/kg**	**99**	**7.2**	**SW846 8260B**
Chlorobenzene	**200**	**190**	**ug/kg**	**97**		**SW846 8260B**
	200	**200**	**ug/kg**	**101**	**4.6**	**SW846 8260B**
1,1-Dichloroethene	**200**	**180**	**ug/kg**	**91**		**SW846 8260B**
	200	**190**	**ug/kg**	**96**	**5.8**	**SW846 8260B**
Toluene	**200**	**200**	**ug/kg**	**99**		**SW846 8260B**
	200	**210**	**ug/kg**	**103**	**3.7**	**SW846 8260B**
Trichloroethene	**200**	**180**	**ug/kg**	**92**		**SW846 8260B**
	200	**200**	**ug/kg**	**99**	**7.2**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	84	(59 - 138)
	86	(59 - 138)
1,2-Dichloroethane-d4	84	(61 - 130)
	89	(61 - 130)
Toluene-d8	95	(60 - 143)
	100	(60 - 143)
4-Bromofluorobenzene	90	(47 - 158)
	92	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4G160169 **Work Order #...:** GLJF51AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A4G210000-414 GLJF51AD-LCSD
Prep Date.....: 07/16/04 **Analysis Date..:** 07/21/04
Prep Batch #...: 4203414
Dilution Factor: 1 **Final Wgt/Vol..:** 25 mL
Initial Wgt/Vol: 25 g

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**92**	**(75 - 129)**			**SW846 8260B**
Chlorobenzene	**99**	**(75 - 129)**	**7.2**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**97**	**(75 - 127)**			**SW846 8260B**
	101	**(75 - 127)**	**4.6**	**(0-22)**	**SW846 8260B**
Toluene	**91**	**(55 - 142)**			**SW846 8260B**
	96	**(55 - 142)**	**5.8**	**(0-27)**	**SW846 8260B**
Trichloroethene	**99**	**(71 - 130)**			**SW846 8260B**
	103	**(71 - 130)**	**3.7**	**(0-24)**	**SW846 8260B**
	92	**(70 - 131)**			**SW846 8260B**
	99	**(70 - 131)**	**7.2**	**(0-23)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	84	(59 - 138)
	86	(59 - 138)
1,2-Dichloroethane-d4	84	(61 - 130)
	89	(61 - 130)
Toluene-d8	95	(60 - 143)
	100	(60 - 143)
4-Bromofluorobenzene	90	(47 - 158)
	92	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

GENERAL CHEMISTRY DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-100

General Chemistry

Lot-Sample #...: A4G160169-001 Work Order #...: GK78C Matrix.....: SO
Date Sampled...: 07/15/04 08:00 Date Received..: 07/16/04
% Moisture.....: 4.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	95.1	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201077
	Dilution Factor: 1			MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-101

General Chemistry

Lot-Sample #...: A4G160169-002 **Work Order #...:** GK78G **Matrix.....:** SO
Date Sampled...: 07/15/04 08:05 **Date Received..:** 07/16/04
% Moisture.....: 2.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.5	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201077

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-102

General Chemistry

Lot-Sample #...: A4G160169-003 Work Order #...: GK78L Matrix.....: SO
Date Sampled...: 07/15/04 08:10 Date Received..: 07/16/04
% Moisture.....: 2.1

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.9	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201077
	Dilution Factor: 1			MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-103

General Chemistry

Lot-Sample #...: A4G160169-004 Work Order #...: GK78N Matrix.....: SO
Date Sampled...: 07/15/04 08:20 Date Received..: 07/16/04
% Moisture.....: 2.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.5	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201077

Dilution Factor: 1
MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-104

General Chemistry

Lot-Sample #...: A4G160169-005 Work Order #...: GK78R Matrix.....: SO
Date Sampled...: 07/15/04 08:25 Date Received..: 07/16/04
% Moisture.....: 2.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.2	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201077

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-105

General Chemistry

Lot-Sample #...: A4G160169-006 Work Order #...: GK78W Matrix.....: SO
Date Sampled...: 07/15/04 08:30 Date Received..: 07/16/04
% Moisture.....: 2.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	98.0	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201077

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-106

General Chemistry

Lot-Sample #...: A4G160169-007 Work Order #...: GK78X Matrix.....: SO
Date Sampled...: 07/15/04 08:35 Date Received..: 07/16/04
% Moisture.....: 3.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	96.6	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201077

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-107

General Chemistry

Lot-Sample #...: A4G160169-008 Work Order #...: GK781 Matrix.....: SO
Date Sampled...: 07/15/04 08:40 Date Received..: 07/16/04
% Moisture.....: 2.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.7	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201077

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-108

General Chemistry

Lot-Sample #...: A4G160169-009 Work Order #...: GK783 Matrix.....: SO
Date Sampled...: 07/15/04 08:45 Date Received..: 07/16/04
% Moisture.....: 2.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.4	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201077
	Dilution Factor: 1			MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-109

General Chemistry

Lot-Sample #...: A4G160169-010 Work Order #...: GK784 Matrix.....: SO
Date Sampled...: 07/15/04 08:55 Date Received..: 07/16/04
% Moisture.....: 3.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.0	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078
		Dilution Factor: 1		MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-110

General Chemistry

Lot-Sample #...: A4G160169-011 Work Order #...: GK786 Matrix.....: SO
Date Sampled...: 07/15/04 09:00 Date Received..: 07/16/04
% Moisture.....: 7.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	93.0	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-111

General Chemistry

Lot-Sample #...: A4G160169-012 Work Order #...: GK788 Matrix.....: SO
Date Sampled...: 07/15/04 10:50 Date Received..: 07/16/04
% Moisture.....: 5.7

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	94.3	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078
	Dilution Factor: 1			MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-112

General Chemistry

Lot-Sample #...: A4G160169-013 Work Order #...: GK789 Matrix.....: SO
Date Sampled...: 07/15/04 10:55 Date Received..: 07/16/04
% Moisture.....: 3.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	96.8	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-113

General Chemistry

Lot-Sample #...: A4G160169-014 **Work Order #...:** GK79C **Matrix.....:** SO
Date Sampled...: 07/15/04 11:00 **Date Received..:** 07/16/04
% Moisture.....: 1.7

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	98.3	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-114

General Chemistry

Lot-Sample #...: A4G160169-015 Work Order #...: GK79D Matrix.....: SO
Date Sampled...: 07/15/04 11:05 Date Received..: 07/16/04
% Moisture.....: 1.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	98.1	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078
		Dilution Factor: 1		MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-115

General Chemistry

Lot-Sample #...: A4G160169-016 Work Order #...: GK79H Matrix.....: SO
Date Sampled...: 07/15/04 11:10 Date Received..: 07/16/04
% Moisture.....: 2.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.1	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078

Dilution Factor: 1
MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-116

General Chemistry

Lot-Sample #...: A4G160169-017 Work Order #...: GK79J Matrix.....: SO
Date Sampled...: 07/15/04 11:20 Date Received..: 07/16/04
% Moisture.....: 4.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	95.2	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-117

General Chemistry

Lot-Sample #...: A4G160169-018 Work Order #...: GK79K Matrix.....: SO
Date Sampled...: 07/15/04 11:25 Date Received..: 07/16/04
% Moisture.....: 3.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	96.2	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078
	Dilution Factor: 1			MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-118

General Chemistry

Lot-Sample #...: A4G160169-019 Work Order #...: GK79M Matrix.....: SO
Date Sampled...: 07/15/04 11:30 Date Received..: 07/16/04
% Moisture.....: 2.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.2	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-119

General Chemistry

Lot-Sample #...: A4G160169-020 Work Order #...: GK79P Matrix.....: SO
Date Sampled...: 07/15/04 11:40 Date Received..: 07/16/04
% Moisture.....: 1.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	98.5	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078
		Dilution Factor: 1		MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-120

General Chemistry

Lot-Sample #...: A4G160169-021 Work Order #...: GK79T Matrix.....: SO
Date Sampled...: 07/15/04 11:50 Date Received..: 07/16/04
% Moisture.....: 2.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.4	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078
	Dilution Factor: 1			MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-121

General Chemistry

Lot-Sample #...: A4G160169-022 Work Order #...: GK79W Matrix.....: SO
Date Sampled...: 07/15/04 12:00 Date Received..: 07/16/04
% Moisture.....: 4.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	95.5	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-122

General Chemistry

Lot-Sample #...: A4G160169-023 Work Order #...: GK791 Matrix.....: SO
Date Sampled...: 07/15/04 12:35 Date Received..: 07/16/04
% Moisture.....: 5.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	94.7	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078
	Dilution Factor: 1			MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-123

General Chemistry

Lot-Sample #...: A4G160169-024 **Work Order #...:** GK793 **Matrix.....:** SO
Date Sampled...: 07/15/04 12:40 **Date Received..:** 07/16/04
% Moisture.....: 3.1

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**96.9**	**10.0**	**%**	**MCAWW 160.3 MOD**	**07/19-07/20/04**	**4201078**

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-124

General Chemistry

Lot-Sample #...: A4G160169-025 Work Order #...: GK795 Matrix.....: SO
Date Sampled...: 07/15/04 12:45 Date Received..: 07/16/04
% Moisture.....: 1.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	98.1	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-125

General Chemistry

Lot-Sample #...: A4G160169-026 Work Order #...: GK798 Matrix.....: SO
Date Sampled...: 07/15/04 12:50 Date Received..: 07/16/04
% Moisture.....: 1.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	98.1	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078
		Dilution Factor: 1		MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-126

General Chemistry

Lot-Sample #...: A4G160169-027 Work Order #...: GK8AD Matrix.....: SO
Date Sampled...: 07/15/04 13:30 Date Received..: 07/16/04
% Moisture.....: 2.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.7	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078
	Dilution Factor: 1			MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-127

General Chemistry

Lot-Sample #...: A4G160169-028 Work Order #...: GK8AE Matrix.....: SO
Date Sampled...: 07/15/04 13:35 Date Received..: 07/16/04
% Moisture.....: 4.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	95.8	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078
	Dilution Factor: 1			MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-128

General Chemistry

Lot-Sample #...: A4G160169-029 Work Order #...: GK8AF Matrix.....: SO
Date Sampled...: 07/15/04 13:40 Date Received..: 07/16/04
% Moisture.....: 2.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.5	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078
	Dilution Factor: 1			MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-129

General Chemistry

Lot-Sample #...: A4G160169-030 **Work Order #...:** GK8AG **Matrix.....:** SO
Date Sampled...: 07/15/04 13:45 **Date Received..:** 07/16/04
% Moisture.....: 3.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**96.7**	**10.0**	**%**	**MCAWW 160.3 MOD**	**07/19-07/20/04**	**4201274**
		Dilution Factor: 1		MDL.....: 10.0		

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-130

General Chemistry

Lot-Sample #...: A4G160169-031 Work Order #...: GK8AH Matrix.....: SO
Date Sampled...: 07/15/04 13:50 Date Received..: 07/16/04
% Moisture.....: 2.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	97.6	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201274

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: S-17360-071504-DCR-131

General Chemistry

Lot-Sample #...: A4G160169-032 Work Order #...: GK8AJ Matrix.....: SO
Date Sampled...: 07/15/04 14:00 Date Received..: 07/16/04
% Moisture.....: 2.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	98.0	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201274

Dilution Factor: 1 MDL.....: 10.0

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: S-17360-071504-DCR-132

General Chemistry

Lot-Sample #...: A4G160169-033 Work Order #...: GK8AK Matrix.....: SO
Date Sampled...: 07/15/04 14:10 Date Received..: 07/16/04
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	87.1	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201274

Dilution Factor: 1 MDL.....: 10.0

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A4G160169 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids		Work Order #: GLCVG1AA		MB Lot-Sample #:	A4G190000-077	
	ND	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201077
		Dilution Factor: 1				
Percent Solids		Work Order #: GLCVJ1AA		MB Lot-Sample #:	A4G190000-078	
	ND	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201078
		Dilution Factor: 1				
Percent Solids		Work Order #: GLDA31AA		MB Lot-Sample #:	A4G190000-274	
	ND	10.0	%	MCAWW 160.3 MOD	07/19-07/20/04	4201274
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4G160169 **Work Order #...:** GK76W-SMP GK76W-DUP **Matrix.....:** SOLID

Date Sampled...: 07/15/04 12:05 **Date Received..:** 07/16/04

% Moisture.....: 5.4

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A4G160162-016		
	94.6	94.7	%	0.12	(0-20)	MCAWW 160.3 MOD	07/19-07/20/04	4201077

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4G160169 **Work Order #...:** GK77E-SMP GK77E-DUP **Matrix.....:** SOLID

Date Sampled...: 07/15/04 14:45 **Date Received..:** 07/16/04

% Moisture.....: 21

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A4G160162-024		
	79.2	82.3	%	3.9	(0-20)	MCAWW 160.3 MOD	07/19-07/20/04	4201077

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4G160169 **Work Order #...:** GK784-SMP GK784-DUP **Matrix.....:** SO

Date Sampled...: 07/15/04 08:55 **Date Received..:** 07/16/04

% Moisture.....: 3.0

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A4G160169-010		
	97.0	97.3	%	0.29	(0-20)	MCAWW 160.3 MOD	07/19-07/20/04	4201078

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4G160169 **Work Order #...:** GK8AF-SMP GK8AF-DUP **Matrix.....:** SO

Date Sampled...: 07/15/04 13:40 **Date Received..:** 07/16/04

% Moisture.....: 2.5

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #:	A4G160169-029	
	97.5	97.9	%	0.37	(0-20)	MCAWW 160.3 MOD	07/19-07/20/04	4201078

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4G160169 **Work Order #...:** GK6CC-SMP GK6CC-DUP **Matrix.....:** SOLID

Date Sampled...: 07/07/04 **Date Received..:** 07/15/04

% Moisture.....: 18

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #:	A4G150264-001	
	81.8	81.0	%	0.99	(0-20)	MCAWW 160.3 MOD	07/19-07/20/04	4201274

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4G160169 **Work Order #...:** GK8AG-SMP GK8AG-DUP **Matrix.....:** SO

Date Sampled...: 07/15/04 13:45 **Date Received..:** 07/16/04

% Moisture.....: 3.4

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #:	A4G160169-030	
	96.7	97.1	%	0.42	(0-20)	MCAWW 160.3 MOD	07/19-07/20/04	4201274

Dilution Factor: 1

SEVERN TRENT STL

END OF REPORT

REC'D CRA
SEP - 1 2004
G-24

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A4H100202

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4H100202
Name: GM - GR
Description
Event: Quarterly GW
Samples: 11 water
Analysis: TCL VOC, SVOC

TAT: 21 day
Lab: STL
Checked Against Preliminary Data:
Date: ____ Init.: KAK
Date of Validation Memo: 10/20/04
Invoice Approval Date: ____
Comments: ____

Kenneth J. Kuzior
Project Manager

August 31, 2004

Cooler # - MT 335

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: Gm - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	TCL SVOCs	STD TAT	REMARKS
1	8/9/09	1140	GW-17360-080904-DCN-191	H2O	9	X		X	MS/MSD
2		1146	-192		3	X		X	
3		1411	-193		3	X		X	
4		1416	-194		3	X		X	
5		1407	-195		3	X		X	
6		1440	-196		3	X		X	
7		1640	-197		5	X	X	X	
8		1637	-198		3	X		X	
9		1800	-199		5	X	X	X	
10		1835	-200		5	X	X	X	
11		—	-201		1	X		X	

TOTAL NUMBER OF CONTAINERS: 43

RELINQUISHED BY: 1. _____	DATE: 8/9/09 TIME: 1945	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No. 839355888831

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27162

SAMPLE TEAM: David Rivers, Bryant Miller

RECEIVED FOR LABORATORY BY: Natalie Burden

DATE: 8-10-09 TIME: 9:40

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4H100202

The following report contains the analytical results for ten water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received August 10, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on August 24, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 5.4°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for batch(es) 4229361 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

GC/MS SEMIVOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

Samples GW-17360-080904-DCR-199 and GW-17360-080904-DCR-200 had elevated reporting limits due to matrix interferences.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4H100202

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-080904-DCR-191 08/09/04 11:40 001				
1,1-Dichloroethane	6.3	2.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	0.98 J	2.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	1.7 J	2.0	ug/L	SW846 8260B
Methylene chloride	1.1 J,B	10	ug/L	SW846 8260B
Vinyl chloride	69	2.0	ug/L	SW846 8260B
GW-17360-080904-DCR-192 08/09/04 11:46 002				
Acetone	1.5 J	42	ug/L	SW846 8260B
1,1-Dichloroethane	3.4	1.7	ug/L	SW846 8260B
1,1-Dichloroethene	2.9	1.7	ug/L	SW846 8260B
cis-1,2-Dichloroethene	44	1.7	ug/L	SW846 8260B
trans-1,2-Dichloroethene	6.2	1.7	ug/L	SW846 8260B
Trichloroethene	37	1.7	ug/L	SW846 8260B
Vinyl chloride	6.0	1.7	ug/L	SW846 8260B
GW-17360-080904-DCR-193 08/09/04 14:11 003				
Chloroform	1.5	1.0	ug/L	SW846 8260B
Trichloroethene	0.36 J	1.0	ug/L	SW846 8260B
GW-17360-080904-DCR-194 08/09/04 14:16 004				
Chloroform	1.6	1.0	ug/L	SW846 8260B
Trichloroethene	0.35 J	1.0	ug/L	SW846 8260B
GW-17360-080904-DCR-195 08/09/04 14:07 005				
Acetone	0.88 J	25	ug/L	SW846 8260B
Bromodichloromethane	0.83 J	1.0	ug/L	SW846 8260B
Chloroform	4.1	1.0	ug/L	SW846 8260B
Trichloroethene	0.36 J	1.0	ug/L	SW846 8260B
GW-17360-080904-DCR-196 08/09/04 14:40 006				
Chloroform	1.8	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	0.32 J	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	0.47 J	5.0	ug/L	SW846 8260B
Trichloroethene	4.7	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4H100202

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-080904-DCR-198 08/09/04 16:37 008				
cis-1,2-Dichloroethene	26	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	2.8	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	0.93 J	5.0	ug/L	SW846 8260B
Trichloroethene	25	1.0	ug/L	SW846 8260B
Vinyl chloride	0.68 J	1.0	ug/L	SW846 8260B
GW-17360-080904-DCR-199 08/09/04 18:00 009				
Benzo(a)anthracene	5.4 J	16	ug/L	SW846 8270C
Benzo(a)pyrene	2.3 J	16	ug/L	SW846 8270C
Benzo(b)fluoranthene	4.3 J	16	ug/L	SW846 8270C
Benzo(ghi)perylene	2.0 J	20	ug/L	SW846 8270C
Benzo(k)fluoranthene	2.1 J	20	ug/L	SW846 8270C
Chrysene	4.0 J	20	ug/L	SW846 8270C
Fluoranthene	19 J	20	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	1.8 J	16	ug/L	SW846 8270C
Phenanthrene	4.3 J	20	ug/L	SW846 8270C
Pyrene	22	20	ug/L	SW846 8270C
Acetone	2.0 J	25	ug/L	SW846 8260B
Carbon disulfide	7.3	5.0	ug/L	SW846 8260B
1,1-Dichloroethane	0.42 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	2.7	1.0	ug/L	SW846 8260B
Isopropylbenzene	0.44 J	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	0.57 J	50	ug/L	SW846 8260B
Trichloroethene	0.30 J	1.0	ug/L	SW846 8260B
GW-17360-080904-DCR-200 08/09/04 18:35 010				
bis(2-Ethylhexyl) phthalate	8.4 J	50	ug/L	SW846 8270C
Caprolactam	9.5 J	100	ug/L	SW846 8270C
Fluoranthene	5.8 J	50	ug/L	SW846 8270C
Pyrene	6.1 J	50	ug/L	SW846 8270C
Tetrachloroethene	0.35 J	1.0	ug/L	SW846 8260B
GW-17360-080904-DCR-201 08/09/04 011				
Methylene chloride	0.86 J,B	5.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4H100202

PARAMETER	ANALYTICAL METHOD
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4H100202

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GMTP3	001	GW-17360-080904-DCR-191	08/09/04	11:40
GMTP9	002	GW-17360-080904-DCR-192	08/09/04	11:46
GMTQA	003	GW-17360-080904-DCR-193	08/09/04	14:11
GMTQC	004	GW-17360-080904-DCR-194	08/09/04	14:16
GMTQD	005	GW-17360-080904-DCR-195	08/09/04	14:07
GMTQE	006	GW-17360-080904-DCR-196	08/09/04	14:40
GMTQG	007	GW-17360-080904-DCR-197	08/09/04	16:40
GMTQJ	008	GW-17360-080904-DCR-198	08/09/04	16:37
GMTQK	009	GW-17360-080904-DCR-199	08/09/04	18:00
GMTQM	010	GW-17360-080904-DCR-200	08/09/04	18:35
GMTQN	011	GW-17360-080904-DCR-201	08/09/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

Cooler # - MI 553

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: Gm - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	TCL SVOCs	STD TNT	REMARKS
1	8/9/04	1140	GW-17360-080904-DCN-191	H2O	9	X		X	MS/MSD
2		1146	-192		3	X		X	
3		1911	-193		3	X		X	
4		1416	-194		3	X		X	
5		1407	-195		3	X		X	
6		1440	-196		3	X		X	
7		1640	-197		5	X	X	X	
8		1637	-198		3	X		X	
9		1800	-199		5	X	X	X	
10		1835	-200		5	X	X	X	
11		—	-201		1	X		X	

TOTAL NUMBER OF CONTAINERS: 43

RELINQUISHED BY: 1. _____	DATE: 8/9/04 TIME: 1945	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 839355888831

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27162

SAMPLE TEAM: David Rivers, Bryant Miller

RECEIVED FOR LABORATORY BY: Natalie J. Burke
DATE: 8-10-04 TIME: 9:40

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

STL-North Canton, Ohio

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4H100202

Case Number/SDG: 17360-09

Storage Location: C223 MS/MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GMTP3	STILLERJ	8/10/04	Yes		Storage	
GMTP9	STILLERJ	8/10/04	Yes		Storage	
GMTQA	STILLERJ	8/10/04	Yes		Storage	
GMTQC	STILLERJ	8/10/04	Yes		Storage	
GMTQD	STILLERJ	8/10/04	Yes		Storage	
GMTQE	STILLERJ	8/10/04	Yes		Storage	
GMTQG	STILLERJ	8/10/04	Yes		Storage	
GMTQJ	STILLERJ	8/10/04	Yes		Storage	
GMTQK	STILLERJ	8/10/04	Yes		Storage	
GMTQM	STILLERJ	8/10/04	Yes		Storage	
GMTQN	STILLERJ	8/10/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** ATH100202

North Canton Facility

Client: CRA Project: Grn Grand Rapids Quote#: 50154

Cooler Received on: 8-10-04 Opened on: 8-10-04 by: Natalie J Bullen (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:_____

STL Cooler No# mi553 Foam Box ☐ Client Cooler ☐ Other____

1. Were custody seals on the outside of the cooler? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
   If YES, Quantity____
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☒
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☒ None ☐ Other :_____
6. Cooler temperature upon receipt 5.4 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H_20 Slurry ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☒
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐

Contacted PM _____ Date:_____ by:_____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

√	

1. CHAIN OF CUSTODY

√	The following discrepancies occurred: Sample times not listed on labels for some samples; time on COC for -194 = 1416 ; time on label = 1414 ; will log all for times per COC

2. SAMPLE CONDITION

	Sample(s) were received after the recommended holding time had expired.
	Sample(s) were received in a broken container.

3. SAMPLE PRESERVATION

	Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	Sample(s) were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-080904-DCR-191

GC/MS Volatiles

Lot-Sample #...: A4H100202-001 **Work Order #...:** GMTP31AA **Matrix.....:** WG
Date Sampled...: 08/09/04 11:40 **Date Received..:** 08/10/04
Prep Date.....: 08/15/04 **Analysis Date..:** 08/15/04
Prep Batch #...: 4229439
Dilution Factor: 2 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	50	ug/L	1.5
Benzene	ND	2.0	ug/L	0.44
Bromodichloromethane	ND	2.0	ug/L	0.28
Bromoform	ND	2.0	ug/L	0.34
Bromomethane	ND	2.0	ug/L	0.72
2-Butanone	ND	50	ug/L	0.78
Carbon disulfide	ND	10	ug/L	0.56
Carbon tetrachloride	ND	2.0	ug/L	0.38
Chlorobenzene	ND	2.0	ug/L	0.40
Chloroethane	ND	2.0	ug/L	0.48
Chloroform	ND	2.0	ug/L	0.32
Chloromethane	ND	2.0	ug/L	0.28
Cyclohexane	ND	2.0	ug/L	0.24
Dibromochloromethane	ND	2.0	ug/L	0.38
1,2-Dibromo-3-chloro-propane	ND	2.0	ug/L	0.56
1,2-Dibromoethane	ND	2.0	ug/L	0.48
1,2-Dichlorobenzene	ND	2.0	ug/L	0.40
1,3-Dichlorobenzene	ND	2.0	ug/L	0.36
1,4-Dichlorobenzene	ND	2.0	ug/L	0.44
Dichlorodifluoromethane	ND	2.0	ug/L	0.50
1,1-Dichloroethane	**6.3**	**2.0**	**ug/L**	**0.42**
1,2-Dichloroethane	ND	2.0	ug/L	0.32
1,1-Dichloroethene	ND	2.0	ug/L	0.36
cis-1,2-Dichloroethene	**0.98 J**	**2.0**	**ug/L**	**0.42**
trans-1,2-Dichloroethene	**1.7 J**	**2.0**	**ug/L**	**0.32**
1,2-Dichloropropane	ND	2.0	ug/L	0.30
cis-1,3-Dichloropropene	ND	2.0	ug/L	0.24
trans-1,3-Dichloropropene	ND	2.0	ug/L	0.34
Ethylbenzene	ND	2.0	ug/L	0.38
2-Hexanone	ND	100	ug/L	0.70
Isopropylbenzene	ND	10	ug/L	0.30
Methyl acetate	ND	20	ug/L	1.0
Methylene chloride	**1.1 J,B**	**10**	**ug/L**	**0.38**
Methylcyclohexane	ND	2.0	ug/L	1.0
4-Methyl-2-pentanone	ND	100	ug/L	0.64
Methyl tert-butyl ether	ND	10	ug/L	0.36
Styrene	ND	2.0	ug/L	0.26

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-191

GC/MS Volatiles

Lot-Sample #...: A4H100202-001 **Work Order #...:** GMTP31AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	0.44
Tetrachloroethene	ND	2.0	ug/L	0.38
Toluene	ND	2.0	ug/L	0.34
1,2,4-Trichloro-benzene	ND	10	ug/L	0.38
1,1,1-Trichloroethane	ND	2.0	ug/L	0.42
1,1,2-Trichloroethane	ND	2.0	ug/L	0.44
Trichloroethene	ND	2.0	ug/L	0.56
Trichlorofluoromethane	ND	2.0	ug/L	0.32
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ug/L	0.52
Vinyl chloride	**69**	**2.0**	**ug/L**	**0.42**
Xylenes (total)	ND	6.0	ug/L	0.88

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-192

GC/MS Volatiles

Lot-Sample #...: A4H100202-002 **Work Order #...:** GMTP91AA **Matrix.....:** WG
Date Sampled...: 08/09/04 11:46 **Date Received..:** 08/10/04
Prep Date.....: 08/18/04 **Analysis Date..:** 08/18/04
Prep Batch #...: 4231527
Dilution Factor: 1.67 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.5 J**	**42**	**ug/L**	**1.2**
Benzene	ND	1.7	ug/L	0.37
Bromodichloromethane	ND	1.7	ug/L	0.23
Bromoform	ND	1.7	ug/L	0.28
Bromomethane	ND	1.7	ug/L	0.60
2-Butanone	ND	42	ug/L	0.65
Carbon disulfide	ND	8.4	ug/L	0.47
Carbon tetrachloride	ND	1.7	ug/L	0.32
Chlorobenzene	ND	1.7	ug/L	0.33
Chloroethane	ND	1.7	ug/L	0.40
Chloroform	ND	1.7	ug/L	0.27
Chloromethane	ND	1.7	ug/L	0.23
Cyclohexane	ND	1.7	ug/L	0.20
Dibromochloromethane	ND	1.7	ug/L	0.32
1,2-Dibromo-3-chloro-propane	ND	1.7	ug/L	0.47
1,2-Dibromoethane	ND	1.7	ug/L	0.40
1,2-Dichlorobenzene	ND	1.7	ug/L	0.33
1,3-Dichlorobenzene	ND	1.7	ug/L	0.30
1,4-Dichlorobenzene	ND	1.7	ug/L	0.37
Dichlorodifluoromethane	ND	1.7	ug/L	0.42
1,1-Dichloroethane	**3.4**	**1.7**	**ug/L**	**0.35**
1,2-Dichloroethane	ND	1.7	ug/L	0.27
1,1-Dichloroethene	**2.9**	**1.7**	**ug/L**	**0.30**
cis-1,2-Dichloroethene	**44**	**1.7**	**ug/L**	**0.35**
trans-1,2-Dichloroethene	**6.2**	**1.7**	**ug/L**	**0.27**
1,2-Dichloropropane	ND	1.7	ug/L	0.25
cis-1,3-Dichloropropene	ND	1.7	ug/L	0.20
trans-1,3-Dichloropropene	ND	1.7	ug/L	0.28
Ethylbenzene	ND	1.7	ug/L	0.32
2-Hexanone	ND	84	ug/L	0.58
Isopropylbenzene	ND	8.4	ug/L	0.25
Methyl acetate	ND	17	ug/L	0.87
Methylene chloride	ND	8.4	ug/L	0.32
Methylcyclohexane	ND	1.7	ug/L	0.84
4-Methyl-2-pentanone	ND	84	ug/L	0.53
Methyl tert-butyl ether	ND	8.4	ug/L	0.30
Styrene	ND	1.7	ug/L	0.22

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-192

GC/MS Volatiles

Lot-Sample #...: A4H100202-002 **Work Order #...:** GMTP91AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.7	ug/L	0.37
Tetrachloroethene	ND	1.7	ug/L	0.32
Toluene	ND	1.7	ug/L	0.28
1,2,4-Trichloro-benzene	ND	8.4	ug/L	0.32
1,1,1-Trichloroethane	ND	1.7	ug/L	0.35
1,1,2-Trichloroethane	ND	1.7	ug/L	0.37
Trichloroethene	**37**	**1.7**	**ug/L**	**0.47**
Trichlorofluoromethane	ND	1.7	ug/L	0.27
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.7	ug/L	0.43
Vinyl chloride	**6.0**	**1.7**	**ug/L**	**0.35**
Xylenes (total)	ND	5.0	ug/L	0.73

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	104	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-193

GC/MS Volatiles

Lot-Sample #...: A4H100202-003 **Work Order #...:** GMTQA1AA **Matrix.....:** WG
Date Sampled...: 08/09/04 14:11 **Date Received..:** 08/10/04
Prep Date.....: 08/14/04 **Analysis Date..:** 08/14/04
Prep Batch #...: 4227028
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.5**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-193

