QUARTERLY MONITORING REPORT
FEBRUARY - APRIL 2002

TOMAH MUNICIPAL SANITARY LANDFILL SUPERFUND SITE
TOMAH, WISCONSIN

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MAY 2002
REF. NO. 12865 (26)
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1.0 INTRODUCTION

This report presents the results of the long-term groundwater and landfill gas monitoring plan at the Tomah Municipal Sanitary Landfill (Site) in Tomah, Wisconsin for the period February 1, 2002 to April 30, 2002. Conestoga-Rovers & Associates (CRA) completed this report on behalf of International Paper.

Groundwater sampling activities were conducted in accordance with the approved Groundwater Field Sampling Plan (GW-FSP) (CRA, February 2000) as revised in accordance with USEPA approval on July 2, 2001 (see Appendix A). Landfill gas monitoring was conducted in accordance with the approved Gas Extraction System Field Sampling Plan (GES-FSP) (CRA, February 2000) as revised in accordance with USEPA approval on July 2, 2001.

1.1 PURPOSE

The objective of the monitoring program is to ensure ongoing protection of human health and the environment by monitoring potential contaminant migration pathways.

The scope of the monitoring program includes:

- Water level monitoring at wells and Deer Creek;
- Groundwater quality sampling of the upper, middle, and lower portions of the unconfined aquifer from selected off-Site monitoring wells;
- Methane, oxygen, and pressure measuring in perimeter gas probes;
- Methane, oxygen, and pressure measuring in gas extraction wells;
- Methane, oxygen, volatile organic compounds (VOCs), pressure, temperature, and flow rate monitoring at the gas extraction system blower discharge; and
- Water quality sampling of condensate collection tank.

The long term monitoring program began in November 2000, following final submittal of the Groundwater Quality Assurance Project Plan (GW-QAPP) (CRA, September 2000) and Gas Extraction System Quality Assurance Project Plan (GES-QAPP) (CRA, September 2000).

This report provides an evaluation of field monitoring data and laboratory results for sampling and monitoring conducted from February through April 2002.

1.2 PROJECT BACKGROUND

The Tomah Municipal Sanitary Landfill (TMSL) was operated by the City of Tomah from 1959 to 1979. The TMSL accepted both municipal and industrial wastes. Wastes were placed in shallow, unlined trenches along the southern 18 acres of the property, then covered with native soils. Wisconsin Department of Natural Resources (WDNR) ordered the Site closed in August 1975, because of potential degradation of local groundwater quality. The City of Tomah closed the Site in 1979 with a soil cap and planted grass and trees.

In December 1993, WDNR conducted a Potential Hazardous Waste Site Preliminary Assessment. Results of the assessment found the landfill represented a potential hazard to groundwater and surface water. Additional studies were conducted in June 1984. Based on the evaluation of these investigations, WDNR nominated the Site for inclusion onto the United States Environmental Protection Agency's (USEPA's) National Priorities List (NPL). The Site was placed on the NPL on March 31, 1989.

After placement on the NPL, various studies were conducted and culminated with the Remedial Investigation Report and Feasibility Study Report, which were released to the public in July 1996 and April 1997, respectively. An interim gas extraction system was installed during 1996 to reduce potential off-Site migration of landfill gas.

USEPA issued a Record of Decision (ROD) to address on-Site source (OU1-Operable Unit 1) control on September 25, 1997. The ROD outlined that the source control remedy for the Site as the installation of a low permeability geomembrane, with a geosynthetic clay liner, and the operation of an active gas extraction system.

International Paper (formerly Union Camp Corporation) and USEPA entered into an Administrative Order on Consent (AOC) for Remedial Design (effective October 12, 1998). CRA, on behalf of International Paper, developed the USEPA approved design and associated plans for the source control remedy.

USEPA issued the Unilateral Administrative Order (UAO) for Remedial Action, effective November 1, 1999. Under the UAO, International Paper implemented the remedial action set forth in the ROD, in accordance with the design approved by USEPA. Construction of the remedy began in April 2000 and was completed in August 2000. Long term monitoring of the source control remedy began in July 2000.

In June 2001, a meeting was held between CRA, WDNR, and EPA to discuss revisions to the long term groundwater and gas monitoring program. The revisions included changes to the number and frequency of monitoring wells and residential wells to be sampled. The revised groundwater and gas monitoring program was submitted in a letter to USEPA on July 2, 2001. The revised monitoring program was approved by USEPA and implemented thereafter.

Under the ROD, after the OU1 remedy has been implemented and sufficiently monitored, a second Feasibility Study will be conducted for the off-Site groundwater contamination (OU2-Operable Unit 2). Several remedial alternatives are being considered for OU2, including natural attenuation of volatile organic compounds (VOCs).

On October 16, 2001, a meeting was held between CRA, USEPA, WDNR, International Paper, and the City of Tomah to discuss the OU2 remedy. Natural attenuation and deed restrictions were identified as potential remedy options. It was decided to combine sampling for the purpose of evaluating natural attenuation into the OU1 monitoring program. USEPA confirmed in January 2002 that a vertical aquifer profiling investigation would be required to refine the limits of the VOC plume prior to acceptance of a remedy for OU2.