GC/MS Volatiles

Lot-Sample #...: A4H100202-003 **Work Order #...:** GMTQA1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.36 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-080904-DCR-194

GC/MS Volatiles

Lot-Sample #...: A4H100202-004 **Work Order #...:** GMTQC1AA **Matrix.....:** WG
Date Sampled...: 08/09/04 14:16 **Date Received..:** 08/10/04
Prep Date.....: 08/14/04 **Analysis Date..:** 08/14/04
Prep Batch #...: 4227028
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.6**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-080904-DCR-194

GC/MS Volatiles

Lot-Sample #...: A4H100202-004 **Work Order #...:** GMTQC1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.35 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-080904-DCR-195

GC/MS Volatiles

Lot-Sample #...: A4H100202-005 **Work Order #...:** GMTQD1AA **Matrix.....:** WG
Date Sampled...: 08/09/04 14:07 **Date Received..:** 08/10/04
Prep Date.....: 08/16/04 **Analysis Date..:** 08/16/04
Prep Batch #...: 4229361
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**0.88 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**0.83 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**4.1**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-195

GC/MS Volatiles

Lot-Sample #...: A4H100202-005 **Work Order #...:** GMTQD1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.36 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	85	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-080904-DCR-196

GC/MS Volatiles

Lot-Sample #...: A4H100202-006 **Work Order #...:** GMTQE1AA **Matrix.....:** WG
Date Sampled...: 08/09/04 14:40 **Date Received..:** 08/10/04
Prep Date.....: 08/16/04 **Analysis Date..:** 08/16/04
Prep Batch #...: 4229439
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.8**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**0.32 J**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**0.47 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-196

GC/MS Volatiles

Lot-Sample #...: A4H100202-006 **Work Order #...:** GMTQE1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**4.7**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-197

GC/MS Volatiles

Lot-Sample #...: A4H100202-007 **Work Order #...:** GMTQG1AA **Matrix.....:** WG
Date Sampled...: 08/09/04 16:40 **Date Received..:** 08/10/04
Prep Date.....: 08/16/04 **Analysis Date..:** 08/16/04
Prep Batch #...: 4229439
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-197

GC/MS Volatiles

Lot-Sample #...: A4H100202-007 **Work Order #...:** GMTQG1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	89	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-080904-DCR-198

GC/MS Volatiles

Lot-Sample #...: A4H100202-008 **Work Order #...:** GMTQJ1AA **Matrix.....:** WG
Date Sampled...: 08/09/04 16:37 **Date Received..:** 08/10/04
Prep Date.....: 08/16/04 **Analysis Date..:** 08/16/04
Prep Batch #...: 4229439
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**26**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	**2.8**	**1.0**	**ug/L**	**0.16**
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**0.93 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-198

GC/MS Volatiles

Lot-Sample #...: A4H100202-008 **Work Order #...:** GMTQJ1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**25**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	**0.68 J**	**1.0**	**ug/L**	**0.21**
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
1,2-Dichloroethane-d4	86	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-199

GC/MS Volatiles

Lot-Sample #...: A4H100202-009 **Work Order #...:** GMTQK1AA **Matrix.....:** WG
Date Sampled...: 08/09/04 18:00 **Date Received..:** 08/10/04
Prep Date.....: 08/18/04 **Analysis Date..:** 08/18/04
Prep Batch #...: 4231527
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.0 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	**7.3**	**5.0**	**ug/L**	**0.28**
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	**0.42 J**	**1.0**	**ug/L**	**0.21**
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**2.7**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	**0.44 J**	**5.0**	**ug/L**	**0.15**
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	**0.57 J**	**50**	**ug/L**	**0.32**
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-199

GC/MS Volatiles

Lot-Sample #...: A4H100202-009 **Work Order #...:** GMTQK1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.30 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	108	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-080904-DCR-200

GC/MS Volatiles

Lot-Sample #...: A4H100202-010 **Work Order #...:** GMTQM1AA **Matrix.....:** WG
Date Sampled...: 08/09/04 18:35 **Date Received..:** 08/10/04
Prep Date.....: 08/16/04 **Analysis Date..:** 08/16/04
Prep Batch #...: 4229439
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-200

GC/MS Volatiles

Lot-Sample #...: A4H100202-010 **Work Order #...:** GMTQM1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.35 J**	**1.0**	**ug/L**	**0.19**
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-201

GC/MS Volatiles

Lot-Sample #...: A4H100202-011 **Work Order #...:** GMTQN1AA **Matrix.....:** WQ
Date Sampled...: 08/09/04 **Date Received..:** 08/10/04
Prep Date.....: 08/16/04 **Analysis Date..:** 08/16/04
Prep Batch #...: 4229439
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**0.86 J,B**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-201

GC/MS Volatiles

Lot-Sample #...: A4H100202-011 **Work Order #...:** GMTQN1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
1,2-Dichloroethane-d4	86	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GM57D1AA **Matrix.....:** WATER
MB Lot-Sample #: A4H140000-028

Prep Date.....: 08/13/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 08/13/04 **Prep Batch #...:** 4227028
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	**1.1 J**	**5.0**	**ug/L**	**SW846 8260B**
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GM57D1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GM8F01AA **Matrix.....:** WATER
MB Lot-Sample #: A4H160000-361

Prep Date.....: 08/16/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 08/16/04 **Prep Batch #...:** 4229361
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	**0.88 J**	**5.0**	**ug/L**	**SW846 8260B**
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GM8F01AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
1,2-Dichloroethane-d4	83	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GM8TQ1AA **Matrix.....:** WATER
MB Lot-Sample #: A4H160000-439

Prep Date.....: 08/15/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 08/15/04 **Prep Batch #...:** 4229439
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	**0.91 J**	**5.0**	**ug/L**	**SW846 8260B**
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GM8TQ1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GNFEM1AA **Matrix.....:** WATER
MB Lot-Sample #: A4H180000-527

Prep Date.....: 08/17/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 08/17/04 **Prep Batch #...:** 4231527
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	**0.38 J**	**1.0**	**ug/L**	**SW846 8260B**
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GNFEM1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GM57D1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H140000-028 GM57D1AD-LCSD
Prep Date.....: 08/13/04 **Analysis Date..:** 08/13/04
Prep Batch #...: 4227028
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	10	9.3	ug/L	93		SW846 8260B
	10	10	ug/L	102	8.4	SW846 8260B
Chlorobenzene	10	9.5	ug/L	95		SW846 8260B
	10	11	ug/L	106	11	SW846 8260B
1,1-Dichloroethene	10	10	ug/L	102		SW846 8260B
	10	10	ug/L	105	3.2	SW846 8260B
Toluene	10	10	ug/L	100		SW846 8260B
	10	11	ug/L	111	10	SW846 8260B
Trichloroethene	10	9.6	ug/L	96		SW846 8260B
	10	10	ug/L	101	5.0	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
	91	(73 - 122)
1,2-Dichloroethane-d4	85	(61 - 128)
	91	(61 - 128)
Toluene-d8	94	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)
	92	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GM57D1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H140000-028 GM57D1AD-LCSD
Prep Date.....: 08/13/04 **Analysis Date..:** 08/13/04
Prep Batch #...: 4227028
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**93**	**(80 - 116)**			**SW846 8260B**
	102	**(80 - 116)**	**8.4**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**95**	**(76 - 117)**			**SW846 8260B**
	106	**(76 - 117)**	**11**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**102**	**(63 - 130)**			**SW846 8260B**
	105	**(63 - 130)**	**3.2**	**(0-20)**	**SW846 8260B**
Toluene	**100**	**(74 - 119)**			**SW846 8260B**
	111	**(74 - 119)**	**10**	**(0-20)**	**SW846 8260B**
Trichloroethene	**96**	**(75 - 122)**			**SW846 8260B**
	101	**(75 - 122)**	**5.0**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
	91	(73 - 122)
1,2-Dichloroethane-d4	85	(61 - 128)
	91	(61 - 128)
Toluene-d8	94	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)
	92	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GM8F01AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H160000-361 GM8F01AD-LCSD
Prep Date.....: 08/16/04 **Analysis Date..:** 08/16/04
Prep Batch #...: 4229361
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**9.4**	**ug/L**	**94**		**SW846 8260B**
	10	**9.9**	**ug/L**	**99**	**5.4**	**SW846 8260B**
Chlorobenzene	**10**	**9.5**	**ug/L**	**95**		**SW846 8260B**
	10	**10**	**ug/L**	**103**	**7.8**	**SW846 8260B**
1,1-Dichloroethene	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	10	**9.9**	**ug/L**	**99**	**0.52**	**SW846 8260B**
Toluene	**10**	**9.9**	**ug/L**	**99**		**SW846 8260B**
	10	**11**	**ug/L**	**107**	**8.0**	**SW846 8260B**
Trichloroethene	**10**	**9.7**	**ug/L**	**97**		**SW846 8260B**
	10	**9.8**	**ug/L**	**98**	**1.4**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(73 - 122)
	90	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
	89	(61 - 128)
Toluene-d8	95	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)
	93	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GM8F01AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H160000-361 GM8F01AD-LCSD
Prep Date.....: 08/16/04 **Analysis Date..:** 08/16/04
Prep Batch #...: 4229361
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**94**	**(80 - 116)**			**SW846 8260B**
	99	**(80 - 116)**	**5.4**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**95**	**(76 - 117)**			**SW846 8260B**
	103	**(76 - 117)**	**7.8**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**98**	**(63 - 130)**			**SW846 8260B**
	99	**(63 - 130)**	**0.52**	**(0-20)**	**SW846 8260B**
Toluene	**99**	**(74 - 119)**			**SW846 8260B**
	107	**(74 - 119)**	**8.0**	**(0-20)**	**SW846 8260B**
Trichloroethene	**97**	**(75 - 122)**			**SW846 8260B**
	98	**(75 - 122)**	**1.4**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(73 - 122)
	90	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
	89	(61 - 128)
Toluene-d8	95	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)
	93	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GM8TQ1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H160000-439 GM8TQ1AD-LCSD
Prep Date.....: 08/15/04 **Analysis Date..:** 08/15/04
Prep Batch #...: 4229439
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**9.9**	**ug/L**	**99**		**SW846 8260B**
	10	**9.9**	**ug/L**	**99**	**0.16**	**SW846 8260B**
Chlorobenzene	**10**	**10**	**ug/L**	**104**		**SW846 8260B**
	10	**10**	**ug/L**	**105**	**1.1**	**SW846 8260B**
1,1-Dichloroethene	**10**	**11**	**ug/L**	**107**		**SW846 8260B**
	10	**11**	**ug/L**	**108**	**0.99**	**SW846 8260B**
Toluene	**10**	**11**	**ug/L**	**108**		**SW846 8260B**
	10	**11**	**ug/L**	**107**	**0.62**	**SW846 8260B**
Trichloroethene	**10**	**10**	**ug/L**	**101**		**SW846 8260B**
	10	**10**	**ug/L**	**100**	**1.3**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
	86	(73 - 122)
1,2-Dichloroethane-d4	86	(61 - 128)
	83	(61 - 128)
Toluene-d8	97	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)
	92	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GM8TQ1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H160000-439 GM8TQ1AD-LCSD
Prep Date.....: 08/15/04 **Analysis Date..:** 08/15/04
Prep Batch #...: 4229439
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**99**	**(80 - 116)**			**SW846 8260B**
	99	**(80 - 116)**	**0.16**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**104**	**(76 - 117)**			**SW846 8260B**
	105	**(76 - 117)**	**1.1**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**107**	**(63 - 130)**			**SW846 8260B**
	108	**(63 - 130)**	**0.99**	**(0-20)**	**SW846 8260B**
Toluene	**108**	**(74 - 119)**			**SW846 8260B**
	107	**(74 - 119)**	**0.62**	**(0-20)**	**SW846 8260B**
Trichloroethene	**101**	**(75 - 122)**			**SW846 8260B**
	100	**(75 - 122)**	**1.3**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
	86	(73 - 122)
1,2-Dichloroethane-d4	86	(61 - 128)
	83	(61 - 128)
Toluene-d8	97	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)
	92	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GNFEM1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H180000-527 GNFEM1AD-LCSD
Prep Date.....: 08/17/04 **Analysis Date..:** 08/17/04
Prep Batch #...: 4231527
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**10**	**ug/L**	**102**		**SW846 8260B**
	10	**10**	**ug/L**	**101**	**0.85**	**SW846 8260B**
Chlorobenzene	**10**	**11**	**ug/L**	**108**		**SW846 8260B**
	10	**11**	**ug/L**	**107**	**1.6**	**SW846 8260B**
1,1-Dichloroethene	**10**	**11**	**ug/L**	**109**		**SW846 8260B**
	10	**11**	**ug/L**	**106**	**2.4**	**SW846 8260B**
Toluene	**10**	**11**	**ug/L**	**105**		**SW846 8260B**
	10	**11**	**ug/L**	**108**	**2.4**	**SW846 8260B**
Trichloroethene	**10**	**11**	**ug/L**	**106**		**SW846 8260B**
	10	**11**	**ug/L**	**108**	**1.9**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
	102	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	100	(61 - 128)
Toluene-d8	98	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	112	(74 - 116)
	113	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GNFEM1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H180000-527 GNFEM1AD-LCSD
Prep Date.....: 08/17/04 **Analysis Date..:** 08/17/04
Prep Batch #...: 4231527
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**102**	**(80 - 116)**			**SW846 8260B**
	101	**(80 - 116)**	**0.85**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**108**	**(76 - 117)**			**SW846 8260B**
	107	**(76 - 117)**	**1.6**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**109**	**(63 - 130)**			**SW846 8260B**
	106	**(63 - 130)**	**2.4**	**(0-20)**	**SW846 8260B**
Toluene	**105**	**(74 - 119)**			**SW846 8260B**
	108	**(74 - 119)**	**2.4**	**(0-20)**	**SW846 8260B**
Trichloroethene	**106**	**(75 - 122)**			**SW846 8260B**
	108	**(75 - 122)**	**1.9**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
	102	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	100	(61 - 128)
Toluene-d8	98	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	112	(74 - 116)
	113	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GMTLR1AM-MS **Matrix.....:** WATER
MS Lot-Sample #: A4H100174-002 GMTLR1AN-MSD
Date Sampled...: 08/09/04 11:38 **Date Received..:** 08/10/04
Prep Date.....: 08/14/04 **Analysis Date..:** 08/14/04
Prep Batch #...: 4227028
Dilution Factor: 5 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	50	47	ug/L	95		SW846 8260B
	ND	50	47	ug/L	93	1.5	SW846 8260B
Chlorobenzene	ND	50	47	ug/L	94		SW846 8260B
	ND	50	46	ug/L	92	2.4	SW846 8260B
1,1-Dichloroethene	ND	50	49	ug/L	97		SW846 8260B
	ND	50	49	ug/L	98	0.67	SW846 8260B
Toluene	ND	50	48	ug/L	97		SW846 8260B
	ND	50	49	ug/L	98	1.1	SW846 8260B
Trichloroethene	11	50	56	ug/L	91		SW846 8260B
	11	50	54	ug/L	87	3.8	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	93	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
	89	(61 - 128)
Toluene-d8	98	(76 - 110)
	95	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)
	88	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A4H100202	**Work Order #...:**	GMTLR1AM-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A4H100174-002		GMTLR1AN-MSD		
Date Sampled...:	08/09/04 11:38	**Date Received..:**	08/10/04		
Prep Date.....:	08/14/04	**Analysis Date..:**	08/14/04		
Prep Batch #...:	4227028				
Dilution Factor:	5	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**95**	**(78 - 118)**			**SW846 8260B**
	93	**(78 - 118)**	**1.5**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**94**	**(76 - 117)**			**SW846 8260B**
	92	**(76 - 117)**	**2.4**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**97**	**(62 - 130)**			**SW846 8260B**
	98	**(62 - 130)**	**0.67**	**(0-20)**	**SW846 8260B**
Toluene	**97**	**(70 - 119)**			**SW846 8260B**
	98	**(70 - 119)**	**1.1**	**(0-20)**	**SW846 8260B**
Trichloroethene	**91**	**(62 - 130)**			**SW846 8260B**
	87	**(62 - 130)**	**3.8**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	93	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
	89	(61 - 128)
Toluene-d8	98	(76 - 110)
	95	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)
	88	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4H100202 **Work Order #...:** GML6T1C1-MS **Matrix.....:** WATER
MS Lot-Sample #: A4H060243-013 GML6T1C2-MSD
Date Sampled...: 08/04/04 16:45 **Date Received..:** 08/06/04
Prep Date.....: 08/16/04 **Analysis Date..:** 08/16/04
Prep Batch #...: 4229361
Dilution Factor: 10000 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**230000**	**100000**	**370000**	**ug/L**	**133 a**		**SW846 8260B**
	230000	**100000**	**380000**	**ug/L**	**146 a**	**3.5**	**SW846 8260B**
Chlorobenzene	**ND**	**100000**	**97000**	**ug/L**	**97**		**SW846 8260B**
	ND	**100000**	**98000**	**ug/L**	**98**	**1.0**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**100000**	**100000**	**ug/L**	**100**		**SW846 8260B**
	ND	**100000**	**100000**	**ug/L**	**102**	**2.0**	**SW846 8260B**
Toluene	**13000**	**100000**	**110000**	**ug/L**	**98**		**SW846 8260B**
	13000	**100000**	**120000**	**ug/L**	**102**	**3.3**	**SW846 8260B**
Trichloroethene	**ND**	**100000**	**96000**	**ug/L**	**96**		**SW846 8260B**
	ND	**100000**	**100000**	**ug/L**	**101**	**4.8**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
	90	(73 - 122)
1,2-Dichloroethane-d4	89	(61 - 128)
	86	(61 - 128)
Toluene-d8	98	(76 - 110)
	95	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)
	90	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A4H100202	**Work Order #...:**	GML6T1C1-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A4H060243-013		GML6T1C2-MSD		
Date Sampled...:	08/04/04 16:45	**Date Received..:**	08/06/04		
Prep Date.....:	08/16/04	**Analysis Date..:**	08/16/04		
Prep Batch #...:	4229361				
Dilution Factor:	10000	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**133 a**	**(78 - 118)**			**SW846 8260B**
	146 a	**(78 - 118)**	**3.5**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**97**	**(76 - 117)**			**SW846 8260B**
	98	**(76 - 117)**	**1.0**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**100**	**(62 - 130)**			**SW846 8260B**
	102	**(62 - 130)**	**2.0**	**(0-20)**	**SW846 8260B**
Toluene	**98**	**(70 - 119)**			**SW846 8260B**
	102	**(70 - 119)**	**3.3**	**(0-20)**	**SW846 8260B**
Trichloroethene	**96**	**(62 - 130)**			**SW846 8260B**
	101	**(62 - 130)**	**4.8**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
	90	(73 - 122)
1,2-Dichloroethane-d4	89	(61 - 128)
	86	(61 - 128)
Toluene-d8	98	(76 - 110)
	95	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)
	90	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	A4H100202	**Work Order #...:**	GMTP31AC-MS	**Matrix.....:**	WG
MS Lot-Sample #:	A4H100202-001		GMTP31AD-MSD		
Date Sampled...:	08/09/04 11:40	**Date Received..:**	08/10/04		
Prep Date.....:	08/15/04	**Analysis Date..:**	08/15/04		
Prep Batch #...:	4229439				
Dilution Factor:	2	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**20**	**20**	**ug/L**	**99**		**SW846 8260B**
	ND	**20**	**20**	**ug/L**	**99**	**0.26**	**SW846 8260B**
Chlorobenzene	**ND**	**20**	**20**	**ug/L**	**100**		**SW846 8260B**
	ND	**20**	**20**	**ug/L**	**100**	**0.30**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**20**	**21**	**ug/L**	**103**		**SW846 8260B**
	ND	**20**	**21**	**ug/L**	**104**	**1.2**	**SW846 8260B**
Toluene	**ND**	**20**	**21**	**ug/L**	**103**		**SW846 8260B**
	ND	**20**	**21**	**ug/L**	**105**	**1.6**	**SW846 8260B**
Trichloroethene	**ND**	**20**	**20**	**ug/L**	**101**		**SW846 8260B**
	ND	**20**	**21**	**ug/L**	**103**	**1.9**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(73 - 122)
	88	(73 - 122)
1,2-Dichloroethane-d4	87	(61 - 128)
	87	(61 - 128)
Toluene-d8	96	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	88	(74 - 116)
	92	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A4H100202	**Work Order #...:**	GMTP31AC-MS	**Matrix.....:**	WG
MS Lot-Sample #:	A4H100202-001		GMTP31AD-MSD		
Date Sampled...:	08/09/04 11:40	**Date Received..:**	08/10/04		
Prep Date.....:	08/15/04	**Analysis Date..:**	08/15/04		
Prep Batch #...:	4229439				
Dilution Factor:	2	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**99**	**(78 - 118)**			**SW846 8260B**
	99	**(78 - 118)**	**0.26**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**100**	**(76 - 117)**			**SW846 8260B**
	100	**(76 - 117)**	**0.30**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**103**	**(62 - 130)**			**SW846 8260B**
	104	**(62 - 130)**	**1.2**	**(0-20)**	**SW846 8260B**
Toluene	**103**	**(70 - 119)**			**SW846 8260B**
	105	**(70 - 119)**	**1.6**	**(0-20)**	**SW846 8260B**
Trichloroethene	**101**	**(62 - 130)**			**SW846 8260B**
	103	**(62 - 130)**	**1.9**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(73 - 122)
	88	(73 - 122)
1,2-Dichloroethane-d4	87	(61 - 128)
	87	(61 - 128)
Toluene-d8	96	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	88	(74 - 116)
	92	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	A4H100202	**Work Order #...:**	GM01C1AC-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A4H120171-001		GM01C1AD-MSD		
Date Sampled...:	08/11/04 10:25	**Date Received..:**	08/12/04		
Prep Date.....:	08/17/04	**Analysis Date..:**	08/17/04		
Prep Batch #...:	4231527				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**10**	**11**	**ug/L**	**107**		**SW846 8260B**
	ND	**10**	**9.8**	**ug/L**	**98**	**9.1**	**SW846 8260B**
Chlorobenzene	**ND**	**10**	**11**	**ug/L**	**108**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**102**	**5.3**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10**	**10**	**ug/L**	**103**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**100**	**2.8**	**SW846 8260B**
Toluene	**ND**	**10**	**11**	**ug/L**	**106**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**103**	**3.0**	**SW846 8260B**
Trichloroethene	**ND**	**10**	**11**	**ug/L**	**107**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**102**	**5.0**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
	97	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	98	(61 - 128)
Toluene-d8	96	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	113	(74 - 116)
	111	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A4H100202	**Work Order #...:**	GM01C1AC-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A4H120171-001		GM01C1AD-MSD		
Date Sampled...:	08/11/04 10:25	**Date Received..:**	08/12/04		
Prep Date.....:	08/17/04	**Analysis Date..:**	08/17/04		
Prep Batch #...:	4231527				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**107**	**(78 - 118)**			**SW846 8260B**
	98	**(78 - 118)**	**9.1**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**108**	**(76 - 117)**			**SW846 8260B**
	102	**(76 - 117)**	**5.3**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**103**	**(62 - 130)**			**SW846 8260B**
	100	**(62 - 130)**	**2.8**	**(0-20)**	**SW846 8260B**
Toluene	**106**	**(70 - 119)**			**SW846 8260B**
	103	**(70 - 119)**	**3.0**	**(0-20)**	**SW846 8260B**
Trichloroethene	**107**	**(62 - 130)**			**SW846 8260B**
	102	**(62 - 130)**	**5.0**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
	97	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	98	(61 - 128)
Toluene-d8	96	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	113	(74 - 116)
	111	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

GCMS SEMIVOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-080904-DCR-197

GC/MS Semivolatiles

Lot-Sample #...: A4H100202-007 **Work Order #...:** GMTQG1AC **Matrix.....:** WG
Date Sampled...: 08/09/04 16:40 **Date Received..:** 08/10/04
Prep Date.....: 08/11/04 **Analysis Date..:** 08/13/04
Prep Batch #...: 4224064
Dilution Factor: 1 **Initial Wgt/Vol:** 950 mL **Final Wgt/Vol..:** 2 mL
Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	5.0	ug/L	0.028
Acenaphthylene	ND	5.0	ug/L	0.030
Acetophenone	ND	5.0	ug/L	0.19
Anthracene	ND	5.0	ug/L	0.030
Atrazine	ND	5.0	ug/L	0.36
Benzo(a)anthracene	ND	4.0	ug/L	0.028
Benzo(a)pyrene	ND	4.0	ug/L	0.022
Benzo(b)fluoranthene	ND	4.0	ug/L	0.043
Benzo(ghi)perylene	ND	5.0	ug/L	0.044
Benzo(k)fluoranthene	ND	5.0	ug/L	0.071
Benzaldehyde	ND	10	ug/L	0.17
1,1'-Biphenyl	ND	10	ug/L	0.30
bis(2-Chloroethoxy) methane	ND	5.0	ug/L	0.24
bis(2-Chloroethyl)-ether	ND	4.0	ug/L	0.19
bis(2-Ethylhexyl) phthalate	ND	5.0	ug/L	0.36
4-Bromophenyl phenyl ether	ND	5.0	ug/L	0.29
Butyl benzyl phthalate	ND	5.0	ug/L	0.14
Caprolactam	ND	10	ug/L	0.73
Carbazole	ND	10	ug/L	0.17
4-Chloroaniline	ND	20	ug/L	0.31
4-Chloro-3-methylphenol	ND	5.0	ug/L	0.18
2-Chloronaphthalene	ND	5.0	ug/L	0.29
2-Chlorophenol	ND	5.0	ug/L	0.14
4-Chlorophenyl phenyl ether	ND	5.0	ug/L	0.21
Chrysene	ND	5.0	ug/L	0.035
Dibenz(a,h)anthracene	ND	4.0	ug/L	0.054
Dibenzofuran	ND	5.0	ug/L	0.025
3,3'-Dichlorobenzidine	ND	4.0	ug/L	0.19
2,4-Dichlorophenol	ND	10	ug/L	0.24
Diethyl phthalate	ND	5.0	ug/L	0.12
2,4-Dimethylphenol	ND	5.0	ug/L	0.23
Dimethyl phthalate	ND	5.0	ug/L	0.27
Di-n-butyl phthalate	ND	5.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-080904-DCR-197

GC/MS Semivolatiles

Lot-Sample #...: A4H100202-007 Work Order #...: GMTQG1AC Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
4,6-Dinitro-2-methylphenol	ND	20	ug/L	1.8
2,4-Dinitrophenol	ND	20	ug/L	1.3
2,4-Dinitrotoluene	ND	5.0	ug/L	0.16
2,6-Dinitrotoluene	ND	5.0	ug/L	0.17
Di-n-octyl phthalate	ND	5.0	ug/L	0.16
Fluoranthene	ND	5.0	ug/L	0.024
Fluorene	ND	5.0	ug/L	0.035
Hexachlorobenzene	ND	5.0	ug/L	0.075
Hexachlorobutadiene	ND	5.0	ug/L	0.11
Hexachlorocyclopentadiene	ND	5.0	ug/L	1.5
Hexachloroethane	ND	5.0	ug/L	0.21
Indeno(1,2,3-cd)pyrene	ND	4.0	ug/L	0.081
Isophorone	ND	5.0	ug/L	0.16
2-Methylnaphthalene	ND	5.0	ug/L	0.028
2-Methylphenol	ND	5.0	ug/L	0.15
4-Methylphenol	ND	5.0	ug/L	0.20
Naphthalene	ND	5.0	ug/L	0.031
2-Nitroaniline	ND	20	ug/L	0.18
3-Nitroaniline	ND	20	ug/L	0.094
4-Nitroaniline	ND	20	ug/L	0.11
Nitrobenzene	ND	4.0	ug/L	0.21
2-Nitrophenol	ND	5.0	ug/L	0.14
4-Nitrophenol	ND	20	ug/L	1.0
N-Nitrosodi-n-propylamine	ND	5.0	ug/L	0.21
N-Nitrosodiphenylamine	ND	5.0	ug/L	0.18
2,2'-oxybis(1-Chloropropane)	ND	5.0	ug/L	0.21
Pentachlorophenol	ND	20	ug/L	2.0
Phenanthrene	ND	5.0	ug/L	0.044
Phenol	ND	5.0	ug/L	0.14
Pyrene	ND	5.0	ug/L	0.051
2,4,5-Trichlorophenol	ND	5.0	ug/L	0.13
2,4,6-Trichlorophenol	ND	4.0	ug/L	0.16

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	64	(32 - 112)
2-Fluorobiphenyl	53	(30 - 110)
Terphenyl-d14	80	(10 - 144)
Phenol-d5	22	(10 - 113)
2-Fluorophenol	33	(13 - 110)
2,4,6-Tribromophenol	64	(21 - 122)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-080904-DCR-199

GC/MS Semivolatiles

Lot-Sample #...: A4H100202-009 Work Order #...: GMTQK1AC Matrix.....: WG
Date Sampled...: 08/09/04 18:00 Date Received..: 08/10/04
Prep Date.....: 08/11/04 Analysis Date..: 08/13/04
Prep Batch #...: 4224064
Dilution Factor: 4 Initial Wgt/Vol: 975 mL Final Wgt/Vol..: 2 mL
Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	20	ug/L	0.11
Acenaphthylene	ND	20	ug/L	0.12
Acetophenone	ND	20	ug/L	0.76
Anthracene	ND	20	ug/L	0.12
Atrazine	ND	20	ug/L	1.4
Benzo(a)anthracene	**5.4 J**	**16**	**ug/L**	**0.11**
Benzo(a)pyrene	**2.3 J**	**16**	**ug/L**	**0.088**
Benzo(b)fluoranthene	**4.3 J**	**16**	**ug/L**	**0.17**
Benzo(ghi)perylene	**2.0 J**	**20**	**ug/L**	**0.18**
Benzo(k)fluoranthene	**2.1 J**	**20**	**ug/L**	**0.28**
Benzaldehyde	ND	40	ug/L	0.68
1,1'-Biphenyl	ND	40	ug/L	1.2
bis(2-Chloroethoxy) methane	ND	20	ug/L	0.96
bis(2-Chloroethyl)-ether	ND	16	ug/L	0.76
bis(2-Ethylhexyl) phthalate	ND	20	ug/L	1.4
4-Bromophenyl phenyl ether	ND	20	ug/L	1.2
Butyl benzyl phthalate	ND	20	ug/L	0.56
Caprolactam	ND	40	ug/L	2.9
Carbazole	ND	40	ug/L	0.68
4-Chloroaniline	ND	80	ug/L	1.2
4-Chloro-3-methylphenol	ND	20	ug/L	0.72
2-Chloronaphthalene	ND	20	ug/L	1.2
2-Chlorophenol	ND	20	ug/L	0.56
4-Chlorophenyl phenyl ether	ND	20	ug/L	0.84
Chrysene	**4.0 J**	**20**	**ug/L**	**0.14**
Dibenz(a,h)anthracene	ND	16	ug/L	0.22
Dibenzofuran	ND	20	ug/L	0.10
3,3'-Dichlorobenzidine	ND	16	ug/L	0.76
2,4-Dichlorophenol	ND	40	ug/L	0.96
Diethyl phthalate	ND	20	ug/L	0.48
2,4-Dimethylphenol	ND	20	ug/L	0.92
Dimethyl phthalate	ND	20	ug/L	1.1
Di-n-butyl phthalate	ND	20	ug/L	0.52

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-080904-DCR-199

GC/MS Semivolatiles

Lot-Sample #...: A4H100202-009 Work Order #...: GMTQK1AC Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
4,6-Dinitro-2-methylphenol	ND	80	ug/L	7.2
2,4-Dinitrophenol	ND	80	ug/L	5.2
2,4-Dinitrotoluene	ND	20	ug/L	0.64
2,6-Dinitrotoluene	ND	20	ug/L	0.68
Di-n-octyl phthalate	ND	20	ug/L	0.64
Fluoranthene	**19 J**	**20**	**ug/L**	**0.096**
Fluorene	ND	20	ug/L	0.14
Hexachlorobenzene	ND	20	ug/L	0.30
Hexachlorobutadiene	ND	20	ug/L	0.44
Hexachlorocyclopentadiene	ND	20	ug/L	6.0
Hexachloroethane	ND	20	ug/L	0.84
Indeno(1,2,3-cd)pyrene	**1.8 J**	**16**	**ug/L**	**0.32**
Isophorone	ND	20	ug/L	0.64
2-Methylnaphthalene	ND	20	ug/L	0.11
2-Methylphenol	ND	20	ug/L	0.60
4-Methylphenol	ND	20	ug/L	0.80
Naphthalene	ND	20	ug/L	0.12
2-Nitroaniline	ND	80	ug/L	0.72
3-Nitroaniline	ND	80	ug/L	0.38
4-Nitroaniline	ND	80	ug/L	0.44
Nitrobenzene	ND	16	ug/L	0.84
2-Nitrophenol	ND	20	ug/L	0.56
4-Nitrophenol	ND	80	ug/L	4.0
N-Nitrosodi-n-propylamine	ND	20	ug/L	0.84
N-Nitrosodiphenylamine	ND	20	ug/L	0.72
2,2'-oxybis(1-Chloropropane)	ND	20	ug/L	0.84
Pentachlorophenol	ND	80	ug/L	8.0
Phenanthrene	**4.3 J**	**20**	**ug/L**	**0.18**
Phenol	ND	20	ug/L	0.56
Pyrene	**22**	**20**	**ug/L**	**0.20**
2,4,5-Trichlorophenol	ND	20	ug/L	0.52
2,4,6-Trichlorophenol	ND	16	ug/L	0.64

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	75 DIL	(32 - 112)
2-Fluorobiphenyl	59 DIL	(30 - 110)
Terphenyl-d14	71 DIL	(10 - 144)
Phenol-d5	22 DIL	(10 - 113)
2-Fluorophenol	30 DIL	(13 - 110)
2,4,6-Tribromophenol	76 DIL	(21 - 122)

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-080904-DCR-199

GC/MS Semivolatiles

Lot-Sample #...: A4H100202-009 Work Order #...: GMTQK1AC Matrix.....: WG

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-080904-DCR-200

GC/MS Semivolatiles

Lot-Sample #...: A4H100202-010 Work Order #...: GMTQM1AC Matrix.....: WG
Date Sampled...: 08/09/04 18:35 Date Received..: 08/10/04
Prep Date.....: 08/11/04 Analysis Date..: 08/13/04
Prep Batch #...: 4224064
Dilution Factor: 10 Initial Wgt/Vol: 1000 mL Final Wgt/Vol..: 2 mL
Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	50	ug/L	0.28
Acenaphthylene	ND	50	ug/L	0.30
Acetophenone	ND	50	ug/L	1.9
Anthracene	ND	50	ug/L	0.30
Atrazine	ND	50	ug/L	3.6
Benzo(a)anthracene	ND	40	ug/L	0.28
Benzo(a)pyrene	ND	40	ug/L	0.22
Benzo(b)fluoranthene	ND	40	ug/L	0.43
Benzo(ghi)perylene	ND	50	ug/L	0.44
Benzo(k)fluoranthene	ND	50	ug/L	0.71
Benzaldehyde	ND	100	ug/L	1.7
1,1'-Biphenyl	ND	100	ug/L	3.0
bis(2-Chloroethoxy) methane	ND	50	ug/L	2.4
bis(2-Chloroethyl)-ether	ND	40	ug/L	1.9
bis(2-Ethylhexyl) phthalate	**8.4 J**	**50**	**ug/L**	**3.6**
4-Bromophenyl phenyl ether	ND	50	ug/L	2.9
Butyl benzyl phthalate	ND	50	ug/L	1.4
Caprolactam	**9.5 J**	**100**	**ug/L**	**7.3**
Carbazole	ND	100	ug/L	1.7
4-Chloroaniline	ND	200	ug/L	3.1
4-Chloro-3-methylphenol	ND	50	ug/L	1.8
2-Chloronaphthalene	ND	50	ug/L	2.9
2-Chlorophenol	ND	50	ug/L	1.4
4-Chlorophenyl phenyl ether	ND	50	ug/L	2.1
Chrysene	ND	50	ug/L	0.35
Dibenz(a,h)anthracene	ND	40	ug/L	0.54
Dibenzofuran	ND	50	ug/L	0.25
3,3'-Dichlorobenzidine	ND	40	ug/L	1.9
2,4-Dichlorophenol	ND	100	ug/L	2.4
Diethyl phthalate	ND	50	ug/L	1.2
2,4-Dimethylphenol	ND	50	ug/L	2.3
Dimethyl phthalate	ND	50	ug/L	2.7
Di-n-butyl phthalate	ND	50	ug/L	1.3

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-080904-DCR-200

GC/MS Semivolatiles

Lot-Sample #...: A4H100202-010 Work Order #...: GMTQM1AC Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
4,6-Dinitro-2-methylphenol	ND	200	ug/L	18
2,4-Dinitrophenol	ND	200	ug/L	13
2,4-Dinitrotoluene	ND	50	ug/L	1.6
2,6-Dinitrotoluene	ND	50	ug/L	1.7
Di-n-octyl phthalate	ND	50	ug/L	1.6
Fluoranthene	**5.8 J**	**50**	**ug/L**	**0.24**
Fluorene	ND	50	ug/L	0.35
Hexachlorobenzene	ND	50	ug/L	0.75
Hexachlorobutadiene	ND	50	ug/L	1.1
Hexachlorocyclopenta-diene	ND	50	ug/L	15
Hexachloroethane	ND	50	ug/L	2.1
Indeno(1,2,3-cd)pyrene	ND	40	ug/L	0.81
Isophorone	ND	50	ug/L	1.6
2-Methylnaphthalene	ND	50	ug/L	0.28
2-Methylphenol	ND	50	ug/L	1.5
4-Methylphenol	ND	50	ug/L	2.0
Naphthalene	ND	50	ug/L	0.31
2-Nitroaniline	ND	200	ug/L	1.8
3-Nitroaniline	ND	200	ug/L	0.94
4-Nitroaniline	ND	200	ug/L	1.1
Nitrobenzene	ND	40	ug/L	2.1
2-Nitrophenol	ND	50	ug/L	1.4
4-Nitrophenol	ND	200	ug/L	10
N-Nitrosodi-n-propyl-amine	ND	50	ug/L	2.1
N-Nitrosodiphenylamine	ND	50	ug/L	1.8
2,2'-oxybis(1-Chloropropane)	ND	50	ug/L	2.1
Pentachlorophenol	ND	200	ug/L	20
Phenanthrene	ND	50	ug/L	0.44
Phenol	ND	50	ug/L	1.4
Pyrene	**6.1 J**	**50**	**ug/L**	**0.51**
2,4,5-Trichloro-phenol	ND	50	ug/L	1.3
2,4,6-Trichloro-phenol	ND	40	ug/L	1.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	74 DIL	(32 - 112)
2-Fluorobiphenyl	65 DIL	(30 - 110)
Terphenyl-d14	71 DIL	(10 - 144)
Phenol-d5	19 DIL	(10 - 113)
2-Fluorophenol	29 DIL	(13 - 110)
2,4,6-Tribromophenol	73 DIL	(21 - 122)

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-080904-DCR-200

GC/MS Semivolatiles

Lot-Sample #...: A4H100202-010 **Work Order #...:** GMTQM1AC **Matrix.....:** WG

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A4H100202 **Work Order #...:** GMV471AA **Matrix.....:** WATER
MB Lot-Sample #: A4H110000-064

Prep Date.....: 08/11/04 **Final Wgt/Vol..:** 2 mL
Analysis Date..: 08/13/04 **Prep Batch #...:** 4224064
Dilution Factor: 1 **Initial Wgt/Vol:** 1000 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.0	ug/L	SW846 8270C
Acenaphthylene	ND	5.0	ug/L	SW846 8270C
Acetophenone	ND	5.0	ug/L	SW846 8270C
Anthracene	ND	5.0	ug/L	SW846 8270C
Atrazine	ND	5.0	ug/L	SW846 8270C
Benzo(a)anthracene	ND	4.0	ug/L	SW846 8270C
Benzo(a)pyrene	ND	4.0	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	4.0	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	5.0	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	5.0	ug/L	SW846 8270C
Benzaldehyde	ND	10	ug/L	SW846 8270C
1,1'-Biphenyl	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	5.0	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	4.0	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	5.0	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	5.0	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	5.0	ug/L	SW846 8270C
Caprolactam	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	20	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	5.0	ug/L	SW846 8270C
2-Chloronaphthalene	ND	5.0	ug/L	SW846 8270C
2-Chlorophenol	ND	5.0	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	5.0	ug/L	SW846 8270C
Chrysene	ND	5.0	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	4.0	ug/L	SW846 8270C
Dibenzofuran	ND	5.0	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	4.0	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	5.0	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	5.0	ug/L	SW846 8270C
Dimethyl phthalate	ND	5.0	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	5.0	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	20	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	20	ug/L	SW846 8270C

(Continued on next page)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A4H100202 **Work Order #...:** GMV471AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	5.0	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	5.0	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	5.0	ug/L	SW846 8270C
Fluoranthene	ND	5.0	ug/L	SW846 8270C
Fluorene	ND	5.0	ug/L	SW846 8270C
Hexachlorobenzene	ND	5.0	ug/L	SW846 8270C
Hexachlorobutadiene	ND	5.0	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	5.0	ug/L	SW846 8270C
Hexachloroethane	ND	5.0	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	4.0	ug/L	SW846 8270C
Isophorone	ND	5.0	ug/L	SW846 8270C
2-Methylnaphthalene	ND	5.0	ug/L	SW846 8270C
2-Methylphenol	ND	5.0	ug/L	SW846 8270C
4-Methylphenol	ND	5.0	ug/L	SW846 8270C
Naphthalene	ND	5.0	ug/L	SW846 8270C
2-Nitroaniline	ND	20	ug/L	SW846 8270C
3-Nitroaniline	ND	20	ug/L	SW846 8270C
4-Nitroaniline	ND	20	ug/L	SW846 8270C
Nitrobenzene	ND	4.0	ug/L	SW846 8270C
2-Nitrophenol	ND	5.0	ug/L	SW846 8270C
4-Nitrophenol	ND	20	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	5.0	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	5.0	ug/L	SW846 8270C
2,2'-oxybis(1-Chloropropa	ND	5.0	ug/L	SW846 8270C
Pentachlorophenol	ND	20	ug/L	SW846 8270C
Phenanthrene	ND	5.0	ug/L	SW846 8270C
Phenol	ND	5.0	ug/L	SW846 8270C
Pyrene	ND	5.0	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	5.0	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	4.0	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	69	(32 - 112)
2-Fluorobiphenyl	55	(30 - 110)
Terphenyl-d14	79	(10 - 144)
Phenol-d5	29	(10 - 113)
2-Fluorophenol	42	(13 - 110)
2,4,6-Tribromophenol	57	(21 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A4H100202 **Work Order #...:** GMV471AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H110000-064 GMV471AD-LCSD
Prep Date.....: 08/11/04 **Analysis Date..:** 08/13/04
Prep Batch #...: 4224064
Dilution Factor: 1 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	20	15	ug/L	77		SW846 8270C
	20	17	ug/L	85	10	SW846 8270C
1,2,4-Trichloro-benzene	20	15	ug/L	75		SW846 8270C
	20	16	ug/L	82	8.8	SW846 8270C
1,4-Dichlorobenzene	20	14	ug/L	69		SW846 8270C
	20	19	ug/L	93	29	SW846 8270C
4-Chloro-3-methylphenol	20	16	ug/L	78		SW846 8270C
	20	17	ug/L	84	7.6	SW846 8270C
2-Chlorophenol	20	14	ug/L	72		SW846 8270C
	20	16	ug/L	81	12	SW846 8270C
2,4-Dinitrotoluene	20	17	ug/L	83		SW846 8270C
	20	18	ug/L	88	6.3	SW846 8270C
4-Nitrophenol	20	8.2	ug/L	41		SW846 8270C
	20	9.5	ug/L	48	15	SW846 8270C
N-Nitrosodi-n-propyl-amine	20	18	ug/L	88		SW846 8270C
	20	19	ug/L	95	7.6	SW846 8270C
Pentachlorophenol	20	12	ug/L	58		SW846 8270C
	20	14	ug/L	69	17	SW846 8270C
Phenol	20	9.3	ug/L	46		SW846 8270C
	20	9.6	ug/L	48	3.3	SW846 8270C
Pyrene	20	16	ug/L	80		SW846 8270C
	20	17	ug/L	84	5.4	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	75	(32 - 112)
	85	(32 - 112)
2-Fluorobiphenyl	67	(30 - 110)
	74	(30 - 110)
Terphenyl-d14	79	(10 - 144)
	82	(10 - 144)
Phenol-d5	43	(10 - 113)
	44	(10 - 113)
2-Fluorophenol	54	(13 - 110)
	56	(13 - 110)

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A4H100202 **Work Order #...:** GMV471AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H110000-064 GMV471AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	75	(21 - 122)
	80	(21 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A4H100202 Work Order #...: GMV471AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A4H110000-064 GMV471AD-LCSD
Prep Date.....: 08/11/04 Analysis Date..: 08/13/04
Prep Batch #...: 4224064
Dilution Factor: 1 Final Wgt/Vol..: 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	77	(39 - 118)			SW846 8270C
	85	(39 - 118)	10	(0-35)	SW846 8270C
1,2,4-Trichloro-benzene	75	(31 - 110)			SW846 8270C
	82	(31 - 110)	8.8	(0-37)	SW846 8270C
1,4-Dichlorobenzene	69	(28 - 110)			SW846 8270C
	93	(28 - 110)	29	(0-36)	SW846 8270C
4-Chloro-3-methylphenol	78	(29 - 124)			SW846 8270C
	84	(29 - 124)	7.6	(0-55)	SW846 8270C
2-Chlorophenol	72	(19 - 124)			SW846 8270C
	81	(19 - 124)	12	(0-43)	SW846 8270C
2,4-Dinitrotoluene	83	(47 - 131)			SW846 8270C
	88	(47 - 131)	6.3	(0-32)	SW846 8270C
4-Nitrophenol	41	(19 - 144)			SW846 8270C
	48	(19 - 144)	15	(0-34)	SW846 8270C
N-Nitrosodi-n-propyl-amine	88	(30 - 115)			SW846 8270C
	95	(30 - 115)	7.6	(0-36)	SW846 8270C
Pentachlorophenol	58	(10 - 140)			SW846 8270C
	69	(10 - 140)	17	(0-56)	SW846 8270C
Phenol	46	(10 - 131)			SW846 8270C
	48	(10 - 131)	3.3	(0-43)	SW846 8270C
Pyrene	80	(46 - 130)			SW846 8270C
	84	(46 - 130)	5.4	(0-31)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	75	(32 - 112)
	85	(32 - 112)
2-Fluorobiphenyl	67	(30 - 110)
	74	(30 - 110)
Terphenyl-d14	79	(10 - 144)
	82	(10 - 144)
Phenol-d5	43	(10 - 113)
	44	(10 - 113)
2-Fluorophenol	54	(13 - 110)
	56	(13 - 110)

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A4H100202 **Work Order #...:** GMV471AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H110000-064 GMV471AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	75	(21 - 122)
	80	(21 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

REC'D CRA
SEP - 2 2004
G-24
G-25

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A4H110160

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

Amy L. McCormick
Project Manager

August 31, 2004

ORIGINAL ANALYTICAL REPORT
Project#: 17360-07 Lab#: A4H110160
Name: GM-GR
Description
Event: Quarterly GW
Samples: 16 water
Analysis: TCL VOC, SVOC
TAT: 21 day
Lab: STL
Checked Against Preliminary Data:
Date: — Init.: KAK
Date of Validation Memo: 10/20/04
Invoice Approval Date:
Comments:

cooler # MI 556

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	TCL SVOCs	STD TAT	REMARKS
1	8/19/09	906	GW-17360-081004-DCR-202	H2O	5	X	X	X	
2		916	-203		5	X	X	X	
3		915	-204		3	X		X	
4		1056	-205		3	X		X	
5		1101	-206		3	X		X	
6		1156	-207		3	X		X	
7		1236	-208		3	X		X	
8		1456	-209		3	X		X	
9		1406	-210		3	X		X	
10		1426	-211		3	X		X	
11		1551	-212		3	X		X	
12		1611	-213		3	X		X	CRA Contact Paul Wiseman
13		1646	-214		3	X		X	
14		1651	-215		3	X		X	
TOTAL NUMBER OF CONTAINERS					46				

RELINQUISHED BY: 1. _____	DATE: 8-20-09 TIME: 1830	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No. 8393 5588 8820

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: David Rivers, Bryant Miller

RECEIVED FOR LABORATORY BY: _____

DATE: 8-21-09 TIME: 0955

27163

Cooler # - M+556 Lot L

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: ~~P~~ GM - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: STD TAT	REMARKS
1	8/10/04	1731	GW-17360-081004-DCR-216	H2O	3	X	X	
2	"	—	" " " " -217	"	1	X	X	

TOTAL NUMBER OF CONTAINERS: 4

RELINQUISHED BY: 1. _____	DATE: 8-10-04 TIME: 1830	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No. 8393 5588 8820

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27164

SAMPLE TEAM: David Rivers, Bryant Miller

RECEIVED FOR LABORATORY BY: _____

DATE: 8-11-04 TIME: 0955

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4H110160

The following report contains the analytical results for sixteen water samples submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received August 11, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 3.3°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

GC/MS SEMIVOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

Y:\Barb\STL headers\Qc846-Narrative_012804.doc, Revised: 01/28/04 DJL

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4H110160

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-081004-DCR-202 08/10/04 09:06 001				
bis(2-Ethylhexyl) phthalate	8.6 B	5.0	ug/L	SW846 8270C
Acetone	2.1 J	25	ug/L	SW846 8260B
Chloroform	0.28 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	1.5	1.0	ug/L	SW846 8260B
GW-17360-081004-DCR-203 08/10/04 09:16 002				
Acetone	1.8 J	25	ug/L	SW846 8260B
Benzene	0.26 J,B	1.0	ug/L	SW846 8260B
Chloroform	0.31 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	1.5	1.0	ug/L	SW846 8260B
GW-17360-081004-DCR-204 08/10/04 09:15 003				
Tetrachloroethene	10	1.0	ug/L	SW846 8260B
GW-17360-081004-DCR-205 08/10/04 10:56 004				
Chloroform	1.0	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.95 J	1.0	ug/L	SW846 8260B
GW-17360-081004-DCR-206 08/10/04 11:01 005				
Acetone	0.85 J	25	ug/L	SW846 8260B
cis-1,2-Dichloroethene	1.9	1.0	ug/L	SW846 8260B
Vinyl chloride	1.1	1.0	ug/L	SW846 8260B
GW-17360-081004-DCR-207 08/10/04 11:56 006				
Benzene	1.2 J,B	5.0	ug/L	SW846 8260B
Tetrachloroethene	160	5.0	ug/L	SW846 8260B
GW-17360-081004-DCR-208 08/10/04 12:36 007				
Acetone	1.7 J	25	ug/L	SW846 8260B
Bromodichloromethane	0.41 J	1.0	ug/L	SW846 8260B
Chloroform	2.7	1.0	ug/L	SW846 8260B
Trichloroethene	0.68 J	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4H110160

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-081004-DCR-209 08/10/04 14:56 008				
Acetone	1.9 J	25	ug/L	SW846 8260B
Benzene	0.24 J,B	1.0	ug/L	SW846 8260B
Chloroform	0.22 J	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	0.27 J	5.0	ug/L	SW846 8260B
GW-17360-081004-DCR-210 08/10/04 14:06 009				
Acetone	2.4 J	25	ug/L	SW846 8260B
Benzene	0.30 J,B	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	3.8	1.0	ug/L	SW846 8260B
Trichloroethene	0.74 J	1.0	ug/L	SW846 8260B
GW-17360-081004-DCR-211 08/10/04 14:26 010				
Acetone	1.9 J	25	ug/L	SW846 8260B
1,1-Dichloroethene	0.80 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	10	1.0	ug/L	SW846 8260B
Trichloroethene	2.0	1.0	ug/L	SW846 8260B
GW-17360-081004-DCR-212 08/10/04 15:51 011				
Acetone	0.93 J	25	ug/L	SW846 8260B
Chloroform	0.80 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	0.43 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	3.8	1.0	ug/L	SW846 8260B
Trichloroethene	0.63 J	1.0	ug/L	SW846 8260B
GW-17360-081004-DCR-213 08/10/04 16:11 012				
Acetone	0.94 J	25	ug/L	SW846 8260B
Benzene	0.26 J,B	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	0.41 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.99 J	1.0	ug/L	SW846 8260B
GW-17360-081004-DCR-214 08/10/04 16:46 013				
Acetone	1.7 J	25	ug/L	SW846 8260B
Benzene	0.28 J,B	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.31 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.49 J	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4H110160

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-081004-DCR-215 08/10/04 16:51 014				
Acetone	1.0 J	25	ug/L	SW846 8260B
Tetrachloroethene	0.23 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.48 J	1.0	ug/L	SW846 8260B
GW-17360-081004-DCR-216 08/10/04 17:31 015				
Acetone	1.3 J	25	ug/L	SW846 8260B
Bromodichloromethane	0.41 J	1.0	ug/L	SW846 8260B
Chloroform	2.7	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	0.24 J	5.0	ug/L	SW846 8260B
Trichloroethene	2.4	1.0	ug/L	SW846 8260B
GW-17360-081004-DCR-217 08/10/04 016				
Acetone	8.9 J	25	ug/L	SW846 8260B
Benzene	0.29 J,B	1.0	ug/L	SW846 8260B
Methylene chloride	3.9 J	5.0	ug/L	SW846 8260B
Toluene	0.18 J	1.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4H110160

PARAMETER	ANALYTICAL METHOD
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4H110160

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GMWL4	001	GW-17360-081004-DCR-202	08/10/04	09:06
GMWL6	002	GW-17360-081004-DCR-203	08/10/04	09:16
GMWL7	003	GW-17360-081004-DCR-204	08/10/04	09:15
GMWL8	004	GW-17360-081004-DCR-205	08/10/04	10:56
GMWL9	005	GW-17360-081004-DCR-206	08/10/04	11:01
GMWMC	006	GW-17360-081004-DCR-207	08/10/04	11:56
GMWMD	007	GW-17360-081004-DCR-208	08/10/04	12:36
GMWME	008	GW-17360-081004-DCR-209	08/10/04	14:56
GMWMG	009	GW-17360-081004-DCR-210	08/10/04	14:06
GMWMH	010	GW-17360-081004-DCR-211	08/10/04	14:26
GMWML	011	GW-17360-081004-DCR-212	08/10/04	15:51
GMWMM	012	GW-17360-081004-DCR-213	08/10/04	16:11
GMWMN	013	GW-17360-081004-DCR-214	08/10/04	16:46
GMWMP	014	GW-17360-081004-DCR-215	08/10/04	16:51
GMWMR	015	GW-17360-081004-DCR-216	08/10/04	17:31
GMWMT	016	GW-17360-081004-DCR-217	08/10/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

Cooler # [illegible] 1 of 2

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: TCL SVOCs	PARAMETERS: STD TAT	REMARKS
1	8/17/09	906	GW-17360-081709-DCR-202	H2O	5	X	X	X	
2		916	-203		5	X	X	X	
3		915	-204		3	X		X	
4		1056	-205		3	X		X	
5		1101	-206		3	X		X	
6		1156	-207		3	X		X	
7		1236	-208		3	X		X	
8		1456	-209		3	X		X	
9		1406	-210		3	X		X	
10		1426	-211		3	X		X	
11		1551	-212		3	X		X	
12		1611	-213		3	X		X	CRA contact Paul Wiseman
13		1646	-214		3	X		X	
14		1651	-215		3	X		X	
			TOTAL NUMBER OF CONTAINERS		46				

RELINQUISHED BY: 1. [signature]	DATE: 8-20-09 TIME: 1830	RECEIVED BY: 1.	DATE: TIME:
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 8393 5588 8820

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27163

SAMPLE TEAM: David Rivers, Bryant Miller

RECEIVED FOR LABORATORY BY: [signature]
DATE: 8-21-09 TIME: 0955

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

16

STL North Canton

Cooler #- MI556 2 of 2

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: ~~FS~~ GM- Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOA			STD TAT							REMARKS
1	8/4/04	1731	GW-17360-081004-DCR-216	H2O	3	X			X							
2	"	—	" " " " -217	"	1	X			X							

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4H110160

Case Number/SDG: 17360-09

Storage Location: C222 MS/MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GMWL4	STILLERJ	8/11/04	Yes		Storage	
GMWL6	STILLERJ	8/11/04	Yes		Storage	
GMWL7	STILLERJ	8/11/04	Yes		Storage	
GMWL8	STILLERJ	8/11/04	Yes		Storage	
GMWL9	STILLERJ	8/11/04	Yes		Storage	
GMWMC	STILLERJ	8/11/04	Yes		Storage	
GMWMD	STILLERJ	8/11/04	Yes		Storage	
GMWME	STILLERJ	8/11/04	Yes		Storage	
GMWMG	STILLERJ	8/11/04	Yes		Storage	
GMWMH	STILLERJ	8/11/04	Yes		Storage	
GMWML	STILLERJ	8/11/04	Yes		Storage	
GMWMM	STILLERJ	8/11/04	Yes		Storage	
GMWMN	STILLERJ	8/11/04	Yes		Storage	
GMWMP	STILLERJ	8/11/04	Yes		Storage	
GMWMR	STILLERJ	8/11/04	Yes		Storage	
GMWMT	STILLERJ	8/11/04	Yes		Storage	

STL Cooler Receipt Form/Narrative

Lot Number: 44111C16C

North Canton Facility

Client: CRA Project: 173600-09 Quote#:

Cooler Received on: 8-11-04 Opened on: 8-11-04 by: (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:

STL Cooler No# MT-556 Foam Box ☐ Client Cooler ☐ Other

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☑
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☑ None ☐ Other :
6. Cooler temperature upon receipt 3.3 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

√	

1. CHAIN OF CUSTODY

The following discrepancies occurred:

2. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*

Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-202

GC/MS Volatiles

Lot-Sample #...: A4H110160-001 **Work Order #...:** GMWL41AA **Matrix.....:** WG
Date Sampled...: 08/10/04 09:06 **Date Received..:** 08/11/04
Prep Date.....: 08/18/04 **Analysis Date..:** 08/18/04
Prep Batch #...: 4231527
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.1 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**0.28 J**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-202

GC/MS Volatiles

Lot-Sample #...: A4H110160-001 **Work Order #...:** GMWL41AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**1.5**	**1.0**	**ug/L**	**0.19**
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	103	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-203

GC/MS Volatiles

Lot-Sample #...: A4H110160-002 **Work Order #...:** GMWL61AA **Matrix.....:** WG
Date Sampled...: 08/10/04 09:16 **Date Received..:** 08/11/04
Prep Date.....: 08/18/04 **Analysis Date..:** 08/18/04
Prep Batch #...: 4231527
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.8 J**	**25**	**ug/L**	**0.74**
Benzene	**0.26 J,B**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**0.31 J**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-203

GC/MS Volatiles

Lot-Sample #...: A4H110160-002 **Work Order #...:** GMWL61AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**1.5**	**1.0**	**ug/L**	**0.19**
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	104	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	104	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-204

GC/MS Volatiles

Lot-Sample #...: A4H110160-003 **Work Order #...:** GMWL71AA **Matrix.....:** WG
Date Sampled...: 08/10/04 09:15 **Date Received..:** 08/11/04
Prep Date.....: 08/18/04 **Analysis Date..:** 08/18/04
Prep Batch #...: 4231527
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-204

GC/MS Volatiles

Lot-Sample #...: A4H110160-003 **Work Order #...:** GMWL71AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**10**	**1.0**	**ug/L**	**0.19**
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-205

GC/MS Volatiles

Lot-Sample #...: A4H110160-004 **Work Order #...:** GMWL81AA **Matrix.....:** WG
Date Sampled...: 08/10/04 10:56 **Date Received..:** 08/11/04
Prep Date.....: 08/18/04 **Analysis Date..:** 08/18/04
Prep Batch #...: 4231527
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.0**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-205

GC/MS Volatiles

Lot-Sample #...: A4H110160-004 **Work Order #...:** GMWL81AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.95 J**	**1.0**	**ug/L**	**0.19**
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	103	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-206

GC/MS Volatiles

Lot-Sample #...: A4H110160-005 **Work Order #...:** GMWL91AA **Matrix.....:** WG
Date Sampled...: 08/10/04 11:01 **Date Received..:** 08/11/04
Prep Date.....: 08/18/04 **Analysis Date..:** 08/18/04
Prep Batch #...: 4231527
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**0.85 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**1.9**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-206

GC/MS Volatiles

Lot-Sample #...: A4H110160-005 **Work Order #...:** GMWL91AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	**1.1**	**1.0**	**ug/L**	**0.21**
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	105	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-207