During the week of November 26, 2001, 26 monitoring wells from the approved source control groundwater monitoring network were sampled for the first of four rounds of quarterly natural attenuation evaluation. Section 3.0 describes the natural attenuation monitoring program.

On March 5, 2002, CRA issued a vertical aquifer sampling (VAS) work plan to the USEPA. The VAS program intends to delineate, both horizontally and vertically, the extent of VOCs in groundwater associated with the TMSL. By delineating the horizontal and vertical extent of VOCs, long-term groundwater monitoring sample locations can be appropriately located to better evaluate the effects of natural attenuation. CRA received comments from the USEPA on the VAS work plan in a letter dated April 15, 2002. Agency concerns are being addressed.

1.3 SITE LOCATION

The TMSL is located on 40 acres in the SW ¼ of the NE ¼ of Section 32, Township 18 North, Range 1 West, Monroe County, Wisconsin. The Site is bordered to the north by wetlands, scrub, and forested land; to the east by Noth Avenue; to the South by the Sunnyvale Residential Development; and to the west by agricultural fields and wetlands. The location of the Site is presented on Figure 1.1. The landfill is located on the southern 18 acres of the 40-acre parcel. Figure 1.2 shows the post-construction groundwater monitoring locations. Figure 1.3 shows the post-construction gas extraction system monitoring locations.

2.0 GROUNDWATER MONITORING

2.1 SUMMARY OF GROUNDWATER MONITORING PROGRAM

Figure 1.2 presents the network of monitoring and residential wells identified for groundwater monitoring. The groundwater monitoring well network consists of a total of 35 wells. These wells are screened in the upper, middle, and lower portions of the unconfined aquifer. The residential well network consists of 10 residential wells. Table 2.1 summarizes the groundwater sampling program.

Monitoring wells immediately down gradient of the landfill Site (core wells) monitor immediate off-Site effects of the landfill cap and provide information for the long term database for the Site. These core wells are monitored on a quarterly basis.

Wells located downgradient from the landfill monitor off-Site to develop a more detailed groundwater quality database. This database notes changes, both chemical and areal extent, of the plume, and confirms the stability of the plume. These off-Site wells serve as boundary wells for monitoring potential plume expansion towards nearby residential wells and are monitored semi-annually.

The remaining wells serve as sentry wells to monitor expansion or reduction along the edge of the plume. The sentry wells are sampled annually.

The residential well network consists of key residential wells immediately down gradient and cross gradient of the plume. The residential well monitoring confirms that there are no potential impacts to the residents down gradient of the Site. All residential wells with the exception of the Hanson and Ripp wells, are used for potable water supply.

Groundwater monitoring during the period was conducted the week of February 25, 2002. Samples collected in February 2002 represent the core of off-site monitoring wells that evaluate off-site plume migration and expansion. Additionally, the core monitoring wells and select boundary and sentry wells were sampled for natural attenuation indicator parameters. Details of the natural attenuation monitoring program are outlined in Section 3.0.

2.2 GROUNDWATER HYDROLOGY

A complete round of water level measurements was collected from each monitoring well prior to groundwater sampling. Historical groundwater elevations are provided in Table 2.2. Groundwater contours for the upper (A), middle (B), and lower (C) horizon wells are depicted on Figure 2.1, Figure 2.2, and Figure 2.3, respectively.

Groundwater flow direction for the "A", "B", and "C" horizon wells is to the northeast, which is consistent with the direction of historical groundwater flow. In general, groundwater elevations decreased since the November 2001 sampling event, a seasonal expectation. Groundwater elevations are relatively consistent within the three horizons. At several locations, there is a slight upward to almost neutral hydraulic gradient from the "C" horizon to the "A" horizon. Any upward gradient would inhibit downward contaminant migration. However, the low vertical gradients indicate that groundwater flow is predominantly horizontal with minimal vertical movement.

Two geologic cross sections are presented to show the hydraulic relationship between the three horizons. The locations of the cross sections are shown on Figure 2.4. The two cross sections are presented on Figure 2.5 and Figure 2.6.

2.3 GROUNDWATER SAMPLING RESULTS

Round 7 of the quarterly monitoring program consisted of sampling eleven core wells and measuring groundwater levels at all monitoring wells. Additional monitoring wells were included for natural attenuation evaluation. Natural attenuation sampling is detailed in Section 3.0.

Groundwater sampling in the shallow wells was conducted under low flow purging conditions using peristaltic pumps. Groundwater sampling in deep wells was conducted under low flow conditions using bladder pumps. Purging rate was at 500 ml/min and sampling rate was at 300 ml/min. Groundwater was stabilized prior to sampling to ensure that the samples obtained were representative of the groundwater. Each sample location was sampled in accordance with the GW-FSP and GW-QAPP. Table 2.3 summarizes the February 2002 monitoring well sampling event.

As noted on Table 2.3, 11 core monitoring wells were sampled. Sampling for VOCs (EPA method 8260 B) was conducted immediately after purging. Samples were placed

in iced coolers and shipped within 48 hours to Severn Trent Laboratories (STL) via commercial courier under standard chain of custody procedures.

Table 2.4 provides a summary of detected compounds in groundwater monitoring wells sampled during February 2002. Appendix B contains the laboratory reports for the groundwater samples. Groundwater data validation is provided in Appendix C.

Table 2.5 presents a historical summary of VOC compounds that have exceeded the Wisconsin Enforcement Standard (ES). For each chemical that has exceeded a standard, the number of exceedences and the date of the most recent exceedence are presented. Eight compounds exceeded the ES during the February 2002 sampling event.

2.4 CHLORIDE EXTENT

Chloride can be a good indicator of landfill affects to an aquifer. Because chloride acts as a non-reactive tracer, it can help determine the downgradient extent of a landfill affected groundwater. Chloride concentrations attributed to landfill groundwater contamination varies. USEPA documents have estimate the range between 2 and 5,000 mg/L. Actual landfill leachate composition is site specific and the presence of elevated chloride (indicating a plume) in downgradient groundwater is compared to actual background and upgradient chloride concentrations. Background chloride concentrations at the Site were found to be below 10 mg/L. However, chloride concentrations detected between 10 mg/L and 100 mg/L should be use viewed carefully. These concentrations indicate possible, but not necessarily probable, association with the landfill.

Figure 2.7 presents the chloride data from the February 2002 sampling event. As the figure shows, chloride is detected above 10 mg/L, in the groundwater horizon downgradient from the landfill, which is consistent with the groundwater flow direction. This confirms that the monitoring locations were placed in areas where contamination would be expected.

2.5 VOC EXTENT

Vinyl chloride and benzene data from the February 2002 sampling event are presented in Figure 2.8 and Figure 2.9, respectively. Vinyl chloride was detected in seven of the eleven core sample locations, which is consistent with historical sampling data. Sentry well nest MW-14 did not show any detectable concentrations of vinyl chloride. The

MW-14 well nest is the sampling point immediately upgradient of the Kenworthy residential well.

The benzene plume is found within the limits of the vinyl chloride plume. Benzene was detected at seven of the eleven core sample locations. Benzene was not detected at a concentration greater than 32 µg/L during the February 2002 sampling event.

Based on the groundwater sampling data, the VOC plume remains relatively stable with no indication of plume expansion either horizontally or vertically.

3.0 NATURAL ATTENUATION MONITORING

3.1 SUMMARY OF NATURAL ATTENUATION MONITORING PROGRAM

The natural attenuation monitoring program is to determine if in-situ processes are effectively reducing or mitigating the advancement of the VOC plume. Twenty-six monitoring wells from the approved groundwater monitoring network were selected for four rounds of quarterly natural attenuation evaluation beginning in November 2001. Figure 3.1 presents the network of monitoring wells identified for natural attenuation monitoring. Table 3.1 lists the selected monitoring wells and includes well construction specifications.

The 26 monitoring wells have been separated into four categories: Source Area, Background, Plume, and Outer Plume. A brief description of each group is provided below.

Source Area – Monitoring wells from this group represent the most impacted portion of the groundwater system as it begins migration from the TMSL. These wells are located along the downgradient side of the TMSL. Groundwater samples from these wells tend to have the highest concentration for VOCs. The source area is represented by MW-3A, MW-3B, MW-3C, MW-4B, and MW-7A.

Background – Monitoring wells from this group are intended to define groundwater quality unaffected by the Site conditions. These wells are located hydraulically upgradient from the TMSL. Background monitoring wells include MW-1A, MW-1B, and MW-6A.

Plume – Monitoring wells from this group are located within the VOC plume. These wells are located off-Site, but hydraulically downgradient from the landfill. Plume monitoring wells are to define groundwater chemistry away from the Site including the effects of natural attenuation. Plume monitoring wells include MW-2A, MW-2B, MW-5A, MW-8A, MW-9A, MW-9B, MW-9C, MW-12A, MW-12B, MW-12C, MW-13A, and MW-13B.

Outer Plume - Monitoring wells from this group are located on the downgradient edge of the VOC plume. Groundwater samples from these wells typically do not exhibit VOCs. These wells are intended to monitor possible changes in the groundwater plume, confirm steady-state conditions, and detect breakdown by-products. Outer Plume

monitoring wells include MW-14A, MW-14B, MW-14C, MW-15A, MW-15B, and MW-15C.

3.2 NATURAL ATTENUATION SAMPLING PROCEDURES

Under this program, groundwater samples are collected for VOCs and natural attenuation indicator parameters. Table 3.2 lists the parameters that will be analyzed under this program. Groundwater samples are collected according to the following procedures:

- The water levels in the wells are measured to ±0.01 foot prior to purging.
- Total well depth are measured after sample collection or a minimum of 12 hours before sample collection.
- The wells are purged under low-flow conditions (≤ 500 mL/min) as specified under "Low-Flow (Minimal Drawdown) Groundwater Sampling Procedures" (EPA/540/S-95/504), using a Teflon bladder stainless steel pump (deep wells) or a peristaltic pump (shallow wells). The pump intake is placed either mid-screen or in the middle of the water column for partially saturated well screens.
- Purging is conducted until a minimum of 3 well screen volumes are evacuated. After each well screen volume is evacuated, the following parameters will be measured from the flow-through cell: pH, Eh, temperature, dissolved oxygen, turbidity, and conductivity. Purging will continue until 3 successive readings for the above parameters are within the following successive ranges; ±0.1 for pH, ±10% for temperature, ±10 mV for Eh, ±10% for turbidity, ±10% for dissolved oxygen, and ±5% for conductivity.
- After stabilization, water samples are collected for chemical analysis using low flow sampling techniques (i.e. ≤ 300 mL/min).
- In the event that the groundwater is still turbid following purging, additional purging and/or appropriate sampling techniques (i.e. lower pumping rate) will be implemented to collect sediment-free samples, or samples that are as sediment-free as possible.
- Sufficient groundwater is collected for chemical analysis of VOCs, dissolved gases, and general water quality parameters. VOC samples will be collected first so that loss of volatile constituents is minimized, followed by the dissolved gases.
- Field measurements of pH, Eh, conductivity, dissolved oxygen, turbidity, temperature, manganese, and Iron II are taken after well purging, prior to sample

collection. Calibration of field instruments will be undertaken daily, at the beginning of the day in accordance with manufacturer's specifications.

- A blind field duplicate sample is collected per set of samples per matrix (a set of samples is defined as the samples collected in a matrix for a specific sampling event, for example a groundwater sampling round) or at a minimum frequency of one in ten samples per matrix.
- A rinsate sample is collected each day that a decontamination event occurs for each type of equipment used, not to exceed once per day. The rinsate sample will consist of demonstrated analyte-free water poured into, and then sampled out of, a bailer/pump cleaned under the protocol specified for sampling equipment. Rinsates will be preserved and handled in the same manner as the aqueous samples for the associated analysis (i.e. add preservative, cool to 4° Celsius).
- One trip blank is shipped with each cooler of VOC water samples. The trip blank sample will consist of demonstrated analyte-free water. Trip blanks will be cooled to 4°Celsius.
- All other aspects of the sampling program is consistent with the approved Groundwater Field Sampling Plan (GW-FSP) (CRA, February 2000). These aspects include sample labeling and control, data quality assessment, and equipment cleaning.

3.3 NATURAL ATTENUATION SAMPLING RESULTS

The second round of quarterly groundwater sampling data found evidence of natural attenuation. This evidence was based on field measurements (i.e. dissolved oxygen) and analytical data (i.e. dissolved gases). The analytical results will be discussed according to their respective monitoring locations. Analytical results for the natural attenuation parameters are presented in Appendix B. The dissolved gas concentrations (ethene, ethane, methane, and carbon dioxide) measured during this evaluation are presented on Figure 3.2.

3.3.1 BACKGROUND WELLS

Monitoring wells MW-1A, MW-1B, and MW-6A are representative of background conditions. Background wells were identified with aerobic groundwater conditions based on elevated levels of dissolved oxygen (>1.0 mg/L) and positive redox (Eh)

values. Redox values were not collected at MW-6A during the February 2002 event due to equipment malfunction.

Carbon dioxide and methane were the only dissolved gases detected in the background wells (other than oxygen). Carbon dioxide was detected at concentrations ranging from 18 mg/L to 44 mg/L. Methane was detected at MW-1B at 0.0019 mg/L.

VOCs were not detected in the background well samples.

Inorganic parameters such as chloride, iron, and alkalinity establish background conditions upgradient of the TMSL. Background concentrations during the February 2002 event showed chloride levels at 4.4 mg/L or less, iron concentrations at 0.19 mg/L or less, and alkalinity values at 26 mg/L or less.

3.3.2 SOURCE AREA WELLS

Groundwater samples from monitoring wells MW3A, MW3B, MW3C, MW4B, and MW7A were used to establish groundwater conditions at the source area (i.e. TMSL). Historically, groundwater samples from these locations exhibited reducing groundwater conditions with dissolved oxygen values typically less than 0.5 mg/L and Eh at -200 mV or less. Both of these values indicate that the source area groundwater exists under anaerobic conditions and is likely affected by landfill leachate. Due to equipment malfunction, Eh values were only collected from MW4B during the February 2002 event.

Dissolved gases are present in the source area, which include ethene, methane, and carbon dioxide. Concentrations for ethene range from less than 0.001 mg/L to 0.0054 mg/L; ethene is the reductive dechlorination daughter product of vinyl chloride. Methane concentrations range from 0.0014 mg/L to 11 mg/L. Methane is a result of reducing groundwater conditions (methanogenic) that stimulates reductive dechlorination. Carbon dioxide was detected in the source area wells at concentrations ranging from 24 mg/L to 410 mg/L. Carbon dioxide, along with methane, can form during methanogenesis.

VOCs present in the source area well samples included petroleum-related and chlorinated compounds. Petroleum-related VOCs include benzene, ethylbenzene, toluene, and xylene (BETX), and chlorinated VOCs include vinyl chloride. Total VOC concentrations range from non-detect to 268 µg/L. BETX is considered an anthropogenic carbon source that can assist in reductive dechlorination.