GC/MS Volatiles

Lot-Sample #...: A4H110160-006 **Work Order #...:** GMWMC1AA **Matrix.....:** WG
Date Sampled...: 08/10/04 11:56 **Date Received..:** 08/11/04
Prep Date.....: 08/18/04 **Analysis Date..:** 08/18/04
Prep Batch #...: 4231527
Dilution Factor: 5 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	120	ug/L	3.7
Benzene	**1.2 J,B**	**5.0**	**ug/L**	**1.1**
Bromodichloromethane	ND	5.0	ug/L	0.70
Bromoform	ND	5.0	ug/L	0.85
Bromomethane	ND	5.0	ug/L	1.8
2-Butanone	ND	120	ug/L	2.0
Carbon disulfide	ND	25	ug/L	1.4
Carbon tetrachloride	ND	5.0	ug/L	0.95
Chlorobenzene	ND	5.0	ug/L	1.0
Chloroethane	ND	5.0	ug/L	1.2
Chloroform	ND	5.0	ug/L	0.80
Chloromethane	ND	5.0	ug/L	0.70
Cyclohexane	ND	5.0	ug/L	0.60
Dibromochloromethane	ND	5.0	ug/L	0.95
1,2-Dibromo-3-chloro-propane	ND	5.0	ug/L	1.4
1,2-Dibromoethane	ND	5.0	ug/L	1.2
1,2-Dichlorobenzene	ND	5.0	ug/L	1.0
1,3-Dichlorobenzene	ND	5.0	ug/L	0.90
1,4-Dichlorobenzene	ND	5.0	ug/L	1.1
Dichlorodifluoromethane	ND	5.0	ug/L	1.2
1,1-Dichloroethane	ND	5.0	ug/L	1.0
1,2-Dichloroethane	ND	5.0	ug/L	0.80
1,1-Dichloroethene	ND	5.0	ug/L	0.90
cis-1,2-Dichloroethene	ND	5.0	ug/L	1.0
trans-1,2-Dichloroethene	ND	5.0	ug/L	0.80
1,2-Dichloropropane	ND	5.0	ug/L	0.75
cis-1,3-Dichloropropene	ND	5.0	ug/L	0.60
trans-1,3-Dichloropropene	ND	5.0	ug/L	0.85
Ethylbenzene	ND	5.0	ug/L	0.95
2-Hexanone	ND	250	ug/L	1.8
Isopropylbenzene	ND	25	ug/L	0.75
Methyl acetate	ND	50	ug/L	2.6
Methylene chloride	ND	25	ug/L	0.95
Methylcyclohexane	ND	5.0	ug/L	2.5
4-Methyl-2-pentanone	ND	250	ug/L	1.6
Methyl tert-butyl ether	ND	25	ug/L	0.90
Styrene	ND	5.0	ug/L	0.65

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-207

GC/MS Volatiles

Lot-Sample #...: A4H110160-006 **Work Order #...:** GMWMC1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	1.1
Tetrachloroethene	**160**	**5.0**	**ug/L**	**0.95**
Toluene	ND	5.0	ug/L	0.85
1,2,4-Trichloro-benzene	ND	25	ug/L	0.95
1,1,1-Trichloroethane	ND	5.0	ug/L	1.0
1,1,2-Trichloroethane	ND	5.0	ug/L	1.1
Trichloroethene	ND	5.0	ug/L	1.4
Trichlorofluoromethane	ND	5.0	ug/L	0.80
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.0	ug/L	1.3
Vinyl chloride	ND	5.0	ug/L	1.0
Xylenes (total)	ND	15	ug/L	2.2

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-208

GC/MS Volatiles

Lot-Sample #...: A4H110160-007 **Work Order #...:** GMWMD1AA **Matrix.....:** WG
Date Sampled...: 08/10/04 12:36 **Date Received..:** 08/11/04
Prep Date.....: 08/14/04 **Analysis Date..:** 08/14/04
Prep Batch #...: 4229392
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.7 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**0.41 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.7**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-208

GC/MS Volatiles

Lot-Sample #...: A4H110160-007 **Work Order #...:** GMWMD1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.68 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-209

GC/MS Volatiles

Lot-Sample #...: A4H110160-008 **Work Order #...:** GMWME1AA **Matrix.....:** WG
Date Sampled...: 08/10/04 14:56 **Date Received..:** 08/11/04
Prep Date.....: 08/14/04 **Analysis Date..:** 08/14/04
Prep Batch #...: 4229392
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.9 J**	**25**	**ug/L**	**0.74**
Benzene	**0.24 J,B**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**0.22 J**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**0.27 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-209

GC/MS Volatiles

Lot-Sample #...: A4H110160-008 **Work Order #...:** GMWME1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-210

GC/MS Volatiles

Lot-Sample #...: A4H110160-009 **Work Order #...:** GMWMG1AA **Matrix.....:** WG
Date Sampled...: 08/10/04 14:06 **Date Received..:** 08/11/04
Prep Date.....: 08/14/04 **Analysis Date..:** 08/14/04
Prep Batch #...: 4229392
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.4 J**	**25**	**ug/L**	**0.74**
Benzene	**0.30 J,B**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-210

GC/MS Volatiles

Lot-Sample #...: A4H110160-009 **Work Order #...:** GMWMG1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**3.8**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.74 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-211

GC/MS Volatiles

Lot-Sample #...: A4H110160-010 **Work Order #...:** GMWMH1AA **Matrix.....:** WG
Date Sampled...: 08/10/04 14:26 **Date Received..:** 08/11/04
Prep Date.....: 08/14/04 **Analysis Date..:** 08/14/04
Prep Batch #...: 4229392
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.9 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.80 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-211

GC/MS Volatiles

Lot-Sample #...: A4H110160-010 Work Order #...: GMWMH1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**10**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**2.0**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-212

GC/MS Volatiles

Lot-Sample #...: A4H110160-011 **Work Order #...:** GMWML1AA **Matrix.....:** WG
Date Sampled...: 08/10/04 15:51 **Date Received..:** 08/11/04
Prep Date.....: 08/14/04 **Analysis Date..:** 08/14/04
Prep Batch #...: 4229392
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**0.93 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**0.80 J**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.43 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-212

GC/MS Volatiles

Lot-Sample #...: A4H110160-011 **Work Order #...:** GMWML1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**3.8**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.63 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-213

GC/MS Volatiles

Lot-Sample #...: A4H110160-012 **Work Order #...:** GMWMM1AA **Matrix.....:** WG
Date Sampled...: 08/10/04 16:11 **Date Received..:** 08/11/04
Prep Date.....: 08/14/04 **Analysis Date..:** 08/14/04
Prep Batch #...: 4229392
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**0.94 J**	**25**	**ug/L**	**0.74**
Benzene	**0.26 J,B**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	**0.41 J**	**1.0**	**ug/L**	**0.21**
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-213

GC/MS Volatiles

Lot-Sample #...: A4H110160-012 **Work Order #...:** GMWMM1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.99 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-214

GC/MS Volatiles

Lot-Sample #...: A4H110160-013 **Work Order #...:** GMWMN1AA **Matrix.....:** WG
Date Sampled...: 08/10/04 16:46 **Date Received..:** 08/11/04
Prep Date.....: 08/14/04 **Analysis Date..:** 08/14/04
Prep Batch #...: 4229392
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.7 J**	**25**	**ug/L**	**0.74**
Benzene	**0.28 J,B**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-214

GC/MS Volatiles

Lot-Sample #...: A4H110160-013 **Work Order #...:** GMWMN1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.31 J**	**1.0**	**ug/L**	**0.19**
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.49 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-215

GC/MS Volatiles

Lot-Sample #...: A4H110160-014 **Work Order #...:** GMWMP1AA **Matrix.....:** WG
Date Sampled...: 08/10/04 16:51 **Date Received..:** 08/11/04
Prep Date.....: 08/14/04 **Analysis Date..:** 08/14/04
Prep Batch #...: 4229392
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.0 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-215

GC/MS Volatiles

Lot-Sample #...: A4H110160-014 **Work Order #...:** GMWMP1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.23 J**	**1.0**	**ug/L**	**0.19**
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.48 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-216

GC/MS Volatiles

Lot-Sample #...: A4H110160-015 **Work Order #...:** GMWMR1AA **Matrix.....:** WG
Date Sampled...: 08/10/04 17:31 **Date Received..:** 08/11/04
Prep Date.....: 08/18/04 **Analysis Date..:** 08/18/04
Prep Batch #...: 4231527
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.3 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**0.41 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.7**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**0.24 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081004-DCR-216

GC/MS Volatiles

Lot-Sample #...: A4H110160-015 **Work Order #...:** GMWMR1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**2.4**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-217

GC/MS Volatiles

Lot-Sample #...:	A4H110160-016	**Work Order #...:**	GMWMT1AA	**Matrix.....:**	WG
Date Sampled...:	08/10/04	**Date Received..:**	08/11/04		
Prep Date.....:	08/18/04	**Analysis Date..:**	08/18/04		
Prep Batch #...:	4231527				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**8.9 J**	**25**	**ug/L**	**0.74**
Benzene	**0.29 J,B**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**3.9 J**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-217

GC/MS Volatiles

Lot-Sample #...: A4H110160-016 **Work Order #...:** GMWMT1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.18 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H110160 **Work Order #...:** GM8LK1AA **Matrix.....:** WATER
MB Lot-Sample #: A4H160000-392

Prep Date.....: 08/14/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 08/14/04 **Prep Batch #...:** 4229392
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	**0.35 J**	**1.0**	**ug/L**	**SW846 8260B**
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	**0.84 J**	**5.0**	**ug/L**	**SW846 8260B**
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H110160 **Work Order #...:** GM8LK1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H110160 **Work Order #...:** GNFEM1AA **Matrix.....:** WATER
MB Lot-Sample #: A4H180000-527

Prep Date.....: 08/17/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 08/17/04 **Prep Batch #...:** 4231527
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	**0.38 J**	**1.0**	**ug/L**	**SW846 8260B**
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H110160 **Work Order #...:** GNFEM1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4H110160 **Work Order #...:** GM8LK1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H160000-392 GM8LK1AD-LCSD
Prep Date.....: 08/14/04 **Analysis Date..:** 08/14/04
Prep Batch #...: 4229392
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**10**	**ug/L**	**101**		**SW846 8260B**
	10	**9.8**	**ug/L**	**98**	**2.7**	**SW846 8260B**
Chlorobenzene	**10**	**10**	**ug/L**	**100**		**SW846 8260B**
	10	**9.8**	**ug/L**	**98**	**2.2**	**SW846 8260B**
1,1-Dichloroethene	**10**	**12**	**ug/L**	**122**		**SW846 8260B**
	10	**12**	**ug/L**	**123**	**0.31**	**SW846 8260B**
Toluene	**10**	**10**	**ug/L**	**102**		**SW846 8260B**
	10	**9.9**	**ug/L**	**99**	**3.0**	**SW846 8260B**
Trichloroethene	**10**	**11**	**ug/L**	**106**		**SW846 8260B**
	10	**10**	**ug/L**	**104**	**1.1**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	104	(61 - 128)
Toluene-d8	98	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	110	(74 - 116)
	109	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4H110160 **Work Order #...:** GM8LK1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H160000-392 GM8LK1AD-LCSD
Prep Date.....: 08/14/04 **Analysis Date..:** 08/14/04
Prep Batch #...: 4229392
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**101**	**(80 - 116)**			**SW846 8260B**
	98	**(80 - 116)**	**2.7**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**100**	**(76 - 117)**			**SW846 8260B**
	98	**(76 - 117)**	**2.2**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**122**	**(63 - 130)**			**SW846 8260B**
	123	**(63 - 130)**	**0.31**	**(0-20)**	**SW846 8260B**
Toluene	**102**	**(74 - 119)**			**SW846 8260B**
	99	**(74 - 119)**	**3.0**	**(0-20)**	**SW846 8260B**
Trichloroethene	**106**	**(75 - 122)**			**SW846 8260B**
	104	**(75 - 122)**	**1.1**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	104	(61 - 128)
Toluene-d8	98	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	110	(74 - 116)
	109	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4H110160 **Work Order #...:** GNFEM1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H180000-527 GNFEM1AD-LCSD
Prep Date.....: 08/17/04 **Analysis Date..:** 08/17/04
Prep Batch #...: 4231527
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**10**	**ug/L**	**102**		**SW846 8260B**
	10	**10**	**ug/L**	**101**	**0.85**	**SW846 8260B**
Chlorobenzene	**10**	**11**	**ug/L**	**108**		**SW846 8260B**
	10	**11**	**ug/L**	**107**	**1.6**	**SW846 8260B**
1,1-Dichloroethene	**10**	**11**	**ug/L**	**109**		**SW846 8260B**
	10	**11**	**ug/L**	**106**	**2.4**	**SW846 8260B**
Toluene	**10**	**11**	**ug/L**	**105**		**SW846 8260B**
	10	**11**	**ug/L**	**108**	**2.4**	**SW846 8260B**
Trichloroethene	**10**	**11**	**ug/L**	**106**		**SW846 8260B**
	10	**11**	**ug/L**	**108**	**1.9**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
	102	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	100	(61 - 128)
Toluene-d8	98	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	112	(74 - 116)
	113	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4H110160 **Work Order #...:** GNFEM1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H180000-527 GNFEM1AD-LCSD
Prep Date.....: 08/17/04 **Analysis Date..:** 08/17/04
Prep Batch #...: 4231527
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**102**	**(80 - 116)**			**SW846 8260B**
	101	**(80 - 116)**	**0.85**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**108**	**(76 - 117)**			**SW846 8260B**
	107	**(76 - 117)**	**1.6**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**109**	**(63 - 130)**			**SW846 8260B**
	106	**(63 - 130)**	**2.4**	**(0-20)**	**SW846 8260B**
Toluene	**105**	**(74 - 119)**			**SW846 8260B**
	108	**(74 - 119)**	**2.4**	**(0-20)**	**SW846 8260B**
Trichloroethene	**106**	**(75 - 122)**			**SW846 8260B**
	108	**(75 - 122)**	**1.9**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
	102	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	100	(61 - 128)
Toluene-d8	98	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	112	(74 - 116)
	113	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	A4H110160	**Work Order #...:**	GMNG11AC-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A4H060441-001		GMNG11AD-MSD		
Date Sampled...:	08/05/04 11:40	**Date Received..:**	08/06/04		
Prep Date.....:	08/14/04	**Analysis Date..:**	08/14/04		
Prep Batch #...:	4229392				
Dilution Factor:	20	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**6.9**	**200**	**200**	**ug/L**	**98**		**SW846 8260B**
	6.9	**200**	**200**	**ug/L**	**97**	**1.6**	**SW846 8260B**
Chlorobenzene	**ND**	**200**	**200**	**ug/L**	**101**		**SW846 8260B**
	ND	**200**	**200**	**ug/L**	**99**	**2.6**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**200**	**210**	**ug/L**	**104**		**SW846 8260B**
	ND	**200**	**240**	**ug/L**	**121**	**15**	**SW846 8260B**
Toluene	**ND**	**200**	**200**	**ug/L**	**101**		**SW846 8260B**
	ND	**200**	**200**	**ug/L**	**101**	**0.17**	**SW846 8260B**
Trichloroethene	**150**	**200**	**360**	**ug/L**	**105**		**SW846 8260B**
	150	**200**	**360**	**ug/L**	**107**	**0.82**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
	105	(73 - 122)
1,2-Dichloroethane-d4	105	(61 - 128)
	102	(61 - 128)
Toluene-d8	97	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	107	(74 - 116)
	111	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A4H110160	**Work Order #...:**	GMNG11AC-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A4H060441-001		GMNG11AD-MSD		
Date Sampled...:	08/05/04 11:40	**Date Received..:**	08/06/04		
Prep Date.....:	08/14/04	**Analysis Date..:**	08/14/04		
Prep Batch #...:	4229392				
Dilution Factor:	20	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**98**	**(78 - 118)**			**SW846 8260B**
	97	**(78 - 118)**	**1.6**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**101**	**(76 - 117)**			**SW846 8260B**
	99	**(76 - 117)**	**2.6**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**104**	**(62 - 130)**			**SW846 8260B**
	121	**(62 - 130)**	**15**	**(0-20)**	**SW846 8260B**
Toluene	**101**	**(70 - 119)**			**SW846 8260B**
	101	**(70 - 119)**	**0.17**	**(0-20)**	**SW846 8260B**
Trichloroethene	**105**	**(62 - 130)**			**SW846 8260B**
	107	**(62 - 130)**	**0.82**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
	105	(73 - 122)
1,2-Dichloroethane-d4	105	(61 - 128)
	102	(61 - 128)
Toluene-d8	97	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	107	(74 - 116)
	111	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4H110160 **Work Order #...:** GM01C1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A4H120171-001 GM01C1AD-MSD
Date Sampled...: 08/11/04 10:25 **Date Received..:** 08/12/04
Prep Date.....: 08/17/04 **Analysis Date..:** 08/17/04
Prep Batch #...: 4231527
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**10**	**11**	**ug/L**	**107**		**SW846 8260B**
	ND	**10**	**9.8**	**ug/L**	**98**	**9.1**	**SW846 8260B**
Chlorobenzene	**ND**	**10**	**11**	**ug/L**	**108**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**102**	**5.3**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10**	**10**	**ug/L**	**103**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**100**	**2.8**	**SW846 8260B**
Toluene	**ND**	**10**	**11**	**ug/L**	**106**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**103**	**3.0**	**SW846 8260B**
Trichloroethene	**ND**	**10**	**11**	**ug/L**	**107**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**102**	**5.0**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
	97	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	98	(61 - 128)
Toluene-d8	96	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	113	(74 - 116)
	111	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A4H110160	**Work Order #...:**	GM01C1AC-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A4H120171-001		GM01C1AD-MSD		
Date Sampled...:	08/11/04 10:25	**Date Received..:**	08/12/04		
Prep Date.....:	08/17/04	**Analysis Date..:**	08/17/04		
Prep Batch #...:	4231527				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**107**	**(78 - 118)**			**SW846 8260B**
	98	**(78 - 118)**	**9.1**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**108**	**(76 - 117)**			**SW846 8260B**
	102	**(76 - 117)**	**5.3**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**103**	**(62 - 130)**			**SW846 8260B**
	100	**(62 - 130)**	**2.8**	**(0-20)**	**SW846 8260B**
Toluene	**106**	**(70 - 119)**			**SW846 8260B**
	103	**(70 - 119)**	**3.0**	**(0-20)**	**SW846 8260B**
Trichloroethene	**107**	**(62 - 130)**			**SW846 8260B**
	102	**(62 - 130)**	**5.0**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
	97	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	98	(61 - 128)
Toluene-d8	96	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	113	(74 - 116)
	111	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

GCMS SEMIVOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-202

GC/MS Semivolatiles

Lot-Sample #...: A4H110160-001 **Work Order #...:** GMWL41AC **Matrix.....:** WG
Date Sampled...: 08/10/04 09:06 **Date Received..:** 08/11/04
Prep Date.....: 08/11/04 **Analysis Date..:** 08/12/04
Prep Batch #...: 4224403
Dilution Factor: 1 **Initial Wgt/Vol:** 1000 mL **Final Wgt/Vol..:** 2 mL
Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	5.0	ug/L	0.028
Acenaphthylene	ND	5.0	ug/L	0.030
Acetophenone	ND	5.0	ug/L	0.19
Anthracene	ND	5.0	ug/L	0.030
Atrazine	ND	5.0	ug/L	0.36
Benzo(a)anthracene	ND	4.0	ug/L	0.028
Benzo(a)pyrene	ND	4.0	ug/L	0.022
Benzo(b)fluoranthene	ND	4.0	ug/L	0.043
Benzo(ghi)perylene	ND	5.0	ug/L	0.044
Benzo(k)fluoranthene	ND	5.0	ug/L	0.071
Benzaldehyde	ND	10	ug/L	0.17
1,1'-Biphenyl	ND	10	ug/L	0.30
bis(2-Chloroethoxy) methane	ND	5.0	ug/L	0.24
bis(2-Chloroethyl)-ether	ND	4.0	ug/L	0.19
bis(2-Ethylhexyl) phthalate	**8.6 B**	**5.0**	**ug/L**	**0.36**
4-Bromophenyl phenyl ether	ND	5.0	ug/L	0.29
Butyl benzyl phthalate	ND	5.0	ug/L	0.14
Caprolactam	ND	10	ug/L	0.73
Carbazole	ND	10	ug/L	0.17
4-Chloroaniline	ND	20	ug/L	0.31
4-Chloro-3-methylphenol	ND	5.0	ug/L	0.18
2-Chloronaphthalene	ND	5.0	ug/L	0.29
2-Chlorophenol	ND	5.0	ug/L	0.14
4-Chlorophenyl phenyl ether	ND	5.0	ug/L	0.21
Chrysene	ND	5.0	ug/L	0.035
Dibenz(a,h)anthracene	ND	4.0	ug/L	0.054
Dibenzofuran	ND	5.0	ug/L	0.025
3,3'-Dichlorobenzidine	ND	4.0	ug/L	0.19
2,4-Dichlorophenol	ND	10	ug/L	0.24
Diethyl phthalate	ND	5.0	ug/L	0.12
2,4-Dimethylphenol	ND	5.0	ug/L	0.23
Dimethyl phthalate	ND	5.0	ug/L	0.27
Di-n-butyl phthalate	ND	5.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-202

GC/MS Semivolatiles

Lot-Sample #...: A4H110160-001 **Work Order #...:** GMWL41AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
4,6-Dinitro-2-methylphenol	ND	20	ug/L	1.8
2,4-Dinitrophenol	ND	20	ug/L	1.3
2,4-Dinitrotoluene	ND	5.0	ug/L	0.16
2,6-Dinitrotoluene	ND	5.0	ug/L	0.17
Di-n-octyl phthalate	ND	5.0	ug/L	0.16
Fluoranthene	ND	5.0	ug/L	0.024
Fluorene	ND	5.0	ug/L	0.035
Hexachlorobenzene	ND	5.0	ug/L	0.075
Hexachlorobutadiene	ND	5.0	ug/L	0.11
Hexachlorocyclopentadiene	ND	5.0	ug/L	1.5
Hexachloroethane	ND	5.0	ug/L	0.21
Indeno(1,2,3-cd)pyrene	ND	4.0	ug/L	0.081
Isophorone	ND	5.0	ug/L	0.16
2-Methylnaphthalene	ND	5.0	ug/L	0.028
2-Methylphenol	ND	5.0	ug/L	0.15
4-Methylphenol	ND	5.0	ug/L	0.20
Naphthalene	ND	5.0	ug/L	0.031
2-Nitroaniline	ND	20	ug/L	0.18
3-Nitroaniline	ND	20	ug/L	0.094
4-Nitroaniline	ND	20	ug/L	0.11
Nitrobenzene	ND	4.0	ug/L	0.21
2-Nitrophenol	ND	5.0	ug/L	0.14
4-Nitrophenol	ND	20	ug/L	1.0
N-Nitrosodi-n-propylamine	ND	5.0	ug/L	0.21
N-Nitrosodiphenylamine	ND	5.0	ug/L	0.18
2,2'-oxybis(1-Chloropropane)	ND	5.0	ug/L	0.21
Pentachlorophenol	ND	20	ug/L	2.0
Phenanthrene	ND	5.0	ug/L	0.044
Phenol	ND	5.0	ug/L	0.14
Pyrene	ND	5.0	ug/L	0.051
2,4,5-Trichlorophenol	ND	5.0	ug/L	0.13
2,4,6-Trichlorophenol	ND	4.0	ug/L	0.16

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	71	(32 - 112)
2-Fluorobiphenyl	62	(30 - 110)
Terphenyl-d14	86	(10 - 144)
Phenol-d5	60	(10 - 113)
2-Fluorophenol	60	(13 - 110)
2,4,6-Tribromophenol	84	(21 - 122)

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-202

GC/MS Semivolatiles

Lot-Sample #...: A4H110160-001 Work Order #...: GMWL41AC Matrix.....: WG

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-203

GC/MS Semivolatiles

Lot-Sample #...: A4H110160-002 **Work Order #...:** GMWL61AC **Matrix.....:** WG
Date Sampled...: 08/10/04 09:16 **Date Received..:** 08/11/04
Prep Date.....: 08/11/04 **Analysis Date..:** 08/12/04
Prep Batch #...: 4224403
Dilution Factor: 1 **Initial Wgt/Vol:** 1000 mL **Final Wgt/Vol..:** 2 mL
Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	5.0	ug/L	0.028
Acenaphthylene	ND	5.0	ug/L	0.030
Acetophenone	ND	5.0	ug/L	0.19
Anthracene	ND	5.0	ug/L	0.030
Atrazine	ND	5.0	ug/L	0.36
Benzo(a)anthracene	ND	4.0	ug/L	0.028
Benzo(a)pyrene	ND	4.0	ug/L	0.022
Benzo(b)fluoranthene	ND	4.0	ug/L	0.043
Benzo(ghi)perylene	ND	5.0	ug/L	0.044
Benzo(k)fluoranthene	ND	5.0	ug/L	0.071
Benzaldehyde	ND	10	ug/L	0.17
1,1'-Biphenyl	ND	10	ug/L	0.30
bis(2-Chloroethoxy) methane	ND	5.0	ug/L	0.24
bis(2-Chloroethyl)-ether	ND	4.0	ug/L	0.19
bis(2-Ethylhexyl) phthalate	ND	5.0	ug/L	0.36
4-Bromophenyl phenyl ether	ND	5.0	ug/L	0.29
Butyl benzyl phthalate	ND	5.0	ug/L	0.14
Caprolactam	ND	10	ug/L	0.73
Carbazole	ND	10	ug/L	0.17
4-Chloroaniline	ND	20	ug/L	0.31
4-Chloro-3-methylphenol	ND	5.0	ug/L	0.18
2-Chloronaphthalene	ND	5.0	ug/L	0.29
2-Chlorophenol	ND	5.0	ug/L	0.14
4-Chlorophenyl phenyl ether	ND	5.0	ug/L	0.21
Chrysene	ND	5.0	ug/L	0.035
Dibenz(a,h)anthracene	ND	4.0	ug/L	0.054
Dibenzofuran	ND	5.0	ug/L	0.025
3,3'-Dichlorobenzidine	ND	4.0	ug/L	0.19
2,4-Dichlorophenol	ND	10	ug/L	0.24
Diethyl phthalate	ND	5.0	ug/L	0.12
2,4-Dimethylphenol	ND	5.0	ug/L	0.23
Dimethyl phthalate	ND	5.0	ug/L	0.27
Di-n-butyl phthalate	ND	5.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081004-DCR-203

GC/MS Semivolatiles

Lot-Sample #...: A4H110160-002 **Work Order #...:** GMWL61AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
4,6-Dinitro-2-methylphenol	ND	20	ug/L	1.8
2,4-Dinitrophenol	ND	20	ug/L	1.3
2,4-Dinitrotoluene	ND	5.0	ug/L	0.16
2,6-Dinitrotoluene	ND	5.0	ug/L	0.17
Di-n-octyl phthalate	ND	5.0	ug/L	0.16
Fluoranthene	ND	5.0	ug/L	0.024
Fluorene	ND	5.0	ug/L	0.035
Hexachlorobenzene	ND	5.0	ug/L	0.075
Hexachlorobutadiene	ND	5.0	ug/L	0.11
Hexachlorocyclopentadiene	ND	5.0	ug/L	1.5
Hexachloroethane	ND	5.0	ug/L	0.21
Indeno(1,2,3-cd)pyrene	ND	4.0	ug/L	0.081
Isophorone	ND	5.0	ug/L	0.16
2-Methylnaphthalene	ND	5.0	ug/L	0.028
2-Methylphenol	ND	5.0	ug/L	0.15
4-Methylphenol	ND	5.0	ug/L	0.20
Naphthalene	ND	5.0	ug/L	0.031
2-Nitroaniline	ND	20	ug/L	0.18
3-Nitroaniline	ND	20	ug/L	0.094
4-Nitroaniline	ND	20	ug/L	0.11
Nitrobenzene	ND	4.0	ug/L	0.21
2-Nitrophenol	ND	5.0	ug/L	0.14
4-Nitrophenol	ND	20	ug/L	1.0
N-Nitrosodi-n-propylamine	ND	5.0	ug/L	0.21
N-Nitrosodiphenylamine	ND	5.0	ug/L	0.18
2,2'-oxybis(1-Chloropropane)	ND	5.0	ug/L	0.21
Pentachlorophenol	ND	20	ug/L	2.0
Phenanthrene	ND	5.0	ug/L	0.044
Phenol	ND	5.0	ug/L	0.14
Pyrene	ND	5.0	ug/L	0.051
2,4,5-Trichlorophenol	ND	5.0	ug/L	0.13
2,4,6-Trichlorophenol	ND	4.0	ug/L	0.16

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	67	(32 - 112)
2-Fluorobiphenyl	56	(30 - 110)
Terphenyl-d14	82	(10 - 144)
Phenol-d5	65	(10 - 113)
2-Fluorophenol	62	(13 - 110)
2,4,6-Tribromophenol	77	(21 - 122)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A4H110160 **Work Order #...:** GMXGK1AA **Matrix.....:** WATER
MB Lot-Sample #: A4H110000-403

Prep Date.....: 08/11/04 **Final Wgt/Vol..:** 2 mL
Analysis Date..: 08/12/04 **Prep Batch #...:** 4224403
Dilution Factor: 1 **Initial Wgt/Vol:** 1000 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.0	ug/L	SW846 8270C
Acenaphthylene	ND	5.0	ug/L	SW846 8270C
Acetophenone	ND	5.0	ug/L	SW846 8270C
Anthracene	ND	5.0	ug/L	SW846 8270C
Atrazine	ND	5.0	ug/L	SW846 8270C
Benzo(a)anthracene	ND	4.0	ug/L	SW846 8270C
Benzo(a)pyrene	ND	4.0	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	4.0	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	5.0	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	5.0	ug/L	SW846 8270C
Benzaldehyde	ND	10	ug/L	SW846 8270C
1,1'-Biphenyl	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	5.0	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	4.0	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	**0.77 J**	**5.0**	**ug/L**	**SW846 8270C**
4-Bromophenyl phenyl ether	ND	5.0	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	5.0	ug/L	SW846 8270C
Caprolactam	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	20	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	5.0	ug/L	SW846 8270C
2-Chloronaphthalene	ND	5.0	ug/L	SW846 8270C
2-Chlorophenol	ND	5.0	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	5.0	ug/L	SW846 8270C
Chrysene	ND	5.0	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	4.0	ug/L	SW846 8270C
Dibenzofuran	ND	5.0	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	4.0	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	5.0	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	5.0	ug/L	SW846 8270C
Dimethyl phthalate	ND	5.0	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	5.0	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	20	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	20	ug/L	SW846 8270C