Inorganic parameters are measured to evaluate what degradation processes may exist or contribute to natural attenuation. Parameters such as chloride, iron, and alkalinity exist at concentrations well above background that support anaerobic biodegradation processes. Other compounds such as nitrate and sulfate are typically present at diminished concentrations and should not interfere with reductive dechlorination.

3.3.3 PLUME WELLS

Plume monitoring wells represent the portion of the study area that are downgradient of the source area. Plume monitoring wells include MW-2A, MW-2B, MW-5A, MW-8A, MW-9A, MW-9B, MW-9C, MW-12A, MW-12B, MW-12C, MW-13A, and MW-13B.

Groundwater conditions at the Plume monitoring wells show mixed conditions. At some locations, there is evidence of anaerobic conditions with low dissolved oxygen and negative redox (e.g. MW-5A). At other locations, there is evidence of slightly anaerobic conditions with low dissolved oxygen and positive Eh values (e.g. MW-13B). Finally, there are locations with evidence of aerobic conditions of elevated dissolved oxygen (>1.0 mg/L) and positive Eh values (e.g. MW-9C).

Ethene and methane, while present in several Plume monitoring wells, was detected at slightly lower concentrations than at the source wells. Ethene was found in groundwater samples at concentrations ranging from <0.001 mg/L to 0.005 mg/L. Methane was detected at concentrations ranging from <0.001 mg/L to 12 mg/L. Carbon dioxide was measured in groundwater samples at concentrations ranging from 17 mg/L to 230 mg/L. Under aerobic conditions, vinyl chloride can be oxidized to carbon dioxide.

VOCs detected in the Plume monitoring wells included both petroleum-related and chlorinated compounds. The predominant VOC was vinyl chloride with concentrations ranging from <0.5 µg/L to 67 µg/L.

Inorganic parameters continue to exhibit elevated levels. Chloride is detected at values three times higher than background values; particularly at monitoring wells MW-8A, MW-12B, and MW-13A.

3.3.4 OUTER PLUME WELLS

Outer Plume wells refer to monitoring wells that are located at or just beyond the groundwater plume. Outer Plume wells include MW-14A, MW-14B, MW-14C, MW-15A, MW-15B, and MW-15C.

Groundwater conditions at the Outer Plume wells were typically aerobic with dissolved oxygen levels measured above 1.0 mg/L and positive Eh values near 200 mV.

Methane and carbon dioxide were detected at slightly lower concentrations than at the Plume wells. Methane was detected at concentrations ranging from <0.001 mg/L to 2 mg/L. Carbon dioxide was detected at each location ranging from 20 mg/L to 180 mg/L. The elevated levels of carbon dioxide could be attributed to vinyl chloride oxidation.

VOCs were not detected in the Outer Plume well samples.

Inorganic compound sample concentrations had values slightly above background values. Chloride was present at concentrations ranging from <1 mg/L to 25.4 mg/L. Iron was detected at concentrations ranging from <0.1 mg/L to 8.8 mg/L. Alkalinity ranged from <5 mg/L to 83 mg/L.

4.0 GAS EXTRACTION SYSTEM MONITORING RESULTS

4.1 SUMMARY OF GAS EXTRACTION SYSTEM MONITORING PROGRAM

Figure 1.3 presents the network of gas extraction wells and gas probes identified for monitoring. Table 4.1 presents the revised gas extraction system sampling and analysis program. The gas extraction well network consists of 20 extraction wells and the blower discharge. The gas extraction system is designed to ensure landfill gas (LFG) capture across the landfill. The gas probe network consists of 5 on-Site probes and 11 off-Site probes. The gas probe locations were selected to establish sentry points between the landfill and nearby homes with basements to the south. Additionally, gas probes have been placed along the north, west, and east sides of the landfill to monitor potential off-Site gas migration.

Monitoring at the Site is conducted using a direct-read instrument. The selected instrument for the Site is a Landtec GEM 500 gas monitor. The instrument is equipped with a quick-connect fitting that connects to the gas probe, gas extraction well, blower inlet, and blower discharge so that readings can be taken in a closed (e.g. not open to the air) system. A Landtec GEM 500 gas monitor is capable of measuring percent methane by volume, percent carbon monoxide by volume, percent oxygen by volume, flow rate, temperature, and pressure.

4.2 GAS PROBE MONITORING

Gas probes located on-site and on the adjacent properties were monitored on a monthly basis during February, March and April 2002. Readings recorded by the Landtec GEM 500 are summarized in Table 4.2. During the reporting period (February through April 2002), methane was not detected in any of the off-Site probes or at any probe adjacent to the landfill. Given the negative pressure readings at some of these wells and the absence of methane, the operation of the active gas extraction system has prevented migration of the landfill gases off-Site.

4.3 GAS EXTRACTION WELLS MONITORING

Gas extraction wells, located within the limits of the landfill, were monitored on a monthly basis during the reporting period. The blower operation was monitored before and after the blower unit. Additional monitoring was conducted on April 19, 2002 at

EW-02 to confirm the presence of methane (24.6%) which was detected on April 16, 2002. Methane concentrations measured on April 19, 2002 were not detected at EW-02, surrounding extraction wells, or the adjacent gas probe (GP-16). EW-02, previously removed from the extraction network due to the historical lack of methane, was brought back on-line, as a precaution. Other than EW02 and EW14, during the reporting period, methane concentrations continued to show stabilization or a gradual decline. EW14 has shown an increase in methane concentrations since March 2002. Methane concentrations measured at the gas extraction wells, since cap construction, are depicted on graphs provided in Appendix D.