(Continued on next page)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A4H110160 **Work Order #...:** GMXGK1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	5.0	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	5.0	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	5.0	ug/L	SW846 8270C
Fluoranthene	ND	5.0	ug/L	SW846 8270C
Fluorene	ND	5.0	ug/L	SW846 8270C
Hexachlorobenzene	ND	5.0	ug/L	SW846 8270C
Hexachlorobutadiene	ND	5.0	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	5.0	ug/L	SW846 8270C
Hexachloroethane	ND	5.0	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	4.0	ug/L	SW846 8270C
Isophorone	ND	5.0	ug/L	SW846 8270C
2-Methylnaphthalene	ND	5.0	ug/L	SW846 8270C
2-Methylphenol	ND	5.0	ug/L	SW846 8270C
4-Methylphenol	ND	5.0	ug/L	SW846 8270C
Naphthalene	ND	5.0	ug/L	SW846 8270C
2-Nitroaniline	ND	20	ug/L	SW846 8270C
3-Nitroaniline	ND	20	ug/L	SW846 8270C
4-Nitroaniline	ND	20	ug/L	SW846 8270C
Nitrobenzene	ND	4.0	ug/L	SW846 8270C
2-Nitrophenol	ND	5.0	ug/L	SW846 8270C
4-Nitrophenol	ND	20	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	5.0	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	5.0	ug/L	SW846 8270C
2,2'-oxybis(1-Chloropropa	ND	5.0	ug/L	SW846 8270C
Pentachlorophenol	ND	20	ug/L	SW846 8270C
Phenanthrene	ND	5.0	ug/L	SW846 8270C
Phenol	ND	5.0	ug/L	SW846 8270C
Pyrene	ND	5.0	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	5.0	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	4.0	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	65	(32 - 112)
2-Fluorobiphenyl	55	(30 - 110)
Terphenyl-d14	89	(10 - 144)
Phenol-d5	60	(10 - 113)
2-Fluorophenol	62	(13 - 110)
2,4,6-Tribromophenol	64	(21 - 122)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A4H110160 **Work Order #...:** GMXGK1AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A4H110160 Work Order #...: GMXGK1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A4H110000-403 GMXGK1AD-LCSD
Prep Date.....: 08/11/04 Analysis Date..: 08/12/04
Prep Batch #...: 4224403
Dilution Factor: 1 Final Wgt/Vol..: 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	20	15	ug/L	77		SW846 8270C
	20	15	ug/L	75	2.1	SW846 8270C
1,2,4-Trichloro-benzene	20	9.3	ug/L	46		SW846 8270C
	20	9.1	ug/L	45	2.2	SW846 8270C
1,4-Dichlorobenzene	20	10	ug/L	50		SW846 8270C
	20	9.8	ug/L	49	1.2	SW846 8270C
4-Chloro-3-methylphenol	20	15	ug/L	76		SW846 8270C
	20	15	ug/L	73	3.5	SW846 8270C
2-Chlorophenol	20	15	ug/L	76		SW846 8270C
	20	15	ug/L	75	1.1	SW846 8270C
2,4-Dinitrotoluene	20	16	ug/L	78		SW846 8270C
	20	16	ug/L	78	0.36	SW846 8270C
4-Nitrophenol	20	14	ug/L	70		SW846 8270C
	20	14	ug/L	68	2.7	SW846 8270C
N-Nitrosodi-n-propyl-amine	20	16	ug/L	79		SW846 8270C
	20	16	ug/L	79	0.70	SW846 8270C
Pentachlorophenol	20	17	ug/L	86		SW846 8270C
	20	17	ug/L	83	2.6	SW846 8270C
Phenol	20	15	ug/L	74		SW846 8270C
	20	15	ug/L	74	0.090	SW846 8270C
Pyrene	20	17	ug/L	83		SW846 8270C
	20	16	ug/L	82	1.6	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	83	(32 - 112)
	82	(32 - 112)
2-Fluorobiphenyl	77	(30 - 110)
	75	(30 - 110)
Terphenyl-d14	86	(10 - 144)
	85	(10 - 144)
Phenol-d5	81	(10 - 113)
	80	(10 - 113)
2-Fluorophenol	82	(13 - 110)
	80	(13 - 110)

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A4H110160 **Work Order #...:** GMXGK1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H110000-403 GMXGK1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	89	(21 - 122)
	87	(21 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A4H110160 Work Order #...: GMXGK1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A4H110000-403 GMXGK1AD-LCSD
Prep Date.....: 08/11/04 Analysis Date..: 08/12/04
Prep Batch #...: 4224403
Dilution Factor: 1 Final Wgt/Vol..: 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	77	(39 - 118)			SW846 8270C
	75	(39 - 118)	2.1	(0-35)	SW846 8270C
1,2,4-Trichloro-benzene	46	(31 - 110)			SW846 8270C
	45	(31 - 110)	2.2	(0-37)	SW846 8270C
1,4-Dichlorobenzene	50	(28 - 110)			SW846 8270C
	49	(28 - 110)	1.2	(0-36)	SW846 8270C
4-Chloro-3-methylphenol	76	(29 - 124)			SW846 8270C
	73	(29 - 124)	3.5	(0-55)	SW846 8270C
2-Chlorophenol	76	(19 - 124)			SW846 8270C
	75	(19 - 124)	1.1	(0-43)	SW846 8270C
2,4-Dinitrotoluene	78	(47 - 131)			SW846 8270C
	78	(47 - 131)	0.36	(0-32)	SW846 8270C
4-Nitrophenol	70	(19 - 144)			SW846 8270C
	68	(19 - 144)	2.7	(0-34)	SW846 8270C
N-Nitrosodi-n-propyl-amine	79	(30 - 115)			SW846 8270C
	79	(30 - 115)	0.70	(0-36)	SW846 8270C
Pentachlorophenol	86	(10 - 140)			SW846 8270C
	83	(10 - 140)	2.6	(0-56)	SW846 8270C
Phenol	74	(10 - 131)			SW846 8270C
	74	(10 - 131)	0.090	(0-43)	SW846 8270C
Pyrene	83	(46 - 130)			SW846 8270C
	82	(46 - 130)	1.6	(0-31)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	83	(32 - 112)
	82	(32 - 112)
2-Fluorobiphenyl	77	(30 - 110)
	75	(30 - 110)
Terphenyl-d14	86	(10 - 144)
	85	(10 - 144)
Phenol-d5	81	(10 - 113)
	80	(10 - 113)
2-Fluorophenol	82	(13 - 110)
	80	(13 - 110)

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A4H110160 **Work Order #...:** GMXGK1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H110000-403 GMXGK1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	89	(21 - 122)
	87	(21 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

REC'D CRA
SEP 13 2004
G-26

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM GRAND RAPIDS

Lot #: A4H120238

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4H120238
Name: GM GR
Description
SEVERN TRENT LABORATORIES, INC. Event: Quarterly GW
Samples: 15 Water
Analysis: TCL VOC
TAT: STD - 21
Lab: STL

Amy McCormick
for Kenneth J. Kuzior
Project Manager

Checked Against Preliminary Data:
Date: ____ Init.: KAK
Date of Validation Memo: 10/20/04
Invoice Approval Date: ____
September 8, 2004 Comments: ____

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: ST DTXT	REMARKS
1	8/11/04	831	GW-17360-081104-DCR-218	H_2O	3	X	X	
2		901	-219		3	X	X	
3		956	-220		3	X	X	
4		930	-221		3	X	X	
5		1156	-222		3	X	X	
6		1046	-223		3	X	X	
7		1221	-224		3	X	X	
8		1421	-225		3	X	X	
9		1411	-226		3	X	X	
10		1540	-227		9	X	X	MS/MSD
11		1521	-228		3	X	X	
12		1610	-229		3	X	X	
13		1620	-230		3	X	X	CRA Contact Paul Wiseman
14		1635	-231		3	X	X	
15		-	-232		1	X	X	
			TOTAL NUMBER OF CONTAINERS					

RELINQUISHED BY: 1. [signature]	DATE: 8/11-04 TIME: 1800	RECEIVED BY: 1.	DATE: TIME:
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 8393 5588 8810

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27165

SAMPLE TEAM: David Rivers, Bryant Miller

RECEIVED FOR LABORATORY BY: [signature]
DATE: 8-12-04 TIME: 0950

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4H120238

The following report contains the analytical results for fourteen water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM Grand Rapids Site, project number 17360-09. The samples were received August 12, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Ken J. Kuzior, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 2.9°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Louisiana (#04112), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

Y:\Barb\STL headers\Qc846-Narrative_012804.doc Revised083004 mkc

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4H120238

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-081104-DCR-218 08/11/04 08:31 001				
Acetone	2.1 J	25	ug/L	SW846 8260B
GW-17360-081104-DCR-220 08/11/04 09:56 003				
Acetone	1.7 J	25	ug/L	SW846 8260B
Benzene	0.27 J,B	1.0	ug/L	SW846 8260B
Chloroform	0.44 J	1.0	ug/L	SW846 8260B
GW-17360-081104-DCR-221 08/11/04 09:30 004				
Bromodichloromethane	0.43 J	1.0	ug/L	SW846 8260B
Chloroform	2.9	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	0.25 J	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.53 J	1.0	ug/L	SW846 8260B
Trichloroethene	1.8	1.0	ug/L	SW846 8260B
GW-17360-081104-DCR-222 08/11/04 11:56 005				
Acetone	1.7 J	50	ug/L	SW846 8260B
1,1-Dichloroethene	0.73 J	2.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	48	2.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	0.64 J	2.0	ug/L	SW846 8260B
Methylene chloride	1.0 J,B	10	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.57 J	2.0	ug/L	SW846 8260B
Trichloroethene	30	2.0	ug/L	SW846 8260B
Vinyl chloride	1.0 J	2.0	ug/L	SW846 8260B
GW-17360-081104-DCR-223 08/11/04 10:46 006				
Benzene	0.41 J,B	1.0	ug/L	SW846 8260B
Trichloroethene	1.5	1.0	ug/L	SW846 8260B
GW-17360-081104-DCR-224 08/11/04 12:21 007				
Chloroform	2.2	1.0	ug/L	SW846 8260B
Trichloroethene	0.39 J	1.0	ug/L	SW846 8260B
GW-17360-081104-DCR-225 08/11/04 14:21 008				
Bromodichloromethane	2.1	1.0	ug/L	SW846 8260B
Chloroform	12	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.33 J	1.0	ug/L	SW846 8260B
Trichloroethene	2.8	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4H120238

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-081104-DCR-226 08/11/04 14:11 009				
1,1-Dichloroethane	0.88 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	0.65 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	0.82 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.38 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	1.4	1.0	ug/L	SW846 8260B
Trichloroethene	33	1.0	ug/L	SW846 8260B
GW-17360-081104-DCR-227 08/11/04 15:46 010				
Acetone	0.84 J	25	ug/L	SW846 8260B
Bromodichloromethane	1.5	1.0	ug/L	SW846 8260B
Chloroform	10	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	0.26 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.46 J	1.0	ug/L	SW846 8260B
Trichloroethene	5.9	1.0	ug/L	SW846 8260B
GW-17360-081104-DCR-228 08/11/04 15:21 011				
Acetone	2.7 J	25	ug/L	SW846 8260B
Benzene	0.22 J,B	1.0	ug/L	SW846 8260B
Bromodichloromethane	0.24 J	1.0	ug/L	SW846 8260B
Chloroform	1.2	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	0.51 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	0.54 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	0.91 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.54 J	1.0	ug/L	SW846 8260B
Trichloroethene	2.2	1.0	ug/L	SW846 8260B
GW-17360-081104-DCR-229 08/11/04 16:10 012				
Acetone	1.6 J	25	ug/L	SW846 8260B
Benzene	0.31 J,B	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	5.4	1.0	ug/L	SW846 8260B
Tetrachloroethene	4.6	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.51 J	1.0	ug/L	SW846 8260B
Trichloroethene	1.7	1.0	ug/L	SW846 8260B
Vinyl chloride	0.94 J	1.0	ug/L	SW846 8260B
GW-17360-081104-DCR-230 08/11/04 16:20 013				
Acetone	2.5 J	25	ug/L	SW846 8260B
cis-1,2-Dichloroethene	3.1	1.0	ug/L	SW846 8260B
Tetrachloroethene	1.8	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4H120238

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-081104-DCR-230 08/11/04 16:20 013				
1,1,1-Trichloroethane	0.29 J	1.0	ug/L	SW846 8260B
Trichloroethene	1.6	1.0	ug/L	SW846 8260B
Vinyl chloride	0.36 J	1.0	ug/L	SW846 8260B
GW-17360-081104-DCR-231 08/11/04 16:35 014				
Acetone	2.1 J	25	ug/L	SW846 8260B
Bromodichloromethane	0.24 J	1.0	ug/L	SW846 8260B
Bromoform	0.75 J	1.0	ug/L	SW846 8260B
Chloroform	0.31 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.26 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	0.42 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	2.8	1.0	ug/L	SW846 8260B
Trichloroethene	0.50 J	1.0	ug/L	SW846 8260B
GW-17360-081104-DCR-232 08/11/04 015				
Acetone	11 J	25	ug/L	SW846 8260B
Benzene	0.38 J,B	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	0.44 J	1.0	ug/L	SW846 8260B
Methylene chloride	4.0 J,B	5.0	ug/L	SW846 8260B
Toluene	0.18 J	1.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4H120238

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4H120238

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GM1JA	001	GW-17360-081104-DCR-218	08/11/04	08:31
GM1JH	002	GW-17360-081104-DCR-219	08/11/04	09:01
GM1JJ	003	GW-17360-081104-DCR-220	08/11/04	09:56
GM1JK	004	GW-17360-081104-DCR-221	08/11/04	09:30
GM1JL	005	GW-17360-081104-DCR-222	08/11/04	11:56
GM1JM	006	GW-17360-081104-DCR-223	08/11/04	10:46
GM1JN	007	GW-17360-081104-DCR-224	08/11/04	12:21
GM1JP	008	GW-17360-081104-DCR-225	08/11/04	14:21
GM1JQ	009	GW-17360-081104-DCR-226	08/11/04	14:11
GM1JR	010	GW-17360-081104-DCR-227	08/11/04	15:46
GM1JT	011	GW-17360-081104-DCR-228	08/11/04	15:21
GM1JV	012	GW-17360-081104-DCR-229	08/11/04	16:10
GM1JW	013	GW-17360-081104-DCR-230	08/11/04	16:20
GM1JX	014	GW-17360-081104-DCR-231	08/11/04	16:35
GM1J0	015	GW-17360-081104-DCR-232	08/11/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: ST DTMT	REMARKS
1	8/11/04	831	GW-17360-081104-DCR-218	H2O	3	X	X	
2		901	-219		3	X	X	
3		956	-220		3	X	X	
4		930	-221		3	X	X	
5		1156	-222		3	X	X	
6		1046	-223		3	X	X	
7		1221	-224		3	X	X	
8		1421	-225		3	X	X	
9		1411	-226		3	X	X	
10		1596	-227		9	X	X	MS/MSD
11		1521	-228		3	X	X	
12		1610	-229		3	X	X	
13		1620	-230		3	X	X	CRA Contact
14		1635	-231		3	X	X	Paul Wiseman
15		-	-232		1	X	X	

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY: 1. _____	DATE: 8/11/04 TIME: 1800	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No. 8393 5588 8810

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27165

SAMPLE TEAM: David Rivers, Bryant Miller

RECEIVED FOR LABORATORY BY: Angela Matthews

DATE: 8-12-04 TIME: 0950

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

16

STL North Canton

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4H120238

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GM1JA	STILLERJ	8/12/04	Yes		Storage	
GM1JH	STILLERJ	8/12/04	Yes		Storage	
GM1JJ	STILLERJ	8/12/04	Yes		Storage	
GM1JK	STILLERJ	8/12/04	Yes		Storage	
GM1JL	STILLERJ	8/12/04	Yes		Storage	
GM1JM	STILLERJ	8/12/04	Yes		Storage	
GM1JN	STILLERJ	8/12/04	Yes		Storage	
GM1JP	STILLERJ	8/12/04	Yes		Storage	
GM1JQ	STILLERJ	8/12/04	Yes		Storage	
GM1JR	STILLERJ	8/12/04	Yes		Storage	
GM1JT	STILLERJ	8/12/04	Yes		Storage	
GM1JV	STILLERJ	8/12/04	Yes		Storage	
GM1JW	STILLERJ	8/12/04	Yes		Storage	
GM1JX	STILLERJ	8/12/04	Yes		Storage	
GM1J0	STILLERJ	8/12/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** 44H120238
North Canton Facility

Client: CRA Project: GM Grand Rapids Quote#: 50154
Cooler Received on: 8-12-04 Opened on: 8-12-04 by: Angela Matthews (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other: _____
STL Cooler No# _____ Foam Box ☐ Client Cooler ☑ Other ____

1. Were custody seals on the outside of the cooler? Yes ☑ No ☐ Intact? Yes ☑ No ☐ NA ☐
   If YES, Quantity _____
   Were the custody seals signed and dated? Yes ☐ No ☑ NA ☐
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☑ None ☐ Other : _____
6. Cooler temperature upon receipt 2.9 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☑ Against Bottles ☐ IR ☑ ICE/$H_2$0 Slurry ☐
COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐
Concerning: _____

√	
	1. CHAIN OF CUSTODY
	The following discrepancies occurred:
	2. SAMPLE CONDITION
	Sample(s) _____ were received after the recommended holding time had expired.
	Sample(s) _____ were received in a broken container.
	3. SAMPLE PRESERVATION
	Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
	4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081104-DCR-218

GC/MS Volatiles

Lot-Sample #...: A4H120238-001 **Work Order #...:** GM1JA1AA **Matrix.....:** WG
Date Sampled...: 08/11/04 08:31 **Date Received..:** 08/12/04
Prep Date.....: 08/21/04 **Analysis Date..:** 08/21/04
Prep Batch #...: 4237671
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.1 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081104-DCR-218

GC/MS Volatiles

Lot-Sample #...: A4H120238-001 Work Order #...: GM1JA1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	104	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-219

GC/MS Volatiles

Lot-Sample #...: A4H120238-002 Work Order #...: GM1JH1AA Matrix.....: WG
Date Sampled...: 08/11/04 09:01 Date Received..: 08/12/04
Prep Date.....: 08/21/04 Analysis Date..: 08/21/04
Prep Batch #...: 4237671
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081104-DCR-219

GC/MS Volatiles

Lot-Sample #...: A4H120238-002 Work Order #...: GM1JH1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	105	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-220

GC/MS Volatiles

Lot-Sample #...: A4H120238-003 Work Order #...: GM1JJ1AA Matrix.....: WG
Date Sampled...: 08/11/04 09:56 Date Received..: 08/12/04
Prep Date.....: 08/21/04 Analysis Date..: 08/21/04
Prep Batch #...: 4237671
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.7 J**	**25**	**ug/L**	**0.74**
Benzene	**0.27 J,B**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**0.44 J**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081104-DCR-220

GC/MS Volatiles

Lot-Sample #...: A4H120238-003 Work Order #...: GM1JJ1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-221

GC/MS Volatiles

Lot-Sample #...: A4H120238-004 **Work Order #...:** GM1JK1AA **Matrix.....:** WG
Date Sampled...: 08/11/04 09:30 **Date Received..:** 08/12/04
Prep Date.....: 08/21/04 **Analysis Date..:** 08/21/04
Prep Batch #...: 4237671
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**0.43 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.9**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	**0.25 J**	**5.0**	**ug/L**	**0.18**
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081104-DCR-221

GC/MS Volatiles

Lot-Sample #...: A4H120238-004 **Work Order #...:** GM1JK1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.53 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**1.8**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-222

GC/MS Volatiles

Lot-Sample #...: A4H120238-005 Work Order #...: GM1JL1AA Matrix.....: WG
Date Sampled...: 08/11/04 11:56 Date Received..: 08/12/04
Prep Date.....: 08/21/04 Analysis Date..: 08/21/04
Prep Batch #...: 4237671
Dilution Factor: 2 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.7 J**	**50**	**ug/L**	**1.5**
Benzene	ND	2.0	ug/L	0.44
Bromodichloromethane	ND	2.0	ug/L	0.28
Bromoform	ND	2.0	ug/L	0.34
Bromomethane	ND	2.0	ug/L	0.72
2-Butanone	ND	50	ug/L	0.78
Carbon disulfide	ND	10	ug/L	0.56
Carbon tetrachloride	ND	2.0	ug/L	0.38
Chlorobenzene	ND	2.0	ug/L	0.40
Chloroethane	ND	2.0	ug/L	0.48
Chloroform	ND	2.0	ug/L	0.32
Chloromethane	ND	2.0	ug/L	0.28
Cyclohexane	ND	2.0	ug/L	0.24
Dibromochloromethane	ND	2.0	ug/L	0.38
1,2-Dibromo-3-chloro-propane	ND	2.0	ug/L	0.56
1,2-Dibromoethane	ND	2.0	ug/L	0.48
1,2-Dichlorobenzene	ND	2.0	ug/L	0.40
1,3-Dichlorobenzene	ND	2.0	ug/L	0.36
1,4-Dichlorobenzene	ND	2.0	ug/L	0.44
Dichlorodifluoromethane	ND	2.0	ug/L	0.50
1,1-Dichloroethane	ND	2.0	ug/L	0.42
1,2-Dichloroethane	ND	2.0	ug/L	0.32
1,1-Dichloroethene	**0.73 J**	**2.0**	**ug/L**	**0.36**
cis-1,2-Dichloroethene	**48**	**2.0**	**ug/L**	**0.42**
trans-1,2-Dichloroethene	**0.64 J**	**2.0**	**ug/L**	**0.32**
1,2-Dichloropropane	ND	2.0	ug/L	0.30
cis-1,3-Dichloropropene	ND	2.0	ug/L	0.24
trans-1,3-Dichloropropene	ND	2.0	ug/L	0.34
Ethylbenzene	ND	2.0	ug/L	0.38
2-Hexanone	ND	100	ug/L	0.70
Isopropylbenzene	ND	10	ug/L	0.30
Methyl acetate	ND	20	ug/L	1.0
Methylene chloride	**1.0 J,B**	**10**	**ug/L**	**0.38**
Methylcyclohexane	ND	2.0	ug/L	1.0
4-Methyl-2-pentanone	ND	100	ug/L	0.64
Methyl tert-butyl ether	ND	10	ug/L	0.36
Styrene	ND	2.0	ug/L	0.26

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-222

GC/MS Volatiles

Lot-Sample #...: A4H120238-005 Work Order #...: GM1JL1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	0.44
Tetrachloroethene	ND	2.0	ug/L	0.38
Toluene	ND	2.0	ug/L	0.34
1,2,4-Trichloro-benzene	ND	10	ug/L	0.38
1,1,1-Trichloroethane	**0.57 J**	**2.0**	**ug/L**	**0.42**
1,1,2-Trichloroethane	ND	2.0	ug/L	0.44
Trichloroethene	**30**	**2.0**	**ug/L**	**0.56**
Trichlorofluoromethane	ND	2.0	ug/L	0.32
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ug/L	0.52
Vinyl chloride	**1.0 J**	**2.0**	**ug/L**	**0.42**
Xylenes (total)	ND	6.0	ug/L	0.88

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	105	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-223

GC/MS Volatiles

Lot-Sample #...: A4H120238-006 **Work Order #...:** GM1JM1AA **Matrix.....:** WG
Date Sampled...: 08/11/04 10:46 **Date Received..:** 08/12/04
Prep Date.....: 08/21/04 **Analysis Date..:** 08/21/04
Prep Batch #...: 4237671
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	**0.41 J,B**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-223

GC/MS Volatiles

Lot-Sample #...: A4H120238-006 **Work Order #...:** GM1JM1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**1.5**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	106	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-224

GC/MS Volatiles

Lot-Sample #...: A4H120238-007 **Work Order #...:** GM1JN1AA **Matrix.....:** WG
Date Sampled...: 08/11/04 12:21 **Date Received..:** 08/12/04
Prep Date.....: 08/21/04 **Analysis Date..:** 08/21/04
Prep Batch #...: 4237671
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**2.2**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081104-DCR-224

GC/MS Volatiles

Lot-Sample #...: A4H120238-007 **Work Order #...:** GM1JN1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.39 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	106	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-225

GC/MS Volatiles

Lot-Sample #...: A4H120238-008 Work Order #...: GM1JP1AA Matrix.....: WG
Date Sampled...: 08/11/04 14:21 Date Received..: 08/12/04
Prep Date.....: 08/21/04 Analysis Date..: 08/21/04
Prep Batch #...: 4237671
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**2.1**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**12**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-225

GC/MS Volatiles

Lot-Sample #...: A4H120238-008 Work Order #...: GM1JP1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.33 J**	**1.0**	**ug/L**	**0.19**
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**2.8**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	109	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081104-DCR-226

GC/MS Volatiles

Lot-Sample #...: A4H120238-009 Work Order #...: GM1JQ1AA Matrix.....: WG
Date Sampled...: 08/11/04 14:11 Date Received..: 08/12/04
Prep Date.....: 08/21/04 Analysis Date..: 08/21/04
Prep Batch #...: 4237671
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	**0.88 J**	**1.0**	**ug/L**	**0.21**
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.65 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	**0.82 J**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081104-DCR-226

GC/MS Volatiles

Lot-Sample #...: A4H120238-009 **Work Order #...:** GM1JQ1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.38 J**	**1.0**	**ug/L**	**0.19**
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**1.4**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**33**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081104-DCR-227

GC/MS Volatiles

Lot-Sample #...: A4H120238-010 Work Order #...: GM1JR1AA Matrix.....: WG
Date Sampled...: 08/11/04 15:46 Date Received..: 08/12/04
Prep Date.....: 08/21/04 Analysis Date..: 08/21/04
Prep Batch #...: 4237671
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**0.84 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**1.5**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**10**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**0.26 J**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081104-DCR-227

GC/MS Volatiles

Lot-Sample #...: A4H120238-010 Work Order #...: GM1JR1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.46 J**	**1.0**	**ug/L**	**0.19**
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**5.9**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	111	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-228

GC/MS Volatiles

Lot-Sample #...:	A4H120238-011	**Work Order #...:**	GM1JT1AA	**Matrix.....:**	WG
Date Sampled...:	08/11/04 15:21	**Date Received..:**	08/12/04		
Prep Date.....:	08/21/04	**Analysis Date..:**	08/21/04		
Prep Batch #...:	4237671				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.7 J**	**25**	**ug/L**	**0.74**
Benzene	**0.22 J,B**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	**0.24 J**	**1.0**	**ug/L**	**0.14**
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**1.2**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	**0.51 J**	**1.0**	**ug/L**	**0.21**
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.54 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	**0.91 J**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081104-DCR-228

GC/MS Volatiles

Lot-Sample #...: A4H120238-011 Work Order #...: GM1JT1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.54 J**	**1.0**	**ug/L**	**0.19**
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**2.2**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
1,2-Dichloroethane-d4	109	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-229

GC/MS Volatiles

Lot-Sample #...: A4H120238-012 **Work Order #...:** GM1JV1AA **Matrix.....:** WG
Date Sampled...: 08/11/04 16:10 **Date Received..:** 08/12/04
Prep Date.....: 08/21/04 **Analysis Date..:** 08/21/04
Prep Batch #...: 4237671
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.6 J**	**25**	**ug/L**	**0.74**
Benzene	**0.31 J,B**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**5.4**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-229

GC/MS Volatiles

Lot-Sample #...: A4H120238-012 Work Order #...: GM1JV1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**4.6**	**1.0**	**ug/L**	**0.19**
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.51 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**1.7**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	**0.94 J**	**1.0**	**ug/L**	**0.21**
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	109	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-230

GC/MS Volatiles

Lot-Sample #...: A4H120238-013 **Work Order #...:** GM1JW1AA **Matrix.....:** WG
Date Sampled...: 08/11/04 16:20 **Date Received..:** 08/12/04
Prep Date.....: 08/21/04 **Analysis Date..:** 08/21/04
Prep Batch #...: 4237671
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.5 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**3.1**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-230

GC/MS Volatiles

Lot-Sample #...: A4H120238-013 **Work Order #...:** GM1JW1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**1.8**	**1.0**	**ug/L**	**0.19**
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**0.29 J**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**1.6**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	**0.36 J**	**1.0**	**ug/L**	**0.21**
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	106	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081104-DCR-231

GC/MS Volatiles

Lot-Sample #...: A4H120238-014 Work Order #...: GM1JX1AA Matrix.....: WG
Date Sampled...: 08/11/04 16:35 Date Received..: 08/12/04
Prep Date.....: 08/21/04 Analysis Date..: 08/21/04
Prep Batch #...: 4237671
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.1 J**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	**0.24 J**	**1.0**	**ug/L**	**0.14**
Bromoform	**0.75 J**	**1.0**	**ug/L**	**0.17**
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**0.31 J**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	**0.26 J**	**1.0**	**ug/L**	**0.19**
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**0.42 J**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081104-DCR-231

GC/MS Volatiles

Lot-Sample #...: A4H120238-014 **Work Order #...:** GM1JX1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**2.8**	**1.0**	**ug/L**	**0.19**
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**0.50 J**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	111	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081104-DCR-232

GC/MS Volatiles

Lot-Sample #...: A4H120238-015	**Work Order #...:** GM1J01AA	**Matrix.....:** WQ
Date Sampled...: 08/11/04	**Date Received..:** 08/12/04	
Prep Date.....: 08/21/04	**Analysis Date..:** 08/21/04	
Prep Batch #...: 4237671		
Dilution Factor: 1	**Initial Wgt/Vol:** 5 mL	**Final Wgt/Vol..:** 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**11 J**	**25**	**ug/L**	**0.74**
Benzene	**0.38 J,B**	**1.0**	**ug/L**	**0.22**
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	**0.44 J**	**1.0**	**ug/L**	**0.18**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**4.0 J,B**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081104-DCR-232

GC/MS Volatiles

Lot-Sample #...: A4H120238-015 **Work Order #...:** GM1J01AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	**0.18 J**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	105	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H120238 **Work Order #...:** GNXP71AA **Matrix.....:** WATER
MB Lot-Sample #: A4H240000-671

Prep Date.....: 08/21/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 08/21/04 **Prep Batch #...:** 4237671
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	**0.24 J**	**1.0**	**ug/L**	**SW846 8260B**
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	**0.48 J**	**5.0**	**ug/L**	**SW846 8260B**
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H120238 **Work Order #...:** GNXP71AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4H120238 **Work Order #...:** GNXP71AC **Matrix.....:** WATER
LCS Lot-Sample#: A4H240000-671
Prep Date.....: 08/21/04 **Analysis Date..:** 08/21/04
Prep Batch #...: 4237671
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzene	**10**	**9.6**	**ug/L**	**96**	**SW846 8260B**
Chlorobenzene	**10**	**10**	**ug/L**	**101**	**SW846 8260B**
1,1-Dichloroethene	**10**	**9.5**	**ug/L**	**95**	**SW846 8260B**
Toluene	**10**	**10**	**ug/L**	**100**	**SW846 8260B**
Trichloroethene	**10**	**11**	**ug/L**	**106**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	107	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	112	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4H120238 **Work Order #...:** GNXP71AC **Matrix.....:** WATER
LCS Lot-Sample#: A4H240000-671
Prep Date.....: 08/21/04 **Analysis Date..:** 08/21/04
Prep Batch #...: 4237671
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**96**	**(80 - 116)**	**SW846 8260B**
Chlorobenzene	**101**	**(76 - 117)**	**SW846 8260B**
1,1-Dichloroethene	**95**	**(63 - 130)**	**SW846 8260B**
Toluene	**100**	**(74 - 119)**	**SW846 8260B**
Trichloroethene	**106**	**(75 - 122)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	107	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	112	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	A4H120238	**Work Order #...:**	GM1JR1AC-MS	**Matrix.....:**	WG
MS Lot-Sample #:	A4H120238-010		GM1JR1AD-MSD		
Date Sampled...:	08/11/04 15:46	**Date Received..:**	08/12/04		
Prep Date.....:	08/21/04	**Analysis Date..:**	08/21/04		
Prep Batch #...:	4237671				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**10**	**10**	**ug/L**	**99**		**SW846 8260B**
	ND	**10**	**9.9**	**ug/L**	**97**	**2.0**	**SW846 8260B**
Chlorobenzene	**ND**	**10**	**9.5**	**ug/L**	**95**		**SW846 8260B**
	ND	**10**	**9.6**	**ug/L**	**96**	**1.7**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10**	**9.4**	**ug/L**	**94**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**102**	**8.4**	**SW846 8260B**
Toluene	**ND**	**10**	**9.3**	**ug/L**	**93**		**SW846 8260B**
	ND	**10**	**9.7**	**ug/L**	**97**	**4.2**	**SW846 8260B**
Trichloroethene	**5.9**	**10**	**16**	**ug/L**	**98**		**SW846 8260B**
	5.9	**10**	**15**	**ug/L**	**95**	**1.9**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	107	(61 - 128)
	109	(61 - 128)
Toluene-d8	95	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	105	(74 - 116)
	107	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A4H120238	**Work Order #...:**	GM1JR1AC-MS	**Matrix.....:**	WG
MS Lot-Sample #:	A4H120238-010		GM1JR1AD-MSD		
Date Sampled...:	08/11/04 15:46	**Date Received..:**	08/12/04		
Prep Date.....:	08/21/04	**Analysis Date..:**	08/21/04		
Prep Batch #...:	4237671				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**99**	**(78 - 118)**			**SW846 8260B**
	97	**(78 - 118)**	**2.0**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**95**	**(76 - 117)**			**SW846 8260B**
	96	**(76 - 117)**	**1.7**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**94**	**(62 - 130)**			**SW846 8260B**
	102	**(62 - 130)**	**8.4**	**(0-20)**	**SW846 8260B**
Toluene	**93**	**(70 - 119)**			**SW846 8260B**
	97	**(70 - 119)**	**4.2**	**(0-20)**	**SW846 8260B**
Trichloroethene	**98**	**(62 - 130)**			**SW846 8260B**
	95	**(62 - 130)**	**1.9**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	107	(61 - 128)
	109	(61 - 128)
Toluene-d8	95	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	105	(74 - 116)
	107	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

LABORATORY REPORT COMPLIANCE ASSESSMENT FORM

CRA Project #: 17360-09 Laboratory: STL Date Prelims Rec'd: —

CRA SDG ID: G-26 Lab Report #: A4H120238 Date Final Rec'd: 9/13

Validation Memo Required: Compliance ☐ Summary Validation ☑ Full Validation ☐

3. Sample Receipt

COC Record: A ☑ Complete ☐ Incomplete ☑ CRA ☐ Non CRA COC was included with the samples.

Changes or corrections are noted on the attached COC, which was forwarded to the laboratory.

Comments: _____

Sample shipping/receiving issues: ☑ None Issues: _____

4. Laboratory Reporting	**Yes**	**No**	**Comments**
Sample IDs consistent with COC:	☑	☐	
Parameters as designated on COC:	☑	☐	
Analytical methods acceptable:	☑	☐	
Parameter analyte list correct:	☑	☐	
Report limits acceptable:	☑	☐	
Results consistent with preliminary data:	☐	☐	

5. Laboratory Performance	**Yes**	**No**	**Comments**
Sample holding times met:	☑	☐	
Requested turnaround time(s) (TAT) met:	☐	☑	
Method blanks reported non-detect:	☐	☑	VOC
Final report received on time:	☐	☑	

6. Report Deliverables	**No. of Copies**	**Acceptable**	**Comments**
QC Summary Report:	1	☑ Yes ☐ No	
Expanded Report:	1	☑ Yes ☐ No	
Electronic (PDF) Report:	Received: 9/12	☑ Yes ☐ No	
EDDs (EquIS):	Received: 9/12	☑ Yes ☐ No	
Estimated (J) values with MDLs reported:		☐ Yes ☐ No	

Report Comments: _____

Additional comments and notes: _____

REC'D CRA
SEP 13 2004
G-27

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A4H130229

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT
Project#: 17360-09 Lab#: A4H130229
Name: GM GR
Description
SEVERN TRENT LABORATORIES, INC. Event: Quarterly GW
Samples: S water
Analysis: TCL VOC
TAT: 21 STD
Lab: STL

Amy McCormick
for Kenneth J. Kuzior
Project Manager

Checked Against Preliminary Data:
Date: — Init.: KAK
Date of Validation Memo: 10/20/04
Invoice Approval Date:
September 8, 2004 Comments:

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: STD TAT	REMARKS
1	8/12/04	901	GW-17360-081204-DCR-233	H2O	3	X	X	
2	"	906	-234		3	X	X	
3	"	916	-235		3	X	X	
4	"	1056	-236		3	X	X	
5	"	—	-237	↓	1	X	X	
								CRA Contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		13			

RELINQUISHED BY: 1. _____	DATE: 8-12-04 TIME: 1530	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 6741 0644 1240

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27166

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: _____
DATE: 8-13-04 TIME: 0940

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A4H130229

The following report contains the analytical results for four water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received August 13, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Ken J. Kuzior, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 5.0°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Louisiana (#04112), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

Y:\Barb\STL headers\Qc846-Narrative_012804.doc Revised083004 mkc

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A4H130229

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-17360-081204-DCR-233 08/12/04 09:01 001				
cis-1,2-Dichloroethene	64	2.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	6.6	2.0	ug/L	SW846 8260B
Methylene chloride	3.0 J,B	10	ug/L	SW846 8260B
Methyl tert-butyl ether	3.2 J	10	ug/L	SW846 8260B
Tetrachloroethene	28	2.0	ug/L	SW846 8260B
Trichloroethene	45	2.0	ug/L	SW846 8260B
GW-17360-081204-DCR-234 08/12/04 09:06 002				
cis-1,2-Dichloroethene	62	2.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	6.3	2.0	ug/L	SW846 8260B
Methylene chloride	3.1 J,B	10	ug/L	SW846 8260B
Methyl tert-butyl ether	3.3 J	10	ug/L	SW846 8260B
Tetrachloroethene	27	2.0	ug/L	SW846 8260B
Trichloroethene	44	2.0	ug/L	SW846 8260B
GW-17360-081204-DCR-235 08/12/04 09:16 003				
Chloroform	0.95 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	5.5	1.0	ug/L	SW846 8260B
Trichloroethene	11	1.0	ug/L	SW846 8260B
GW-17360-081204-DCR-236 08/12/04 10:56 004				
Chloroform	0.58 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	0.26 J	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	0.44 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.92 J	1.0	ug/L	SW846 8260B
Trichloroethene	1.6	1.0	ug/L	SW846 8260B
Vinyl chloride	0.40 J	1.0	ug/L	SW846 8260B
GW-17360-081204-DCR-237 08/12/04 005				
Acetone	2.1 J,B	25	ug/L	SW846 8260B
Methylene chloride	3.1 J,B	5.0	ug/L	SW846 8260B

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A4H130229

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A4H130229

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GM350	001	GW-17360-081204-DCR-233	08/12/04	09:01
GM353	002	GW-17360-081204-DCR-234	08/12/04	09:06
GM354	003	GW-17360-081204-DCR-235	08/12/04	09:16
GM355	004	GW-17360-081204-DCR-236	08/12/04	10:56
GM357	005	GW-17360-081204-DCR-237	08/12/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL - North Canton

REFERENCE NUMBER: 17360-09

PROJECT NAME: GM - Grand Rapids

SAMPLER'S SIGNATURE: _____ PRINTED NAME: David C. Rivers

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOCs	PARAMETERS: STD TAT	REMARKS
1	8/12/04	9a	GW-17360-081204-DCR-233	H2O	3	X	X	
2	"	906	-234		3	X	X	
3	"	916	-235		3	X	X	
4	"	1056	-236		3	X	X	
5	"	—	-237		1	X	X	
								CRA Contact Paul Wiseman
			TOTAL NUMBER OF CONTAINERS		13			

RELINQUISHED BY: 1. _____	DATE: 8-12-04 TIME: 1530	RECEIVED BY: 1. _____	DATE: TIME:
RELINQUISHED BY: 2. _____	DATE: TIME:	RECEIVED BY: 2. _____	DATE: TIME:
RELINQUISHED BY: 3. _____	DATE: TIME:	RECEIVED BY: 1. _____	DATE: TIME:

METHOD OF SHIPMENT: FED EX AIR BILL No. 674106441240

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

27166

SAMPLE TEAM: David Rivers

RECEIVED FOR LABORATORY BY: _____
DATE: 8-13-04 TIME: 0940

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A4H130229

Case Number/SDG: 17360-09

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
GM350	STILLERJ	8/13/04	Yes		Storage	
GM353	STILLERJ	8/13/04	Yes		Storage	
GM354	STILLERJ	8/13/04	Yes		Storage	
GM355	STILLERJ	8/13/04	Yes		Storage	
GM357	STILLERJ	8/13/04	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** AUH130209
North Canton Facility

Client: CRA Project: GM-Grand Rapids Quote#:
Cooler Received on: 8-13-04 Opened on: 8-13-04 by: (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:
STL Cooler No# Foam Box ☐ Client Cooler ☒ Other

1. Were custody seals on the outside of the cooler? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☒
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☒ None ☐ Other :
6. Cooler temperature upon receipt 5.0 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H_2O Slurry ☐
COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☒
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐

Contacted PM Date: by: via Voice Mail ☐ Verbal ☐ Other ☐
Concerning:

√	

1. CHAIN OF CUSTODY

The following discrepancies occurred:

2. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
Sample(s) were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081204-DCR-233

GC/MS Volatiles

Lot-Sample #...: A4H130229-001 **Work Order #...:** GM3501AA **Matrix.....:** WG
Date Sampled...: 08/12/04 09:01 **Date Received..:** 08/13/04
Prep Date.....: 08/24/04 **Analysis Date..:** 08/24/04
Prep Batch #...: 4238160
Dilution Factor: 2 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	50	ug/L	1.5
Benzene	ND	2.0	ug/L	0.44
Bromodichloromethane	ND	2.0	ug/L	0.28
Bromoform	ND	2.0	ug/L	0.34
Bromomethane	ND	2.0	ug/L	0.72
2-Butanone	ND	50	ug/L	0.78
Carbon disulfide	ND	10	ug/L	0.56
Carbon tetrachloride	ND	2.0	ug/L	0.38
Chlorobenzene	ND	2.0	ug/L	0.40
Chloroethane	ND	2.0	ug/L	0.48
Chloroform	ND	2.0	ug/L	0.32
Chloromethane	ND	2.0	ug/L	0.28
Cyclohexane	ND	2.0	ug/L	0.24
Dibromochloromethane	ND	2.0	ug/L	0.38
1,2-Dibromo-3-chloro-propane	ND	2.0	ug/L	0.56
1,2-Dibromoethane	ND	2.0	ug/L	0.48
1,2-Dichlorobenzene	ND	2.0	ug/L	0.40
1,3-Dichlorobenzene	ND	2.0	ug/L	0.36
1,4-Dichlorobenzene	ND	2.0	ug/L	0.44
Dichlorodifluoromethane	ND	2.0	ug/L	0.50
1,1-Dichloroethane	ND	2.0	ug/L	0.42
1,2-Dichloroethane	ND	2.0	ug/L	0.32
1,1-Dichloroethene	ND	2.0	ug/L	0.36
cis-1,2-Dichloroethene	**64**	**2.0**	**ug/L**	**0.42**
trans-1,2-Dichloroethene	**6.6**	**2.0**	**ug/L**	**0.32**
1,2-Dichloropropane	ND	2.0	ug/L	0.30
cis-1,3-Dichloropropene	ND	2.0	ug/L	0.24
trans-1,3-Dichloropropene	ND	2.0	ug/L	0.34
Ethylbenzene	ND	2.0	ug/L	0.38
2-Hexanone	ND	100	ug/L	0.70
Isopropylbenzene	ND	10	ug/L	0.30
Methyl acetate	ND	20	ug/L	1.0
Methylene chloride	**3.0 J,B**	**10**	**ug/L**	**0.38**
Methylcyclohexane	ND	2.0	ug/L	1.0
4-Methyl-2-pentanone	ND	100	ug/L	0.64
Methyl tert-butyl ether	**3.2 J**	**10**	**ug/L**	**0.36**
Styrene	ND	2.0	ug/L	0.26

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081204-DCR-233

GC/MS Volatiles

Lot-Sample #...: A4H130229-001 Work Order #...: GM3501AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	0.44
Tetrachloroethene	**28**	**2.0**	**ug/L**	**0.38**
Toluene	ND	2.0	ug/L	0.34
1,2,4-Trichloro-benzene	ND	10	ug/L	0.38
1,1,1-Trichloroethane	ND	2.0	ug/L	0.42
1,1,2-Trichloroethane	ND	2.0	ug/L	0.44
Trichloroethene	**45**	**2.0**	**ug/L**	**0.56**
Trichlorofluoromethane	ND	2.0	ug/L	0.32
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ug/L	0.52
Vinyl chloride	ND	2.0	ug/L	0.42
Xylenes (total)	ND	6.0	ug/L	0.88

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081204-DCR-234

GC/MS Volatiles

Lot-Sample #...: A4H130229-002 **Work Order #...:** GM3531AA **Matrix.....:** WG
Date Sampled...: 08/12/04 09:06 **Date Received..:** 08/13/04
Prep Date.....: 08/24/04 **Analysis Date..:** 08/24/04
Prep Batch #...: 4238160
Dilution Factor: 2 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	50	ug/L	1.5
Benzene	ND	2.0	ug/L	0.44
Bromodichloromethane	ND	2.0	ug/L	0.28
Bromoform	ND	2.0	ug/L	0.34
Bromomethane	ND	2.0	ug/L	0.72
2-Butanone	ND	50	ug/L	0.78
Carbon disulfide	ND	10	ug/L	0.56
Carbon tetrachloride	ND	2.0	ug/L	0.38
Chlorobenzene	ND	2.0	ug/L	0.40
Chloroethane	ND	2.0	ug/L	0.48
Chloroform	ND	2.0	ug/L	0.32
Chloromethane	ND	2.0	ug/L	0.28
Cyclohexane	ND	2.0	ug/L	0.24
Dibromochloromethane	ND	2.0	ug/L	0.38
1,2-Dibromo-3-chloro-propane	ND	2.0	ug/L	0.56
1,2-Dibromoethane	ND	2.0	ug/L	0.48
1,2-Dichlorobenzene	ND	2.0	ug/L	0.40
1,3-Dichlorobenzene	ND	2.0	ug/L	0.36
1,4-Dichlorobenzene	ND	2.0	ug/L	0.44
Dichlorodifluoromethane	ND	2.0	ug/L	0.50
1,1-Dichloroethane	ND	2.0	ug/L	0.42
1,2-Dichloroethane	ND	2.0	ug/L	0.32
1,1-Dichloroethene	ND	2.0	ug/L	0.36
cis-1,2-Dichloroethene	**62**	**2.0**	**ug/L**	**0.42**
trans-1,2-Dichloroethene	**6.3**	**2.0**	**ug/L**	**0.32**
1,2-Dichloropropane	ND	2.0	ug/L	0.30
cis-1,3-Dichloropropene	ND	2.0	ug/L	0.24
trans-1,3-Dichloropropene	ND	2.0	ug/L	0.34
Ethylbenzene	ND	2.0	ug/L	0.38
2-Hexanone	ND	100	ug/L	0.70
Isopropylbenzene	ND	10	ug/L	0.30
Methyl acetate	ND	20	ug/L	1.0
Methylene chloride	**3.1 J,B**	**10**	**ug/L**	**0.38**
Methylcyclohexane	ND	2.0	ug/L	1.0
4-Methyl-2-pentanone	ND	100	ug/L	0.64
Methyl tert-butyl ether	**3.3 J**	**10**	**ug/L**	**0.36**
Styrene	ND	2.0	ug/L	0.26

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081204-DCR-234

GC/MS Volatiles

Lot-Sample #...: A4H130229-002 **Work Order #...:** GM3531AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	0.44
Tetrachloroethene	**27**	**2.0**	**ug/L**	**0.38**
Toluene	ND	2.0	ug/L	0.34
1,2,4-Trichloro-benzene	ND	10	ug/L	0.38
1,1,1-Trichloroethane	ND	2.0	ug/L	0.42
1,1,2-Trichloroethane	ND	2.0	ug/L	0.44
Trichloroethene	**44**	**2.0**	**ug/L**	**0.56**
Trichlorofluoromethane	ND	2.0	ug/L	0.32
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ug/L	0.52
Vinyl chloride	ND	2.0	ug/L	0.42
Xylenes (total)	ND	6.0	ug/L	0.88

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081204-DCR-235

GC/MS Volatiles

Lot-Sample #...: A4H130229-003 **Work Order #...:** GM3541AA **Matrix.....:** WG
Date Sampled...: 08/12/04 09:16 **Date Received..:** 08/13/04
Prep Date.....: 08/24/04 **Analysis Date..:** 08/24/04
Prep Batch #...: 4238160
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**0.95 J**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081204-DCR-235

GC/MS Volatiles

Lot-Sample #...: A4H130229-003 **Work Order #...:** GM3541AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	**5.5**	**1.0**	**ug/L**	**0.21**
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**11**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GN-17360-081204-DCR-236

GC/MS Volatiles

Lot-Sample #...: A4H130229-004 Work Order #...: GM3551AA Matrix.....: WG
Date Sampled...: 08/12/04 10:56 Date Received..: 08/13/04
Prep Date.....: 08/24/04 Analysis Date..: 08/24/04
Prep Batch #...: 4238160
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol..: 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.74
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	**0.58 J**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	**0.26 J**	**1.0**	**ug/L**	**0.21**
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	**0.44 J**	**1.0**	**ug/L**	**0.21**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	ND	5.0	ug/L	0.19
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081204-DCR-236

GC/MS Volatiles

Lot-Sample #...: A4H130229-004 **Work Order #...:** GM3551AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	**0.92 J**	**1.0**	**ug/L**	**0.19**
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	**1.6**	**1.0**	**ug/L**	**0.28**
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	**0.40 J**	**1.0**	**ug/L**	**0.21**
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-081204-DCR-237

GC/MS Volatiles

Lot-Sample #...: A4H130229-005	Work Order #...: GM3571AA	Matrix.....: WQ	
Date Sampled...: 08/12/04	Date Received..: 08/13/04		
Prep Date.....: 08/24/04	Analysis Date..: 08/24/04		
Prep Batch #...: 4238160			
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol..: 5 mL	
	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.1 J,B**	**25**	**ug/L**	**0.74**
Benzene	ND	1.0	ug/L	0.22
Bromodichloromethane	ND	1.0	ug/L	0.14
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	1.0	ug/L	0.36
2-Butanone	ND	25	ug/L	0.39
Carbon disulfide	ND	5.0	ug/L	0.28
Carbon tetrachloride	ND	1.0	ug/L	0.19
Chlorobenzene	ND	1.0	ug/L	0.20
Chloroethane	ND	1.0	ug/L	0.24
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.14
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.19
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.28
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.20
1,3-Dichlorobenzene	ND	1.0	ug/L	0.18
1,4-Dichlorobenzene	ND	1.0	ug/L	0.22
Dichlorodifluoromethane	ND	1.0	ug/L	0.25
1,1-Dichloroethane	ND	1.0	ug/L	0.21
1,2-Dichloroethane	ND	1.0	ug/L	0.16
1,1-Dichloroethene	ND	1.0	ug/L	0.18
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.21
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.16
1,2-Dichloropropane	ND	1.0	ug/L	0.15
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.12
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.35
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.52
Methylene chloride	**3.1 J,B**	**5.0**	**ug/L**	**0.19**
Methylcyclohexane	ND	1.0	ug/L	0.50
4-Methyl-2-pentanone	ND	50	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.18
Styrene	ND	1.0	ug/L	0.13

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-081204-DCR-237

GC/MS Volatiles

Lot-Sample #...: A4H130229-005 **Work Order #...:** GM3571AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.22
Tetrachloroethene	ND	1.0	ug/L	0.19
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.19
1,1,1-Trichloroethane	ND	1.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.22
Trichloroethene	ND	1.0	ug/L	0.28
Trichlorofluoromethane	ND	1.0	ug/L	0.16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.26
Vinyl chloride	ND	1.0	ug/L	0.21
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	84	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H130229 **Work Order #...:** GNVM91AA **Matrix.....:** WATER
MB Lot-Sample #: A4H250000-160

Prep Date.....: 08/24/04 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 08/24/04 **Prep Batch #...:** 4238160
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	**0.76 J**	**25**	**ug/L**	**SW846 8260B**
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	**1.3 J**	**50**	**ug/L**	**SW846 8260B**
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	**3.1 J**	**5.0**	**ug/L**	**SW846 8260B**
Methylcyclohexane	**0.87 J**	**1.0**	**ug/L**	**SW846 8260B**
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A4H130229 **Work Order #...:** GNVM91AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	**0.36 J**	**5.0**	**ug/L**	**SW846 8260B**
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4H130229 **Work Order #...:** GNVM91AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H250000-160 GNVM91AD-LCSD
Prep Date.....: 08/24/04 **Analysis Date..:** 08/24/04
Prep Batch #...: 4238160
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	10	**10**	**ug/L**	**101**	**2.9**	**SW846 8260B**
Chlorobenzene	**10**	**9.5**	**ug/L**	**95**		**SW846 8260B**
	10	**9.9**	**ug/L**	**99**	**4.3**	**SW846 8260B**
1,1-Dichloroethene	**10**	**10**	**ug/L**	**103**		**SW846 8260B**
	10	**11**	**ug/L**	**106**	**3.0**	**SW846 8260B**
Toluene	**10**	**10**	**ug/L**	**100**		**SW846 8260B**
	10	**10**	**ug/L**	**103**	**3.6**	**SW846 8260B**
Trichloroethene	**10**	**10**	**ug/L**	**101**		**SW846 8260B**
	10	**10**	**ug/L**	**101**	**0.070**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
	98	(61 - 128)
Toluene-d8	96	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)
	93	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A4H130229 **Work Order #...:** GNVM91AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A4H250000-160 GNVM91AD-LCSD
Prep Date.....: 08/24/04 **Analysis Date..:** 08/24/04
Prep Batch #...: 4238160
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**98**	**(80 - 116)**			**SW846 8260B**
	101	**(80 - 116)**	**2.9**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**95**	**(76 - 117)**			**SW846 8260B**
	99	**(76 - 117)**	**4.3**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**103**	**(63 - 130)**			**SW846 8260B**
	106	**(63 - 130)**	**3.0**	**(0-20)**	**SW846 8260B**
Toluene	**100**	**(74 - 119)**			**SW846 8260B**
	103	**(74 - 119)**	**3.6**	**(0-20)**	**SW846 8260B**
Trichloroethene	**101**	**(75 - 122)**			**SW846 8260B**
	101	**(75 - 122)**	**0.070**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
	98	(61 - 128)
Toluene-d8	96	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)
	93	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A4H130229 **Work Order #...:** GM4LF1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A4H130265-010 GM4LF1AD-MSD
Date Sampled...: 08/11/04 **Date Received..:** 08/13/04
Prep Date.....: 08/24/04 **Analysis Date..:** 08/24/04
Prep Batch #...: 4238160
Dilution Factor: 250 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**120**	**2500**	**2500**	**ug/L**	**93**		**SW846 8260B**
	120	**2500**	**2700**	**ug/L**	**101**	**7.8**	**SW846 8260B**
Chlorobenzene	**ND**	**2500**	**2200**	**ug/L**	**89**		**SW846 8260B**
	ND	**2500**	**2400**	**ug/L**	**97**	**8.5**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**2500**	**2400**	**ug/L**	**97**		**SW846 8260B**
	ND	**2500**	**2600**	**ug/L**	**105**	**7.9**	**SW846 8260B**
Toluene	**510**	**2500**	**3000**	**ug/L**	**100**		**SW846 8260B**
	510	**2500**	**3200**	**ug/L**	**109**	**7.0**	**SW846 8260B**
Trichloroethene	**ND**	**2500**	**2300**	**ug/L**	**92**		**SW846 8260B**
	ND	**2500**	**2500**	**ug/L**	**99**	**7.5**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
	97	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
	99	(61 - 128)
Toluene-d8	98	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)
	94	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A4H130229	**Work Order #...:**	GM4LF1AC-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A4H130265-010		GM4LF1AD-MSD		
Date Sampled...:	08/11/04	**Date Received..:**	08/13/04		
Prep Date.....:	08/24/04	**Analysis Date..:**	08/24/04		
Prep Batch #...:	4238160				
Dilution Factor:	250	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**93**	**(78 - 118)**			**SW846 8260B**
	101	**(78 - 118)**	**7.8**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**89**	**(76 - 117)**			**SW846 8260B**
	97	**(76 - 117)**	**8.5**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**97**	**(62 - 130)**			**SW846 8260B**
	105	**(62 - 130)**	**7.9**	**(0-20)**	**SW846 8260B**
Toluene	**100**	**(70 - 119)**			**SW846 8260B**
	109	**(70 - 119)**	**7.0**	**(0-20)**	**SW846 8260B**
Trichloroethene	**92**	**(62 - 130)**			**SW846 8260B**
	99	**(62 - 130)**	**7.5**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
	97	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
	99	(61 - 128)
Toluene-d8	98	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)
	94	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

APPENDIX D

DATA QUALITY VALIDATION MEMORANDUMS

CONESTOGA-ROVERS & ASSOCIATES

14496 Sheldon Road, Suite #200
Plymouth, Michigan 48170
Telephone: (734) 453-5123 Fax: (734) 453-5201
www.CRAworld.com

MEMORANDUM

TO:	Gary Klepper	REF. NO.:	17360-09
FROM:	Kathy Shaw/tl/43/Det	DATE:	October 20, 2004
RE:	Data Quality Assessment and Validation Quarterly Groundwater Monitoring GM Grand Rapids Site – Grand Rapids, Michigan		

The following details a quality assessment and validation of the analytical data resulting from the August 9 through 12, 2004, collection of 39 groundwater and eight (8) quality control samples from the GM Grand Rapids Site in Grand Rapids, Michigan. The sample summary detailing sample identification, sample location, quality control samples, and analytical parameters is presented in Table 1. Sample analysis was completed at Severn Trent Laboratories, Inc. in North Canton, Ohio (STL) in accordance with the methodologies presented in Table 2. The quality control criteria used to assess the data were established by the methods and the quality assurance project plan (QAPP).[1]

Sample Quantitation

The laboratory reported detected concentrations of volatile organic compounds (VOC), and semi-volatile organic compounds (SVOC), below the laboratory's reporting limit (RL) but above the laboratory's method detection limit (MDL). The laboratory flagged these sample concentrations with a "J". These concentrations should be qualified as estimated (J) values unless otherwise qualified in this memorandum.

Holding Time Period and Sample Analysis

The holding time periods are presented in Table 3. The samples, as indicated by the sample collection, extraction and analysis dates on the chain-of-custody forms and analytical reports provided by STL, were prepared and analyzed within the required holding time periods.

Method Blank Samples

Contamination of samples contributed by laboratory conditions or procedures was monitored by concurrent preparation and analysis of method blank samples. The samples presented in Table 4 should be qualified due to laboratory contamination. The remaining method blank samples were reported to be free from detectable levels of target analytes, indicating no additional laboratory-attributable contamination occurred.

[1] Application of quality assurance criteria was consistent with "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999.

EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

REGISTERED COMPANY ISO 9001 ENGINEERING DESIGN

Laboratory Control Sample / Laboratory Control Sample Duplicate Analysis

The laboratory control sample and laboratory control sample duplicate (LCS/LCSD) analyses serve as a monitor of the overall performance in all steps of the sample analysis. The LCS percent recoveries were within the laboratory control limits, indicating that an acceptable level of overall performance was achieved.

Laboratory precision was verified by the relative percent difference (RPD) of the LCS/LCSD when a matrix spike/matrix spike duplicate was not analyzed. The RPDs were within the laboratory control limits, indicating that an acceptable level of overall laboratory precision was achieved.

Surrogate Compound Percent Recoveries (Surrogate Recoveries)

Individual sample performance for the organic analyses was monitored by assessing the results of surrogate compound percent recoveries. The surrogate recovery acceptance criteria was met for all samples.

Matrix Spike/Matrix Spike Duplicate Percent Recoveries

To assess the long term accuracy and precision of the analytical methods on various matrices, matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and the relative percent difference (RPD) of the concentrations were determined. The samples selected for MS/MSD analysis are identified in Table 1. The MS/MSD percent recoveries and associate RPDs acceptance criteria were met for all analyses.

Field Quality Assurance/Quality Control

The field quality assurance/quality control consisted of four (4) field duplicate sample sets and four (4) trip blank samples.

Overall precision for the sampling event and laboratory procedures was monitored using the results of the field duplicate sample sets. Table 5 summarizes the results of the detected analytes in the field duplicate sample sets. The data indicate that an adequate level of precision was achieved for the sampling event.

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, a trip blank was submitted to the laboratory for VOC analysis with each shipping cooler containing multiple samples. The samples that should be qualified due to trip blank contamination are summarized in Table 6. No additional target analytes were reported as detected in the trip blank samples.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted.

TABLE 1

SAMPLE SUMMARY
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Sample ID	*Sample Location*	*Matrix*	*QC Sample*	*Parameters*
	STL Lot No.: A4H100202			
CRA SDG: G-24				
GW-17360-080904-DCR-191	87-5	Water	MS/MSD	TCL VOC
GW-17360-080904-DCR-192	87-1	Water		TCL VOC
GW-17360-080904-DCR-193	87-4	Water		TCL VOC
GW-17360-080904-DCR-194	87-4	Water	Duplicate (193)	TCL VOC
GW-17360-080904-DCR-195	MW 14-04	Water		TCL VOC
GW-17360-080904-DCR-196	86-2	Water		TCL VOC
GW-17360-080904-DCR-197	87-2	Water		TCL VOC, TCL SVOC
GW-17360-080904-DCR-198	86-1	Water		TCL VOC
GW-17360-080904-DCR-199	85-5B	Water		TCL VOC, TCL SVOC
GW-17360-080904-DCR-200	85-3	Water		TCL VOC, TCL SVOC
GW-17360-080904-DCR-201	--	Water	Trip Blank	TCL VOC
	STL Lot No.: A4H110160			
CRA SDG: G-25				
GW-17360-081004-DCR-202	85-6	Water		TCL VOC, TCL SVOC
GW-17360-081004-DCR-203	85-6	Water	Duplicate (202)	TCL VOC, TCL SVOC
GW-17360-081004-DCR-204	MW 2-03	Water		TCL VOC
GW-17360-081004-DCR-205	MW 3-03	Water		TCL VOC
GW-17360-081004-DCR-206	85-1	Water		TCL VOC
GW-17360-081004-DCR-207	MW 1-03	Water		TCL VOC
GW-17360-081004-DCR-208	85-7	Water		TCL VOC
GW-17360-081004-DCR-209	MW 13-04	Water		TCL VOC
GW-17360-081004-DCR-210	85-2	Water		TCL VOC
GW-17360-081004-DCR-211	MW 15-04	Water		TCL VOC
GW-17360-081004-DCR-212	MW 7-03	Water		TCL VOC
GW-17360-081004-DCR-213	87-9	Water		TCL VOC
GW-17360-081004-DCR-214	87-8	Water		TCL VOC
GW-17360-081004-DCR-215	87-8	Water	Duplicate (214)	TCL VOC
GW-17360-081004-DCR-216	86-3	Water		TCL VOC
GW-17360-081004-DCR-217	--	Water	Trip Blank	TCL VOC
	STL Lot No.: A4H120238			
CRA SDG: G-26				
GW-17360-081104-DCR-218	88-2	Water		TCL VOC
GW-17360-081104-DCR-219	88-3	Water		TCL VOC
GW-17360-081104-DCR-220	88-4	Water		TCL VOC
GW-17360-081104-DCR-221	PWDISCH	Water		TCL VOC
GW-17360-081104-DCR-222	87-11	Water		TCL VOC
GW-17360-081104-DCR-223	87-13	Water		TCL VOC
GW-17360-081104-DCR-224	MW 6-03	Water		TCL VOC
GW-17360-081104-DCR-225	MW 8-04	Water		TCL VOC
GW-17360-081104-DCR-226	87-10	Water		TCL VOC
GW-17360-081104-DCR-227	MW 5-03	Water	MS/MSD	TCL VOC
GW-17360-081104-DCR-228	MW 9-04	Water		TCL VOC
GW-17360-081104-DCR-229	C-3	Water		TCL VOC

TABLE 1

SAMPLE SUMMARY
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Sample ID	*Sample Location*	*Matrix*	*QC Sample*	*Parameters*
	STL Lot No.: A4H120238			
CRA SDG; G-26 (Cont'd)				
GW-17360-081104-DCR-230	C-2	Water		TCL VOC
GW-17360-081104-DCR-231	C-1	Water		TCL VOC
GW-17360-081104-DCR-232	--	Water	Trip Blank	TCL VOC
	STL Lot No.: A4H130229			
CRA SDG: G-27				
GW-17360-081204-DCR-233	11-04	Water		TCL VOC
GW-17360-081204-DCR-234	11-04	Water	Duplicate (233)	TCL VOC
GW-17360-081204-DCR-235	10-04	Water		TCL VOC
GW-17360-081204-DCR-236	MW 4-03	Water		TCL VOC
GW-17360-081204-DCR-237	--	Water	Trip Blank	TCL VOC

TCL - Target Compound List
VOC - Volatile Organic Compounds
SVOC - Semi - Volatile Organic Compounds
QC - Quality Control
MS/MSD - Matrix Spike/Matix Spike Duplicate

TABLE 2

SUMMARY OF ANALYTICAL METHODS
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Parameter	*Method*
TCL VOC	SW-846 8260B [1]
TCL SVOC	SW-846 8270C

[1] SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition, and Promulgated updates, November 1986

TABLE 3

HOLDING TIME PERIODS
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Analysis	*Matrix*	*Holding Time Period*
TCL VOC	Water	- 14 days from sample collection to completion of analysis
TCL SVOC	Water	- 7 days from sample collection to extraction - 40 days from extraction to completion of analysis

TABLE 4

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO METHOD BLANK CONTAMINATION GM GRAND RAPIDS SITE GRAND RAPIDS, MICHIGAN

Analysis	*Parameters*	*Associated Samples*	*Qualified Sample Result*[1]
TCL VOC (µg/L)	Acetone	GW-17360-081204-DCR-237	ND (25) U
TCL VOC (µg/L)	Benzene	GW-17360-081004-DCR-203	ND (1.0) U
		GW-17360-081004-DCR-207	ND (5.0) U
		GW-17360-081004-DCR-209	ND (1.0) U
		GW-17360-081004-DCR-210	ND (1.0) U
		GW-17360-081004-DCR-213	ND (1.0) U
		GW-17360-081004-DCR-214	ND (1.0) U
		GW-17360-081004-DCR-217	ND (1.0) U
		GW-17360-081104-DCR-220	ND (1.0) U
		GW-17360-081104-DCR-223	ND (1.0) U
		GW-17360-081104-DCR-228	ND (1.0) U
		GW-17360-081104-DCR-229	ND (1.0) U
		GW-17360-081104-DCR-232	ND (1.0) U
TCL VOC (µg/L)	Methylene chloride	GW-17360-080904-DCR-191	ND (10) U
		GW-17360-080904-DCR-201	ND (5.0) U
		GW-17360-081104-DCR-222	ND (10) U
		GW-17360-081104-DCR-232	ND (5.0) U
		GW-17360-081204-DCR-233	ND (10) U
		GW-17360-081204-DCR-234	ND (10) U
		GW-17360-081204-DCR-237	ND (5.0) U

[1] The analyte should be qualified for the listed samples as:

ND ( ) U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit in parenthesis.

TABLE 5

SUMMARY OF DETECTED ANALYTES IN FIELD DUPLICATE SAMPLE SETS
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Analysis	*Parameters*	*Investigative Sample*	*Duplicate Sample*	*RPD* [1]
		GW-17360-080904-DCR-193	GW-17360-080904-DCR-194	
TCL VOC (µg/L)				
	Chloroform	1.5	1.6	6.5
	Trichloroethene	0.36 J[2]	0.35 J	2.8
		GW-17360-081004-DCR-202	GW-17360-081004-DCR-203	
TCL VOC (µg/L)				
	Chloroform	0.28 J	0.31 J	10
	Tetrachloroethene	1.5	1.5	0
		GW-17360-081004-DCR-214	GW-17360-081004-DCR-215	
TCL VOC (µg/L)				
	Tetrachloroethene	0.31 J	0.23 J	30
	Trichloroethene	0.49 J	0.48 J	2.1
		GW-17360-081204-DCR-233	GW-17360-081204-DCR-234	
TCL VOC (µg/L)				
	cis-1,2-Dichloroethene	64	62	3.2
	Methyl Tert Butyl Ether	3.2 J	3.3 J	3.1
	Tetrachloroethene	28	27	3.6
	trans-1,2-Dichloroethene	6.6	6.3	4.7
	Trichloroethene	45	44	2.2

[1] RPD - Relative Percent Difference

[2] J - The associated numerical value is an estimated quantity.

TABLE 6

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO
TRIP BLANK CONTAMINATION
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Analysis	*Parameters*	*Associated Samples*	*Qualified Sample Results*[1]
TCL VOC (µg/L)	Acetone	GW-17360-081004-DCR-202	ND (25) U
		GW-17360-081004-DCR-203	ND (25) U
		GW-17360-081004-DCR-206	ND (25) U
		GW-17360-081004-DCR-208	ND (25) U
		GW-17360-081004-DCR-209	ND (25) U
		GW-17360-081004-DCR-210	ND (25) U
		GW-17360-081004-DCR-211	ND (25) U
		GW-17360-081004-DCR-212	ND (25) U
		GW-17360-081004-DCR-213	ND (25) U
		GW-17360-081004-DCR-214	ND (25) U
		GW-17360-081004-DCR-215	ND (25) U
		GW-17360-081004-DCR-216	ND (25) U
		GW-17360-081104-DCR-218	ND (25) U
		GW-17360-081104-DCR-220	ND (25) U
		GW-17360-081104-DCR-222	ND (50) U
		GW-17360-081104-DCR-227	ND (25) U
		GW-17360-081104-DCR-228	ND (25) U
		GW-17360-081104-DCR-229	ND (25) U
		GW-17360-081104-DCR-230	ND (25) U
		GW-17360-081104-DCR-231	ND (25) U
TCL VOC (µg/L)	1,1-Dichloroethene	GW-17360-081104-DCR-222	ND (2.0) U
		GW-17360-081104-DCR-226	ND (1.0) U
		GW-17360-081104-DCR-228	ND (1.0) U

[1] The analyte should be qualifed for the listed samples as:

ND ( ) U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit in parenthesis.

CONESTOGA-ROVERS & ASSOCIATES

14496 Sheldon Road, Suite #200
Plymouth, Michigan 48170
Telephone: (734) 453-5123 Fax: (734) 453-5201
www.CRAworld.com

MEMORANDUM

TO:	Gary Klepper	REF. NO.:	17360-09
FROM:	Kathy Shaw/tl/44/Det	DATE:	October 20, 2004
RE:	Data Quality Assessment and Validation Investigative Soil Borings GM Grand Rapids Site – Grand Rapids, Michigan		

The following details a quality assessment and validation of the analytical data resulting from the July 14 and 15, 2004, collection of 55 soil samples from the GM Grand Rapids Site in Grand Rapids, Michigan. The sample summary detailing sample identification, sample location, and analytical parameters is presented in Table 1. Sample analysis was completed at Severn Trent Laboratories, Inc in North Canton, Ohio (STL) in accordance with Method 8260B, SW-846, from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", 3rd Edition and Promulgated Updates, November 1986. The quality control criteria used to assess the data were established by the methods and the quality assurance project plan (QAPP).[1]

Sample Quantitation

The laboratory reported detected concentrations of volatile organic compounds (VOC), below the laboratory's report limit (RL) but above the laboratory's method detection limit (MDL). The laboratory flagged these sample concentrations with a "J". These concentrations should be qualified as estimated (J) values unless otherwise qualified in this memorandum.

Holding Time Period and Sample Analysis

The holding time periods for VOC analysis is 48 hours until sample preservation and 14 days from sample collection until completion of analysis. The samples, as indicated by the sample collection, extraction and analysis dates on the chain-of-custody forms and analytical reports provided by STL, were prepared and analyzed within the required holding time periods.

Method Blank Samples

Contamination of samples contributed by laboratory conditions or procedures was monitored by concurrent preparation and analysis of method blank samples. The samples presented in Table 2 should be qualified due to laboratory contamination. The remaining method blank samples were reported to be free from detectable levels of target analytes, indicating no additional laboratory-attributable contamination occurred.

---

[1] Application of quality assurance criteria was consistent with "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999.

EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

REGISTERED COMPANY ISO 9001 ENGINEERING DESIGN

Laboratory Control Sample / Laboratory Control Sample Duplicate Analysis

The laboratory control sample and laboratory control sample duplicate (LCS/LCSD) analyses serve as a monitor of the overall performance in all steps of the sample analysis. The LCS percent recoveries were within the laboratory control limits, indicating that an acceptable level of overall performance was achieved.

Laboratory precision was verified by the relative percent difference (RPD) of the LCS/LCSD when a matrix spike/matrix spike duplicate was not analyzed. The RPDs were within the laboratory control limits, indicating that an acceptable level of overall laboratory precision was achieved.

Surrogate Compound Percent Recoveries (Surrogate Recoveries)

Individual sample performance for the organic analyses was monitored by assessing the results of surrogate compound percent recoveries. The surrogate recovery acceptance criteria was met for all samples.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted.

TABLE 1

SAMPLE SUMMARY
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Sample Identification	*Sample Location*	*Sample Depth ft-bgs*	*Matrix*	*Parameter*
CRA SDG: G-13	**STL Lot No.: A4G150200**			
S-17360-071404-DCR-078	SB3-04	0'-2'	Soil	TCL VOC
S-17360-071404-DCR-079	SB3-04	2'-4'	Soil	TCL VOC
S-17360-071404-DCR-080	SB3-04	4'-6'	Soil	TCL VOC
S-17360-071404-DCR-081	SB3-04	6'-8'	Soil	TCL VOC
S-17360-071404-DCR-082	SB3-04	8'-10'	Soil	TCL VOC
S-17360-071404-DCR-083	SB3-04	10'-12'	Soil	TCL VOC
S-17360-071404-DCR-084	SB3-04	12'-14'	Soil	TCL VOC
S-17360-071404-DCR-085	SB3-04	14'-16'	Soil	TCL VOC
S-17360-071404-DCR-086	SB3-04	16'-18'	Soil	TCL VOC
S-17360-071404-DCR-087	SB3-04	18'-20'	Soil	TCL VOC
S-17360-071404-DCR-088	SB3-04	20'-22'	Soil	TCL VOC
S-17360-071404-DCR-089	SB2-04	0'-2'	Soil	TCL VOC
S-17360-071404-DCR-090	SB2-04	2'-4'	Soil	TCL VOC
S-17360-071404-DCR-091	SB2-04	4'-6'	Soil	TCL VOC
S-17360-071404-DCR-092	SB2-04	6'-8'	Soil	TCL VOC
S-17360-071404-DCR-093	SB2-04	8'-10'	Soil	TCL VOC
S-17360-071404-DCR-094	SB2-04	10'-12'	Soil	TCL VOC
S-17360-071404-DCR-095	SB2-04	12'-14'	Soil	TCL VOC
S-17360-071404-DCR-096	SB2-04	14'-16'	Soil	TCL VOC
S-17360-071404-DCR-097	SB2-04	16'-18'	Soil	TCL VOC
S-17360-071404-DCR-098	SB2-04	18'-20'	Soil	TCL VOC
S-17360-071404-DCR-099	SB2-04	20'-22'	Soil	TCL VOC
CRA SDG: G-14	**STL Lot No.: A4G160169**			
S-17360-071504-DCR-100	SB5-04	0'-2'	Soil	TCL VOC
S-17360-071504-DCR-101	SB5-04	2'-4'	Soil	TCL VOC
S-17360-071504-DCR-102	SB5-04	4'-6'	Soil	TCL VOC
S-17360-071504-DCR-103	SB5-04	6'-8'	Soil	TCL VOC
S-17360-071504-DCR-104	SB5-04	8'-10'	Soil	TCL VOC
S-17360-071504-DCR-105	SB5-04	10'-12'	Soil	TCL VOC
S-17360-071504-DCR-106	SB5-04	12'-14'	Soil	TCL VOC
S-17360-071504-DCR-107	SB5-04	14'-16'	Soil	TCL VOC
S-17360-071504-DCR-108	SB5-04	16'-18'	Soil	TCL VOC
S-17360-071504-DCR-109	SB5-04	18'-20'	Soil	TCL VOC
S-17360-071504-DCR-110	SB5-04	20'-22'	Soil	TCL VOC
S-17360-071504-DCR-111	SB4-04	0'-2'	Soil	TCL VOC

TABLE 1

SAMPLE SUMMARY
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Sample Identification	*Sample Location*	*Sample Depth ft-bgs*	*Matrix*	*Parameter*
CRA SDG: G-14 (Cont'd)	**STL Lot No.: A4G160169**			
S-17360-071504-DCR-112	SB4-04	2'-4'	Soil	TCL VOC
S-17360-071504-DCR-113	SB4-04	4'-6'	Soil	TCL VOC
S-17360-071504-DCR-114	SB4-04	6'-8'	Soil	TCL VOC
S-17360-071504-DCR-115	SB4-04	8'-10'	Soil	TCL VOC
S-17360-071504-DCR-116	SB4-04	10'-12'	Soil	TCL VOC
S-17360-071504-DCR-117	SB4-04	12'-14'	Soil	TCL VOC
S-17360-071504-DCR-118	SB4-04	14'-16'	Soil	TCL VOC
S-17360-071504-DCR-119	SB4-04	16'-18'	Soil	TCL VOC
S-17360-071504-DCR-120	SB4-04	18'-20'	Soil	TCL VOC
S-17360-071504-DCR-121	SB4-04	20'-22'	Soil	TCL VOC
S-17360-071504-DCR-122	SB1-04	0'-2'	Soil	TCL VOC
S-17360-071504-DCR-123	SB1-04	2'-4'	Soil	TCL VOC
S-17360-071504-DCR-124	SB1-04	4'-6'	Soil	TCL VOC
S-17360-071504-DCR-125	SB1-04	6'-8'	Soil	TCL VOC
S-17360-071504-DCR-126	SB1-04	8'-10'	Soil	TCL VOC
S-17360-071504-DCR-127	SB1-04	10'-12'	Soil	TCL VOC
S-17360-071504-DCR-128	SB1-04	12'-14'	Soil	TCL VOC
S-17360-071504-DCR-129	SB1-04	14'-16'	Soil	TCL VOC
S-17360-071504-DCR-130	SB1-04	16'-18'	Soil	TCL VOC
S-17360-071504-DCR-131	SB1-04	18'-20'	Soil	TCL VOC
S-17360-071504-DCR-132	SB1-04	20'-22'	Soil	TCL VOC

TCL - Target Compound List
VOC - Volatile Organic Compounds

TABLE 2

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO
METHOD BLANK CONTAMINATION
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Analysis	*Parameter*	*Associated Samples*	*Qualified Sample Result* [1]
TCL VOC (µg/L)	Chloromethane	S-17360-071404-DCR-078	ND (540) U
		S-17360-071404-DCR-079	ND (320) U
		S-17360-071404-DCR-081	ND (400) U
		S-17360-071404-DCR-082	ND (270) U
		S-17360-071404-DCR-083	ND (260) U
		S-17360-071404-DCR-084	ND (250) U
		S-17360-071404-DCR-085	ND (260) U
		S-17360-071404-DCR-086	ND (290) U
		S-17360-071404-DCR-087	ND (270) U
		S-17360-071404-DCR-088	ND (260) U
		S-17360-071404-DCR-090	ND (290) U
		S-17360-071404-DCR-095	ND (270) U
		S-17360-071404-DCR-096	ND (290) U
		S-17360-071504-DCR-102	ND (330) U
		S-17360-071504-DCR-107	ND (280) U
		S-17360-071504-DCR-124	ND (280) U
		S-17360-071504-DCR-128	ND (290) U

[1] The analyte should be qualified for the listed samples as:

ND ( ) U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit in parenthesis.

CONESTOGA-ROVERS & ASSOCIATES

14496 Sheldon Road, Suite #200
Plymouth, Michigan 48170
Telephone: (734) 453-5123 Fax: (734) 453-5201
www.CRAworld.com

MEMORANDUM

TO:	Gary Klepper	REF. NO.:	17360-09
FROM:	Kathy Shaw/tl/45/Det	DATE:	October 21, 2004
RE:	Data Quality Assessment and Validation Vertical Aquifer Sampling GM Grand Rapids Site – Grand Rapids, Michigan		

The following details a quality assessment and validation of the analytical data resulting from the July 2004, collection of 51 groundwater and 14 quality control samples from the GM Grand Rapids Site in Grand Rapids, Michigan. The sample summary detailing sample identification, sample location, quality control samples, and analytical parameters is presented in Table 1. Sample analysis was completed at Severn Trent Laboratories, Inc. in North Canton, Ohio (STL) in accordance with Method 8260B, SW-846, from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", 3rd Edition and Promulgated Updates, November 1986. The quality control criteria used to assess the data were established by the methods and the quality assurance project plan (QAPP).[1]

Sample Quantitation

The laboratory reported detected concentrations of volatile organic compounds (VOC), below the laboratory's report limit (RL) but above the laboratory's method detection limit (MDL). The laboratory flagged these sample concentrations with a "J". These concentrations should be qualified as estimated (J) values unless otherwise qualified in this memorandum.

Sample Preservation

Samples collected for VOC analysis are to be field preserved to a pH of less than 2. The samples were received by the laboratory at pH greater than 2. The samples summarized in Table 2 should be qualified due to violation of sample preservation. The remaining samples were shipped and maintained in accordance with the sample preservation requirements.

Holding Time Period and Sample Analysis

The holding time periods for VOC analysis is 14 days from sample collection until completion of analysis. The samples, as indicated by the sample collection, extraction and analysis dates on the chain-of-custody forms and analytical reports provided by STL, were prepared and analyzed within the required holding time periods.

---

[1] Application of quality assurance criteria was consistent with "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999.

EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

REGISTERED COMPANY ISO 9001 ENGINEERING DESIGN

Method Blank Samples

Contamination of samples contributed by laboratory conditions or procedures was monitored by concurrent preparation and analysis of method blank samples. The samples presented in Table 3 should be qualified due to laboratory contamination. The remaining method blank samples were reported to be free from detectable levels of target analytes, indicating no additional laboratory-attributable contamination occurred.

Laboratory Control Sample / Laboratory Control Sample Duplicate Analysis

The laboratory control sample and laboratory control sample duplicate (LCS/LCSD) analyses serve as a monitor of the overall performance in all steps of the sample analysis. The LCS percent recoveries were within the laboratory control limits, indicating that an acceptable level of overall performance was achieved.

Laboratory precision was verified by the relative percent difference (RPD) of the LCS/LCSD when a matrix spike/matrix spike duplicate was not analyzed. The RPDs were within the laboratory control limits, indicating that an acceptable level of overall laboratory precision was achieved.

Surrogate Compound Percent Recoveries (Surrogate Recoveries)

Individual sample performance for the organic analyses was monitored by assessing the results of surrogate compound percent recoveries. The surrogate recovery acceptance criteria was met for all samples.

Matrix Spike/Matrix Spike Duplicate Percent Recoveries

To assess the long term accuracy and precision of the analytical methods on various matrices, matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and the RPD of the concentrations were determined. The samples selected for MS/MSD analysis are identified in Table 1. The MS/MSD percent recoveries and associate RPDs acceptance criteria were met for all analyses.

Field Quality Assurance/Quality Control

The field quality assurance/quality control consisted of five (5) field duplicate sample sets and nine (9) trip blank samples.

Overall precision for the sampling event and laboratory procedures was monitored using the results of the field duplicate sample sets. Table 4 summarizes the results of the detected analytes in the field duplicate sample sets. The data indicate that an adequate level of precision was achieved for the sampling event.

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, a trip blank was submitted to the laboratory for VOC analysis with each shipping cooler containing multiple samples. The samples that should be qualified due to trip blank contamination are summarized in Table 5. No additional target analytes were reported as detected in the trip blank samples.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted.

TABLE 1

SAMPLE SUMMARY
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Sample Identification	*Sample Location*	*Sample Depth ft-bgs*	*Matrix*	*QC Sample*	*Parameter*
CRA SDG: G-12	**STL Lot No.: A4G140175**				
GW-17360-071204-DCR-071	HP14-04	25'	Water		TCL VOC
GW-17360-071304-DCR-072	HP14-04	35'	Water		TCL VOC
GW-17360-071304-DCR-073	HP14-04	35'	Water	Duplicate (072)	TCL VOC
GW-17360-071304-DCR-074	HP14-04	45'	Water		TCL VOC
GW-17360-071304-DCR-075	HP14-04	55'	Water		TCL VOC
GW-17360-071304-DCR-076	HP14-04	65'	Water		TCL VOC
GW-17360-071304-DCR-077	--	- -	Water	Trip Blank	TCL VOC
CRA SDG: G-15	**STL Lot No.: A4G200170**				
GW-17360-071904-DCR-133	HP13-04	22'	Water		TCL VOC
GW-17360-071904-DCR-134	HP13-04	28.5'	Water		TCL VOC
GW-17360-071904-DCR-135	--	- -	Water	Trip Blank	TCL VOC
CRA SDG: G-16	**STL Lot No.: A4G210154**				
GW-17360-072004-DCR-136	HP12-04	24'	Water		TCL VOC
GW-17360-072004-DCR-137	HP12-04	34'	Water		TCL VOC
GW-17360-072004-DCR-138	HP12-04	34'	Water	Duplicate (137)	TCL VOC
GW-17360-072004-DCR-139	HP12-04	44'	Water	MS/MSD	TCL VOC
GW-17360-072004-DCR-140	HP12-04	54'	Water		TCL VOC
GW-17360-072004-DCR-141	HP15-04	17'	Water		TCL VOC
GW-17360-072004-DCR-142	HP15-04	26'	Water		TCL VOC
GW-17360-072004-DCR-143	--	- -	Water	Trip Blank	TCL VOC

TABLE 1

SAMPLE SUMMARY
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Sample Identification	*Sample Location*	*Sample Depth ft-bgs*	*Matrix*	*QC Sample*	*Parameter*
CRA SDG: G-17	**STL Lot No.: A4G220188**				TCL VOC
GW-17360-072104-BM-144	HP15-04	36'	Water		TCL VOC
GW-17360-072104-BM-145	HP15-04	46'	Water		TCL VOC
GW-17360-072104-BM-146	HP15-04	56'	Water		TCL VOC
GW-17360-072104-BM-147	HP15-04	66'	Water		TCL VOC
GW-17360-072104-BM-148	HP15-04	76'	Water		TCL VOC
GW-17360-072104-BM-149	HP15-04	83.5'	Water		TCL VOC
GW-17360-072104-BM-150	--	- -	Water	Trip Blank	TCL VOC
CRA SDG: G-18	**STL Lot No.: A4G220184**				TCL VOC
GW-17360-072204-DCR-151	HP8-04	22'	Water		TCL VOC
GW-17360-072204-DCR-152	HP8-04	32'	Water		TCL VOC
GW-17360-072204-DCR-153	HP8-04	32'	Water	Duplicate (152)	TCL VOC
GW-17360-072204-DCR-154	HP8-04	43'	Water		TCL VOC
GW-17360-072204-DCR-155	HP8-04	53.5'	Water		TCL VOC
GW-17360-072204-DCR-156	--	- -	Water	Trip Blank	TCL VOC
CRA SDG: G-19	**STL Lot No.: A4G240144**				TCL VOC
GW-17360-072304-DCR-157	HP9-04	26'	Water		TCL VOC
GW-17360-072304-DCR-158	HP9-04	36'	Water		TCL VOC
GW-17360-072304-DCR-159	HP9-04	46'	Water		TCL VOC
GW-17360-072304-DCR-160	HP9-04	56'	Water		TCL VOC
GW-17360-072304-DCR-161	HP9-04	66'	Water		TCL VOC
GW-17360-072304-DCR-162	--	- -	Water	Trip Blank	TCL VOC

TABLE 1

SAMPLE SUMMARY
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Sample Identification	*Sample Location*	*Sample Depth ft-bgs*	*Matrix*	*QC Sample*	*Parameter*
CRA SDG: G-20	**STL Lot No.: A4G270183**				TCL VOC
GW-17360-072604-DCR-163	HP-10-04	15'	Water		TCL VOC
GW-17360-072604-DCR-164	HP-10-04	25'	Water		TCL VOC
GW-17360-072604-DCR-165	HP-10-04	35'	Water		TCL VOC
GW-17360-072604-DCR-166	HP-10-04	45'	Water	MS/MSD	TCL VOC
GW-17360-072604-DCR-167	HP-10-04	55'	Water		TCL VOC
GW-17360-072604-DCR-168	HP-10-04	65'	Water		TCL VOC
GW-17360-072604-DCR-169	HP-10-04	75'	Water		TCL VOC
GW-17360-072604-DCR-170	--	- -	Water	Trip Blank	TCL VOC
CRA SDG: G-21	**STL Lot No.: A4G280151**				
GW-17360-072704-DCR-171	HP-10-04	80'	Water		TCL VOC
GW-17360-072704-DCR-172	HP11-04	12'	Water		TCL VOC
GW-17360-072704-DCR-173	HP11-04	22'	Water		TCL VOC
GW-17360-072704-DCR-174	HP11-04	32'	Water		TCL VOC
GW-17360-072704-DCR-175	HP11-04	42'	Water		TCL VOC
GW-17360-072704-DCR-176	HP11-04	42'	Water	Duplicate (175)	TCL VOC
GW-17360-072704-DCR-177	HP11-04	52'	Water		TCL VOC
GW-17360-072704-DCR-178	--	- -	Water	Trip Blank	TCL VOC
CRA SDG: G-22	**STL Lot No.: A4G290136**				
GW-17360-072804-DCR-179	HP11-04	62'	Water		TCL VOC
GW-17360-072804-DCR-180	HP11-04	69'	Water		TCL VOC
GW-17360-072904-DCR-181	HP16-04	20'	Water		TCL VOC

TABLE 1

SAMPLE SUMMARY
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Sample Identification	*Sample Location*	*Sample Depth ft-bgs*	*Matrix*	*QC Sample*	*Parameter*
CRA SDG: G-23	**STL Lot No.: A4G300129**				
GW-17360-072904-DCR-182	--	- -	Water	Trip Blank	TCL VOC
GW-17360-072904-DCR-183	HP16-04	30'	Water		TCL VOC
GW-17360-072904-DCR-184	HP16-04	30'	Water	Duplicate (183)	TCL VOC
GW-17360-072904-DCR-185	HP16-04	40'	Water		TCL VOC
GW-17360-072904-DCR-186	HP16-04	50'	Water		TCL VOC
GW-17360-072904-DCR-187	HP16-04	60'	Water		TCL VOC
GW-17360-072904-DCR-188	HP16-04	70'	Water	MS/MSD	TCL VOC
GW-17360-072904-DCR-189	HP16-04	80'	Water		TCL VOC
GW-17360-072904-DCR-190	HP16-04	84.5'	Water		TCL VOC

TCL - Target Compound List
VOC - Volatile Organic Compounds
QC - Quality Control
MS/MSD - Matrix Spike /Matrix Spike Duplicate

TABLE 2

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO
SAMPLE PRESERVATION
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Analysis	*Parameters*	*Associated Samples*	*Qualifiers* [1]
TCL VOC - Aromatic Compounds	1,2,4-Trichlorobenzene	GW-17360-072304-DCR-157	UJ
	1,2-Dichlorobenzene	GW-17360-072604-DCR-164	UJ
	1,3-Dichlorobenzene	GW-17360-072704-DCR-177	UJ
	1,4-Dichlorobenzene	GW-17360-072804-DCR-181	UJ
	Benzene	GW-17360-072104-BM-149	J/UJ
	Chlorobenzene		UJ
	Ethylbenzene		J/UJ
	Isopropylbenzene		UJ
	Styrene		UJ
	Toluene		J/UJ
	Xylenes (total)		J/UJ

[1] The sample parameter results should be qualified as:

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample (for detected parameters).

UJ – The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample (non-detected parameters).

TABLE 3

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO METHOD BLANK CONTAMINATION
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Analysis	*Parameters*	*Associated Samples*	*Qualified Sample Result*[1]
TCL VOC (µg/L)	1,2,4-Trichlorobenzene	GW-17360-072604-DCR-167	ND (5.0) U
TCL VOC (µg/L)	2-Butanone	GW-17360-072104-BM-146	ND (25) U
		GW-17360-072104-BM-149	ND (25) U
TCL VOC (µg/L)	Acetone	GW-17360-072304-DCR-157	ND (25) U
		GW-17360-072304-DCR-160	ND (25) U
		GW-17360-072304-DCR-161	ND (25) U
		GW-17360-072304-DCR-162	ND (25) U
		GW-17360-072704-DCR-171	ND (25) U
		GW-17360-072704-DCR-172	ND (25) U
		GW-17360-072704-DCR-174	ND (50) U
		GW-17360-072704-DCR-175	ND (42) U
		GW-17360-072704-DCR-176	ND (42) U
		GW-17360-072704-DCR-177	ND (42) U
		GW-17360-072704-DCR-178	ND (25) U
		GW-17360-072004-DCR-136	ND (25) U
		GW-17360-072004-DCR-137	ND (25) U
		GW-17360-072004-DCR-138	ND (25) U
		GW-17360-072004-DCR-139	ND (25) U
		GW-17360-072004-DCR-140	ND (25) U
		GW-17360-072004-DCR-141	ND (25) U
		GW-17360-072004-DCR-142	ND (25) U
		GW-17360-072104-BM-144	ND (25) U
		GW-17360-072104-BM-145	ND (25) U
		GW-17360-072104-BM-146	ND (25) U
		GW-17360-072104-BM-147	ND (25) U
		GW-17360-072104-BM-148	ND (25) U
		GW-17360-072104-BM-149	ND (25) U
		GW-17360-072204-DCR-151	ND (25) U
		GW-17360-072204-DCR-152	ND (25) U
		GW-17360-072204-DCR-153	ND (25) U
		GW-17360-072204-DCR-154	ND (25) U
		GW-17360-072204-DCR-155	ND (25) U
		GW-17360-072204-DCR-156	ND (25) U
TCL VOC (µg/L)	Chloromethane	GW-17360-072004-DCR-137	ND (1.0) U
		GW-17360-072004-DCR-138	ND (1.0) U
		GW-17360-072004-DCR-139	ND (1.0) U
		GW-17360-072004-DCR-140	ND (1.0) U
TCL VOC (µg/L)	Isopropylbenzene	GW-17360-072604-DCR-163	ND (5.0) U
		GW-17360-072604-DCR-164	ND (5.0) UJ
		GW-17360-072604-DCR-165	ND (5.0) U
		GW-17360-072604-DCR-167	ND (5.0) U

TABLE 3

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO
METHOD BLANK CONTAMINATION
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Analysis	*Parameters*	*Associated Samples*	*Qualified Sample Result*[1]
TCL VOC (µg/L)	Toluene	GW-17360-072904-DCR-183	ND (1.2) U
		GW-17360-072904-DCR-184	ND (1.2) U
		GW-17360-072904-DCR-186	ND (1.7) U

[1] The analyte should be qualified for the listed samples as:

ND ( ) U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit in parenthesis.

ND ( ) UJ - The analyte was analyzed for, but was not detected above the estimated sample quantitation limit in parenthesis.

TABLE 4

SUMMARY OF DETECTED ANALYTES IN FIELD DUPLICATE SAMPLE SETS
GM GRAND RAPIDS SITE
GRAND RAPIDS, MICHIGAN

Analysis	*Parameters*	*Investigative Sample*	*Duplicate Sample*	*RPD* [1]
		GW-17360-071304-DCR-072	GW-17360-071304-DCR-073	
TCL VOC (µg/L)				
	Toluene	0.24 J[2]	0.24 J	0
	Chloroform	2.8	2.8	0
		GW-17360-072004-DCR-137	GW-17360-072004-DCR-138	
TCL VOC (µg/L)				
	Bromodichloromethane	3.1	3.1	0
	Chloroform	5.8	5.9	1.7
	Dibromochloromethane	1.6	1.5	6.5
	Toluene	2.6	2.6	0
		GW-17360-072204-DCR-152	GW-17360-072204-DCR-153	
TCL VOC (µg/L)				
	Benzene	0.38 J	0.35 J	8.2
	Bromodichloromethane	1.9	1.9	0
	Chloroform	13	13	0
	Cyclohexane	0.31 J	0.25 J	21
	Tetrachloroethene	0.35 J	0.39 J	11
	Toluene	0.85 J	0.75 J	13
	Trichloroethene	2.0	2.1	4.9
		GW-17360-072704-DCR-175	GW-17360-072704-DCR-176	
TCL VOC (µg/L)				
	Chloroform	0.42 J	0.44 J	4.7
	cis-1,2-Dichloroethene	38	39	2.6
	Methyl Tert Butyl Ether	1.9 J	2.9 J	42
	Tetrachloroethene	17	15	13
	Toluene	0.61 J	0.59 J	3.3
	trans-1,2-Dichloroethene	4.4	4.9	11
	Trichloroethene	34	33	3.0
		GW-17360-072904-DCR-183	GW-17360-072904-DCR-184	
TCL VOC (µg/L)				
	Benzene	0.26 J	0.26 J	0
	Bromodichloromethane	0.76 J	0.84 J	10
	Chloroform	1.4	1.3	7.4
	Cyclohexane	0.52 J	0.52 J	0
	Dibromochloromethane	0.76 J	0.73 J	4.0
	Ethylbenzene	0.61 J	0.63 J	3.2
	Methyl cyclohexane	0.68 J	0.72 J	5.7
	Xylenes (total)	1.8 J	1.8 J	0

[1] RPD - Relative Percent Difference

[2] J - The associated numerical value is an estimated quantity.

TABLE 5

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO TRIP BLANK CONTAMINATION GM GRAND RAPIDS SITE GRAND RAPIDS, MICHIGAN

Analysis	*Parameters*	*Associated Samples*	*Qualified Sample Results* [1]
TCL VOC (µg/L)	1,1-Dichloroethene	GW-17360-072604-DCR-165	ND (1.0) U
		GW-17360-072004-DCR-141	ND (1.0) U
		GW-17360-072004-DCR-142	ND (1.5) U
TCL VOC (µg/L)	2-Butanone	GW-17360-072304-DCR-159	ND (25) U
		GW-17360-072304-DCR-160	ND (25) U
		GW-17360-072604-DCR-163	ND (25) U
		GW-17360-072604-DCR-164	ND (25) U
		GW-17360-072604-DCR-165	ND (25) U
		GW-17360-072604-DCR-167	ND (25) U
		GW-17360-072604-DCR-168	ND (25) U
		GW-17360-072604-DCR-169	ND (25) U
		GW-17360-072804-DCR-181	ND (25) U
TCL VOC (µg/L)	Acetone	GW-17360-071204-DCR-071	ND (25) U
		GW-17360-071304-DCR-072	ND (25) U
		GW-17360-072604-DCR-163	ND (25) U
		GW-17360-072604-DCR-164	ND (25) U
		GW-17360-072604-DCR-167	ND (25) U
		GW-17360-072604-DCR-168	ND (25) U
		GW-17360-072604-DCR-169	ND (25) U
		GW-17360-072804-DCR-179	ND (25) U
		GW-17360-072804-DCR-180	ND (25) U
		GW-17360-072804-DCR-181	ND (25) U
		GW-17360-071904-DCR-133	ND (25) U
		GW-17360-071904-DCR-134	ND (25) U
		GW-17360-071304-DCR-073	ND (25) U
		GW-17360-071304-DCR-074	ND (25) U
		GW-17360-071304-DCR-075	ND (25) U
		GW-17360-071304-DCR-076	ND (25) U
TCL VOC (µg/L)	Carbon disulfide	GW-17360-071204-DCR-071	ND (5.0) U
		GW-17360-072604-DCR-163	ND (5.0) U
		GW-17360-072804-DCR-179	ND (5.0) U
		GW-17360-071904-DCR-134	ND (5.0) U
TCL VOC (µg/L)	Toluene	GW-17360-072304-DCR-157	ND (1.0) UJ
		GW-17360-072304-DCR-158	ND (1.0) U
		GW-17360-072304-DCR-159	ND (1.2) U

TABLE 5

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO TRIP BLANK CONTAMINATION GM GRAND RAPIDS SITE GRAND RAPIDS, MICHIGAN

Analysis	*Parameters*	*Associated Samples*	*Qualified Sample Results* [1]
TCL VOC (µg/L)	Toluene	GW-17360-072604-DCR-166	ND (1.0) U
		GW-17360-071904-DCR-133	ND (1.0) U
		GW-17360-071904-DCR-134	ND (1.1) U

[1] The analyte should be qualifed for the listed samples as:

ND ( ) U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit in parenthesis.

ND ( ) UJ - The analyte was analyzed for, but was not detected above the estimated sample quantitation limit in parenthesis.

HP5-04	7/22/2004 22 bgs ug/L	7/23/2004 32 bgs ug/L	7/22/2004 43 bgs ug/L	7/22/2004 63.5 bgs ug/L
VOCs				
cis-1,2-Dichloroethene	ND(1.0)	ND(1.0)/ND(1.0)	1.4	ND(1.0)
Tetrachloroethene	ND(1.0)	0.36 J/0.39 J	0.89 J	ND(1.0)
Trichloroethene	ND(1.0)	2.0/2.1	0.91 J	ND(1.0)
Vinyl chloride	ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)

HP9-04	7/23/2004 26 bgs ug/L	7/23/2004 36 bgs ug/L	7/23/2004 46 bgs ug/L	7/23/2004 59 bgs ug/L	7/23/2004 66 bgs ug/L
VOCs					
cis-1,2-Dichloroethene	ND(1.0)	0.79 J	1.2	ND(1.0)	ND(1.0)
Tetrachloroethene	ND(1.0)	0.48 J	0.88 J	0.47 J	ND(1.0)
Trichloroethene	ND(1.0)	1.8	2.7	0.46 J	ND(1.0)
Vinyl chloride	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

HP12-04	7/30/2004 24 bgs ug/L	7/30/2004 34 bgs ug/L	7/30/2004 44 bgs ug/L	7/30/2004 54 bgs ug/L
VOCs				
cis-1,2-Dichloroethene	ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ND(1.0)	ND(1.0)/ND(1.0)	0.25 J	ND(1.0)
Trichloroethene	0.32 J	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)

HP13-04	7/19/2004 22 bgs ug/L	7/19/2004 28.5 bgs ug/L
VOCs		
cis-1,2-Dichloroethene	ND(1.0)	ND(1.0)
Tetrachloroethene	ND(1.0)	ND(1.0)
Trichloroethene	ND(1.0)	0.49 J
Vinyl chloride	ND(1.0)	ND(1.0)

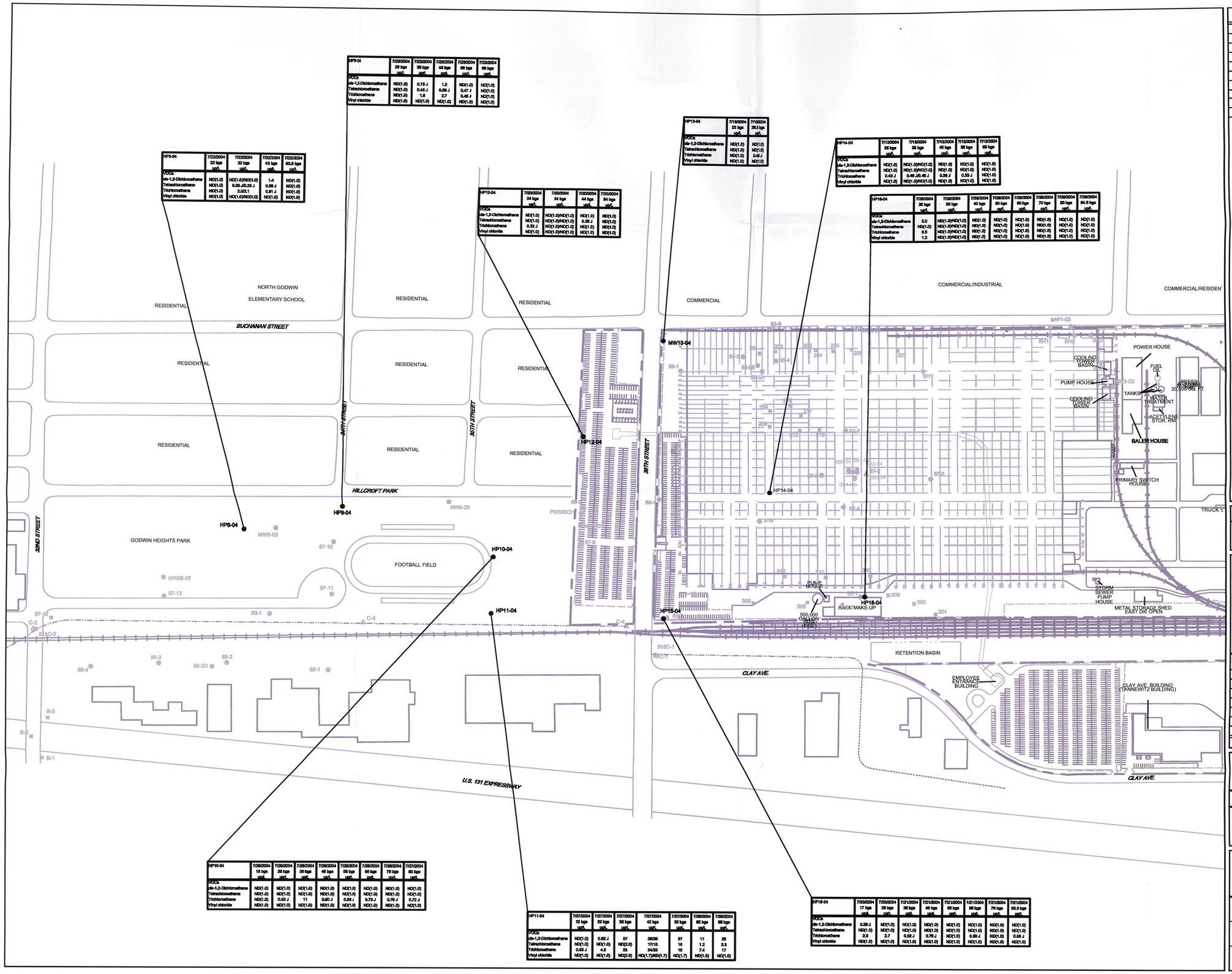
HP14-04	7/12/2004 25 bgs ug/L	7/13/2004 35 bgs ug/L	7/13/2004 45 bgs ug/L	7/13/2004 55 bgs ug/L	7/13/2004 65 bgs ug/L
VOCs					
cis-1,2-Dichloroethene	ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	0.49 J	0.48 J/0.46 J	0.39 J	0.35 J	ND(1.0)
Vinyl chloride	ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

HP15-04	7/28/2004 30 bgs ug/L	7/29/2004 39 bgs ug/L	7/29/2004 49 bgs ug/L	7/29/2004 59 bgs ug/L	7/29/2004 69 bgs ug/L	7/29/2004 79 bgs ug/L	7/29/2004 89 bgs ug/L	7/29/2004 94.5 bgs ug/L
VOCs								
cis-1,2-Dichloroethene	2.0	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	8.5	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	1.2	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

HP10-04	7/26/2004 18 bgs ug/L	7/26/2004 28 bgs ug/L	7/26/2004 38 bgs ug/L	7/26/2004 48 bgs ug/L	7/26/2004 58 bgs ug/L	7/26/2004 68 bgs ug/L	7/26/2004 78 bgs ug/L	7/27/2004 80 bgs ug/L
VOCs								
cis-1,2-Dichloroethene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	ND(1.0)	0.83 J	ND(1.0)	11	0.92 J	0.88 J	0.79 J	0.72 J
Vinyl chloride	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

HP11-04	7/27/2004 12 bgs ug/L	7/27/2004 22 bgs ug/L	7/27/2004 32 bgs ug/L	7/27/2004 42 bgs ug/L	7/27/2004 52 bgs ug/L	7/28/2004 62 bgs ug/L	7/28/2004 69 bgs ug/L
VOCs							
cis-1,2-Dichloroethene	ND(1.0)	0.82 J	57	38/39	37	11	25
Tetrachloroethene	ND(1.0)	ND(1.0)	ND(2.0)	17/15	15	1.2	3.3
Trichloroethene	0.33 J	4.5	25	34/33	16	7.4	17
Vinyl chloride	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.7)/ND(1.7)	ND(1.7)	ND(1.0)	ND(1.0)

HP16-04	7/20/2004 17 bgs ug/L	7/20/2004 26 bgs ug/L	7/21/2004 36 bgs ug/L	7/21/2004 46 bgs ug/L	7/21/2004 56 bgs ug/L	7/21/2004 66 bgs ug/L	7/21/2004 76 bgs ug/L	7/21/2004 83.5 bgs ug/L
VOCs								
cis-1,2-Dichloroethene	0.38 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	2.5	2.7	0.82 J	0.76 J	ND(1.0)	0.30 J	ND(1.0)	0.68 J
Vinyl chloride	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)



No.	Revision	Date	Initial

0 100 200ft

LEGEND

- HP16-04 HYDRO PUNCH/VAS LOCATION
- 87-2 MONITORING WELL LOCATION
- PWDISCH PURGE WELL LOCATION
- 307 SOIL BORING LOCATION
- X-10 DESTROYED/REMOVED MONITORING WELL LOCATION
- C-2 CULVERT LOCATION
- 87-3 AIR PURGE WELL (ABANDONED)
- BH1 APPROXIMATE LOCATION OF DEWATERING WELLS
- APPROXIMATE PROPERTY BOUNDARY
- FENCE
- RAILROAD
- COLE DRAIN

SOURCE: EDI ENGINEERING & SCIENCE, JUNE 1987 AND JUNE 1988 AND EARTH TECH, SEPTEMBER 2001.

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

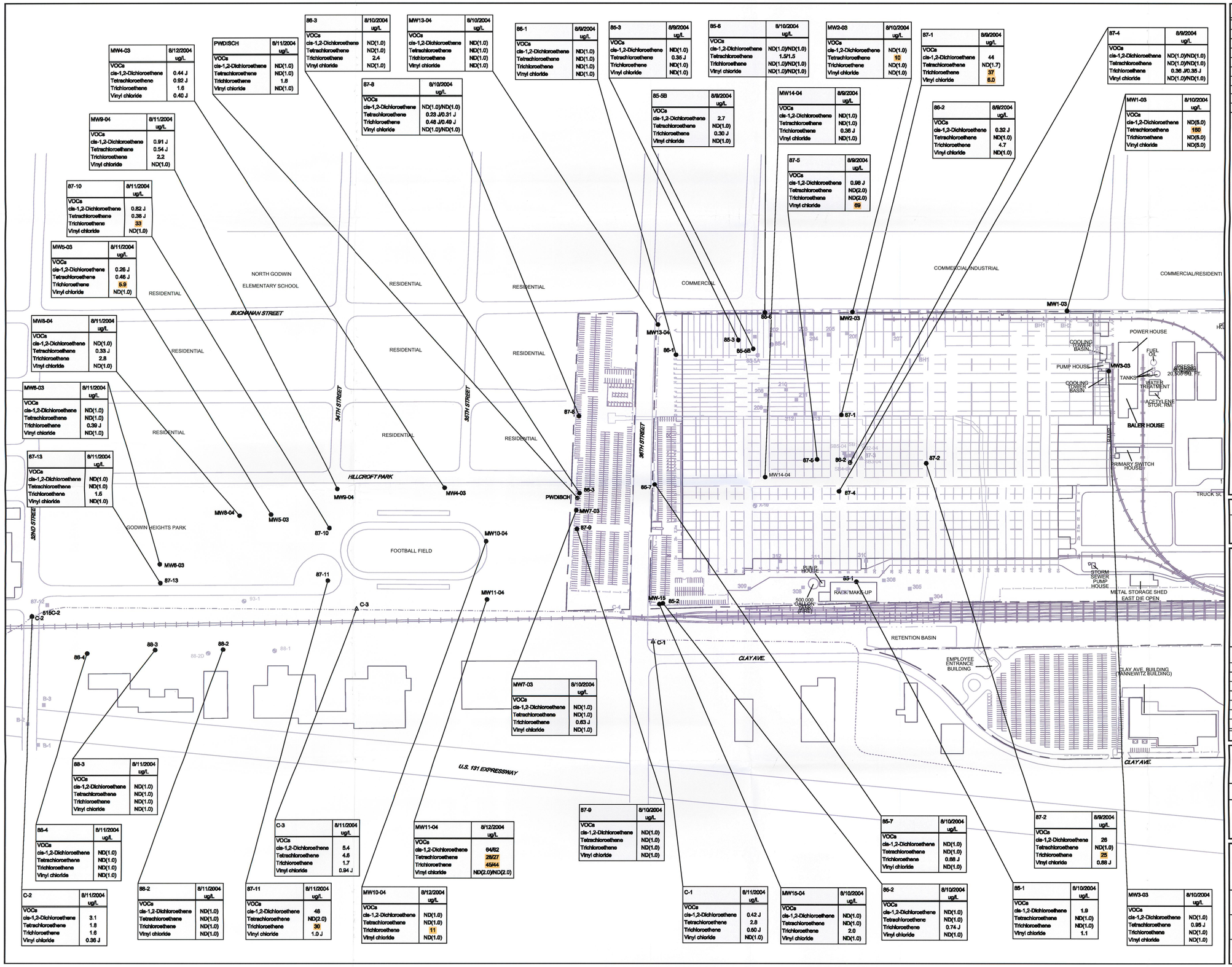
SELECT TCL VOCs IN VAS

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
G.K.	B.M.	OCTOBER, 2004	
Scale: 1" = 200'	Project No.: 17360-09	Report No.: 009	Drawing No.: 1

17360-09(009)GN-D5001 DEC 06/2004



NO.	Revision	Date	Initial

0 100 200ft

LEGEND

- 87-2 MONITORING WELL LOCATION
- PWDISCH PURGE WELL LOCATION
- 307 SOIL BORING LOCATION
- X-10 DESTROYED/REMOVED MONITORING WELL LOCATION
- C-2 CULVERT LOCATION
- 87-3 AIR PURGE WELL
- BH1 APPROXIMATE LOCATION OF DEWATERING WELLS
- APPROXIMATE PROPERTY BOUNDARY
- FENCE
- RAILROAD
- COLE DRAIN

SOURCE: EDI ENGINEERING & SCIENCE, JUNE 1987 AND JUNE 1988 AND EARTH TECH, SEPTEMBER 2001.

30 EXCEEDS MICHIGAN PART 201 RESIDENTIAL DRINKING WATER CRITERIA

TCL VOC	Criteria (ug/L) (1)
cis-1,2-Dichloroethene	70
Tetrachloroethene	5
Trichloroethene	5
Vinyl chloride	2

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

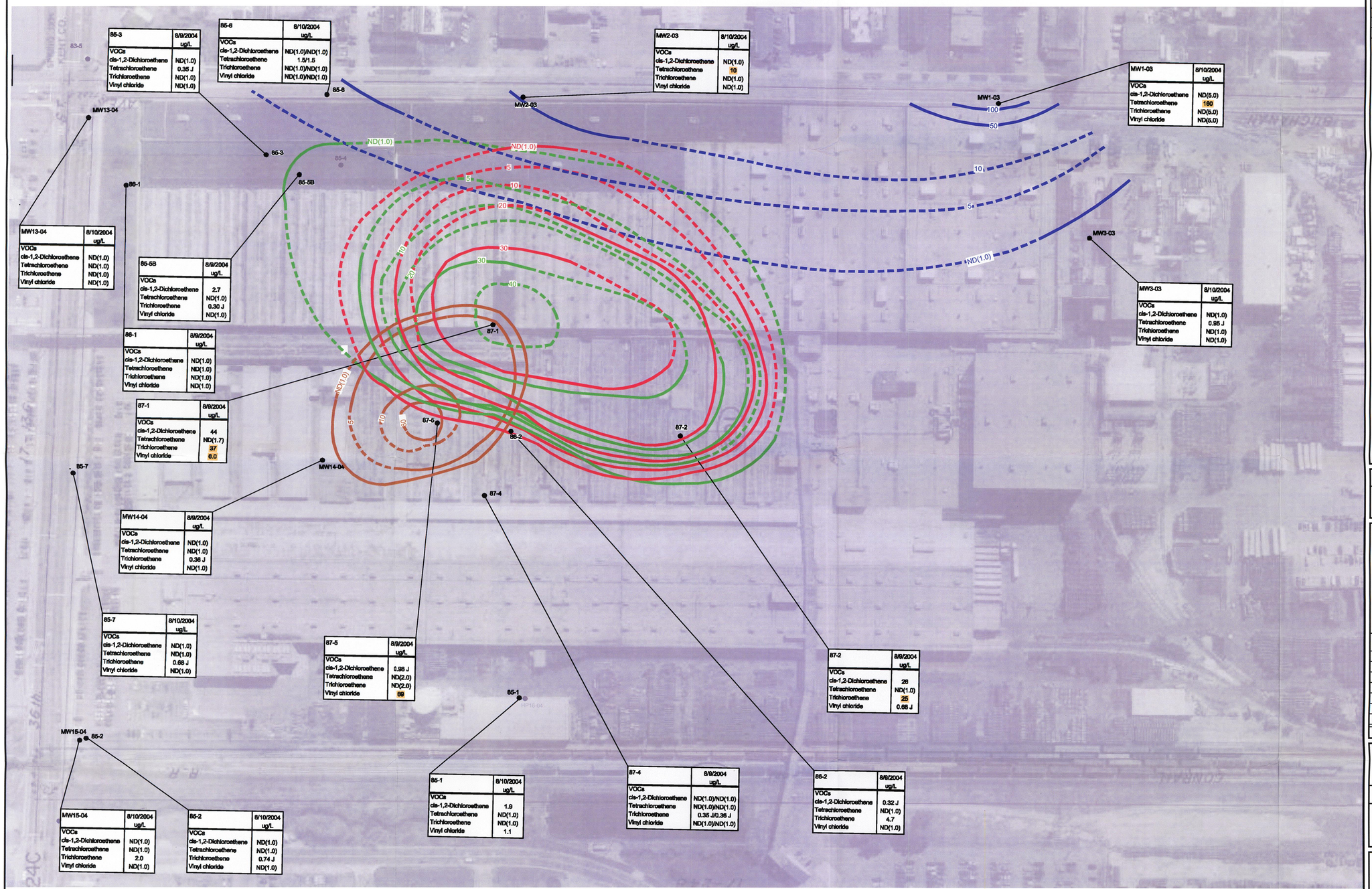
SELECT TCL VOC CONCENTRATIONS IN GROUNDWATER

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
G.K.	B.M.	OCTOBER, 2004	
Scale: 1" = 200'	Project No.: 17360-09	Report No.: 009	Drawing No.: 2

17360-09(009)GN-DE002 DEC 06/2004



NO	Revision	Date	Initial

LEGEND

- 5 cis-1,2-Dichloroethene Contour line
- 5 Trichloroethene Contour line
- 5 Tetrachloroethene Contour line
- 5 Vinyl Chloride Contour line
- INFERRED CONCENTRATION CONTOURS
- 27 VALUE EXCEEDS CRITERIA
- HP14-04/MW14-04 HYDROPUNCH/MONITORING WELL LOCATIONS

TCL VOC	Criteria (ug/L) (1)
cis-1,2-Dichloroethene	70
Tetrachloroethene	5
Trichloroethene	5
Vinyl chloride	2

(1) MICHIGAN ACT 451, PART 201 RESIDENTIAL DRINKING WATER CRITERIA

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

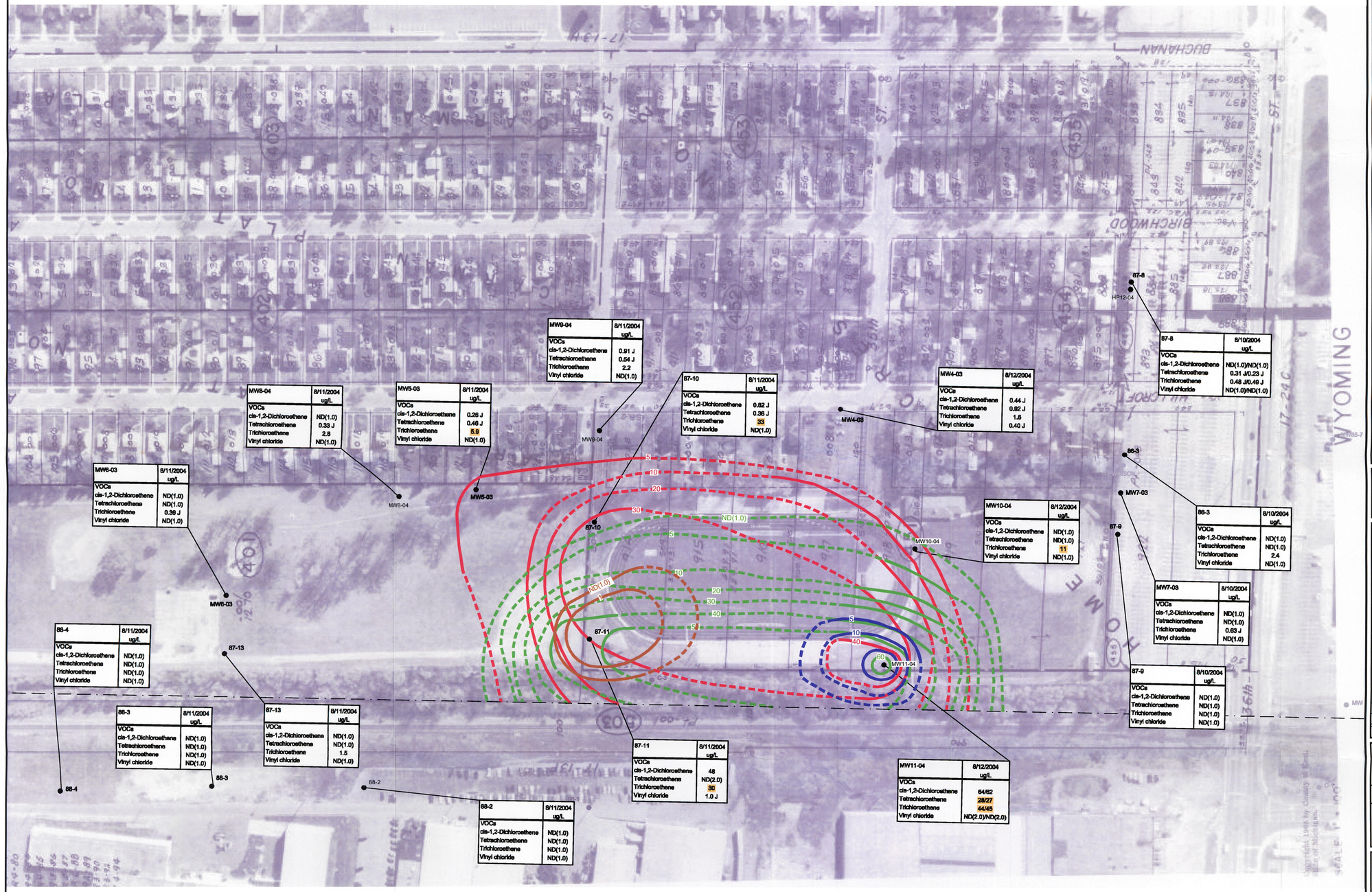
SELECT TCL VOC ISOCONTOURS
SOUTHERN AREA AUGUST, 2004

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
G.K.	B.M.	OCTOBER, 2004	
Scale: 1"=100'	Project N°: 17360-09	Report N°: 009	Drawing N°: 3

17360-09(009)GN-D5004 DEC 06/2004



NΩ	Revision	Date	Initial

0 50 100ft

LEGEND

- 5 cis-1,2-Dichloroethene Contour line
- 5 Trichloroethene Contour line
- 5 Tetrachloroethene Contour line
- 5 Vinyl Chloride Contour line
- INFERRED CONCENTRATION CONTOURS
- 27 VALUE EXCEEDS CRITERIA
- HP14-04/MW14-04 HYDROPUNCH/MONITORING WELL LOCATIONS
- COLE DRAIN HYDRAULIC BARRIER

TCL VOC	Criteria (ug/L) (1)
cis-1,2-Dichloroethene	70
Tetrachloroethene	5
Trichloroethene	5
Vinyl chloride	2

(1) MICHIGAN ACT 451, PART 201 RESIDENTIAL DRINKING WATER CRITERIA

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

SELECT TCL VOC ISOCONCENTRATIONS
NORTHERN AREA AUGUST, 2004

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
G.K.	B.M.	OCTOBER, 2004	
Scale: 1"=100'	Project N º: 17360-09	Report N º: 009	Drawing N º: 4

17360-09(009)GN-D5003 DEC 06/2004