4.4 BLOWER DISCHARGE SAMPLING

The blower discharge was sampled on February 13, 2002. Laboratory data reports are provided in Appendix E. The blower discharge data validation is provided in Appendix F.

Vinyl chloride and benzene are the contaminants of concern in the blower discharge. Acceptable ambient concentrations for vinyl chloride and benzene are 300 pounds per year each (WDNR NR 445). Blower discharge mass loading calculations are provided in Table 4.3. Based on the blower discharge sample results, the estimated total discharge of benzene and vinyl chloride are below the ambient discharge concentrations developed by WDNR. Hence, no off-gas treatment is necessary.

Since full scale operation of the gas system began, approximately 49.04 pounds of vinyl chloride and 2.25 pounds of benzene have been removed from the landfill.

4.5 CONDENSATE TANK

Condensate generated by the gas extraction system is collected in sumps #1 and #2. The condensate is pumped from the sumps to the on-Site underground condensate storage tank (UST). The tank has a capacity of 5,000 gallons. Appendix G presents the water levels measured in the tank and the cumulative water generation since November 1999. Measurements are approximate values, given slight variations in measuring tapes. On October 22, 2001, the City of Tomah removed approximately 3,600 gallons of condensate and transported the material to the City's wastewater treatment plant for disposal. Approximately 2,044 gallons of condensate was generated from October 22, 2002 to April 16, 2002.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

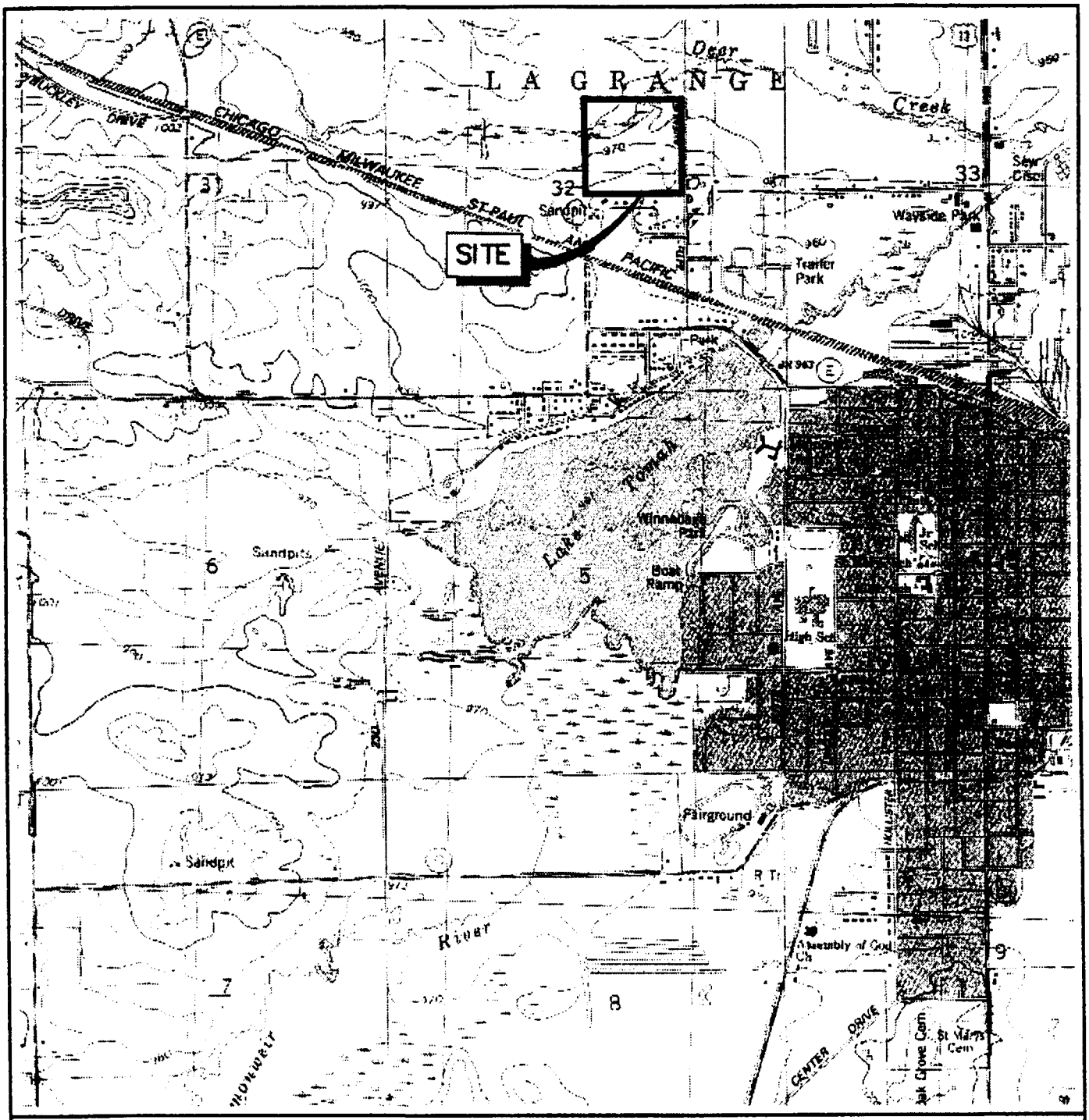
CRA concludes the following, based on the review of historical data and data collected during the February 2002 sampling events:

1. The primary contaminants of concern in groundwater continue to be VOCs. Five VOCs exceeded criteria in February 2002 with vinyl chloride and benzene being the most frequently detected compounds.
2. The overall dimensions of the VOC plume remained unchanged indicating stable conditions.
3. The second round of natural attenuation sampling provides promising evidence that in-situ processes are affecting the fate and transport of VOCs migrating from TMSL.
4. Gas extraction system monitoring at the extraction wells indicate methane and VOCs are being removed from the landfill.
5. Monitoring of the off-Site gas probes indicate the residential homes south of the landfill are not affected by off-Site migration of landfill gases.
6. Analysis of the blower discharge continues to show that benzene and vinyl chloride emissions remain below the maximum allowable by WDNR air quality standards.

5.2 RECOMMENDATIONS

1. Groundwater and gas extraction system will be monitored in accordance with the approved revised monitoring program. Samples will be collected in accordance with the GW-FSP and GES-FSP.
2. Natural attenuation sampling will continue in accordance with Section 3.0.

FIGURES



SOURCE: USGS TOPOGRAPHIC MAP
TOMAH, WIS. QUADRANGLE

0 1000 2000ft

figure 1.1

SITE LOCATION
TOMAH MUNICIPAL SANITARY LANDFILL
Tomah, Wisconsin

12865-80(026)GN-SP001 APR 16/2002

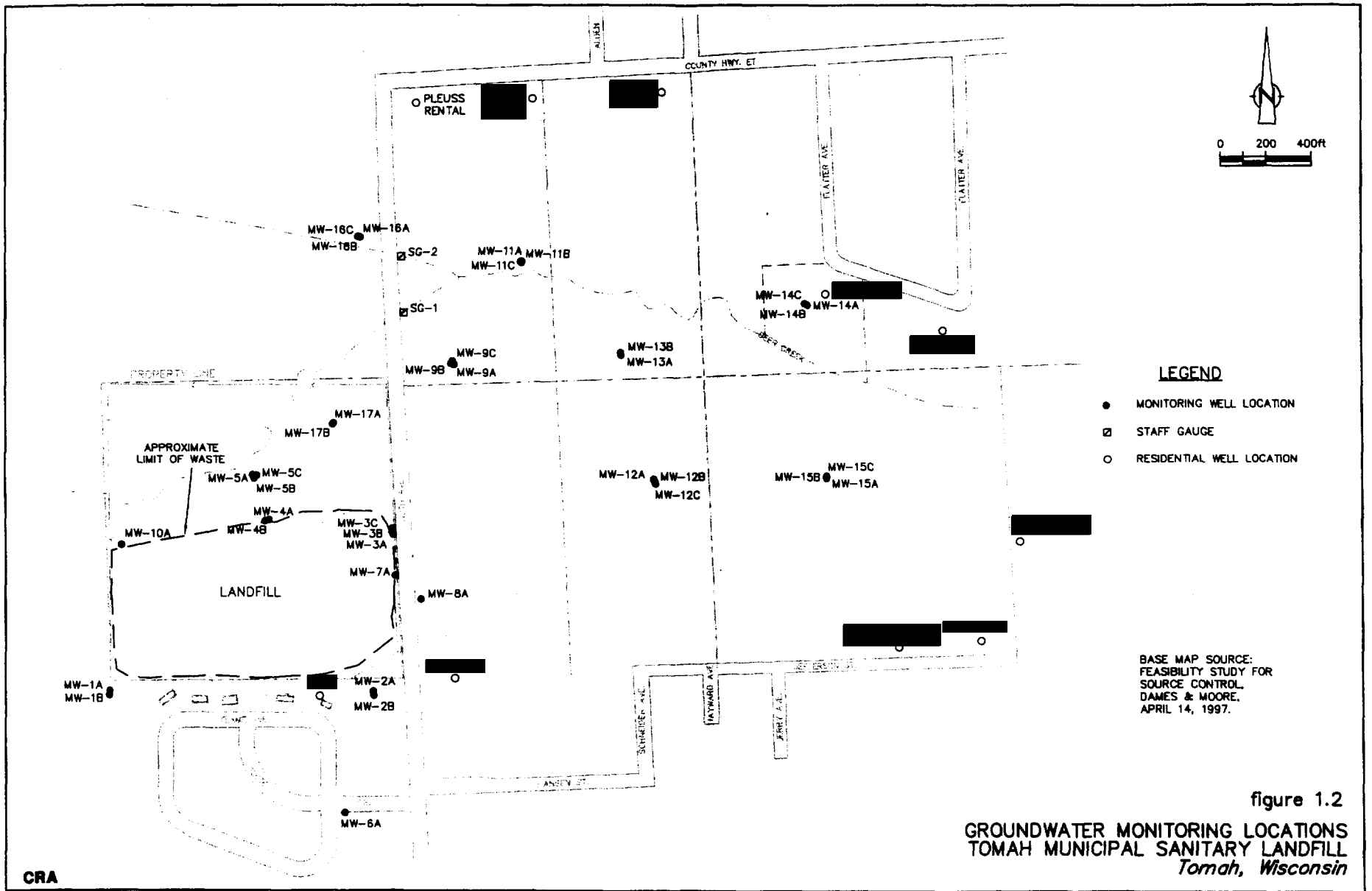


figure 1.2

GROUNDWATER MONITORING LOCATIONS
TOMAH MUNICIPAL SANITARY LANDFILL
Tomah, Wisconsin

CRA

12865-80(026)GN-SP002 APR 16/2002

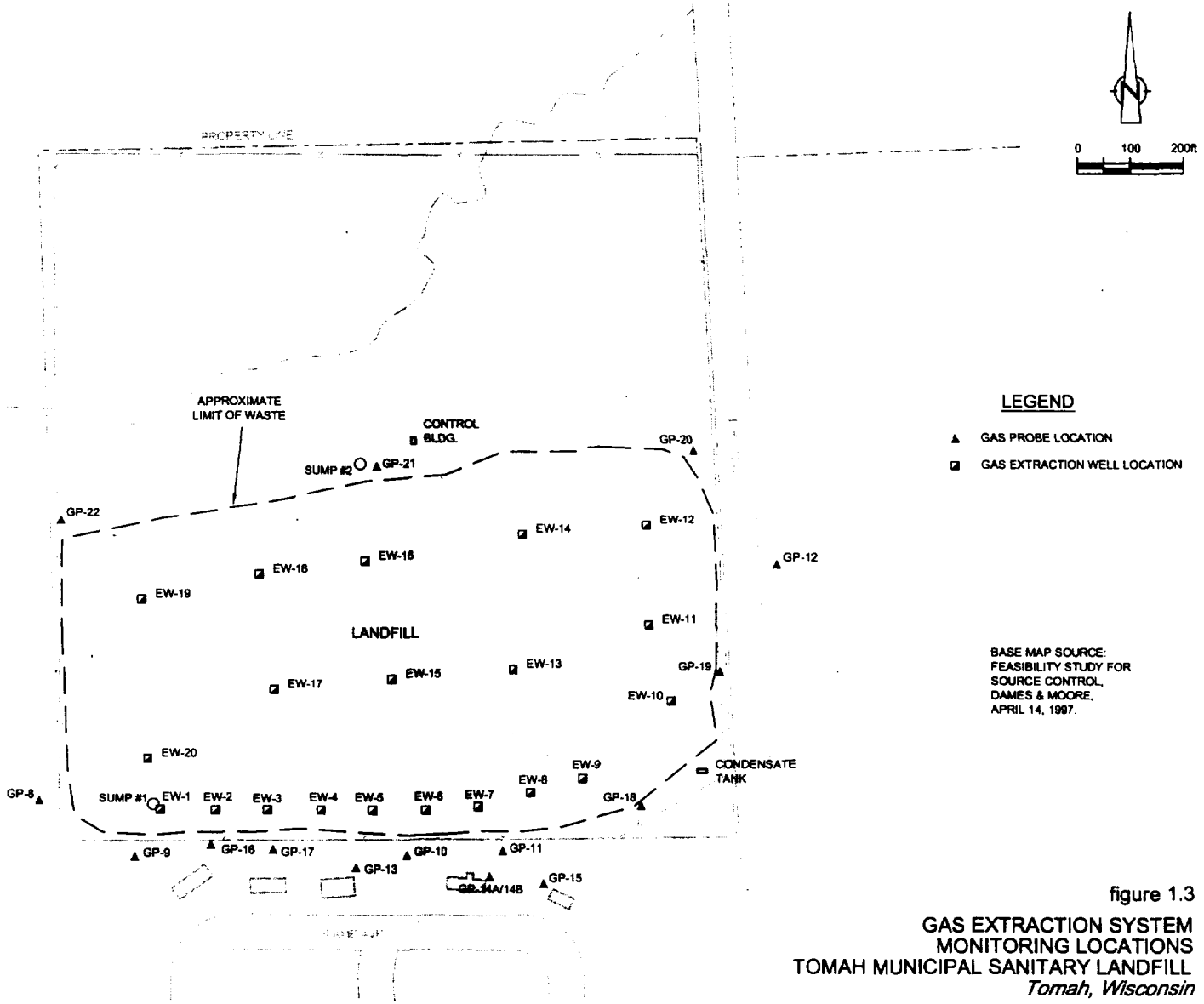


figure 1.3

GAS EXTRACTION SYSTEM
MONITORING LOCATIONS
TOMAH MUNICIPAL SANITARY LANDFILL
Tomah, Wisconsin

CRA

12865-80(026)GN-SP003 APR 16/2002

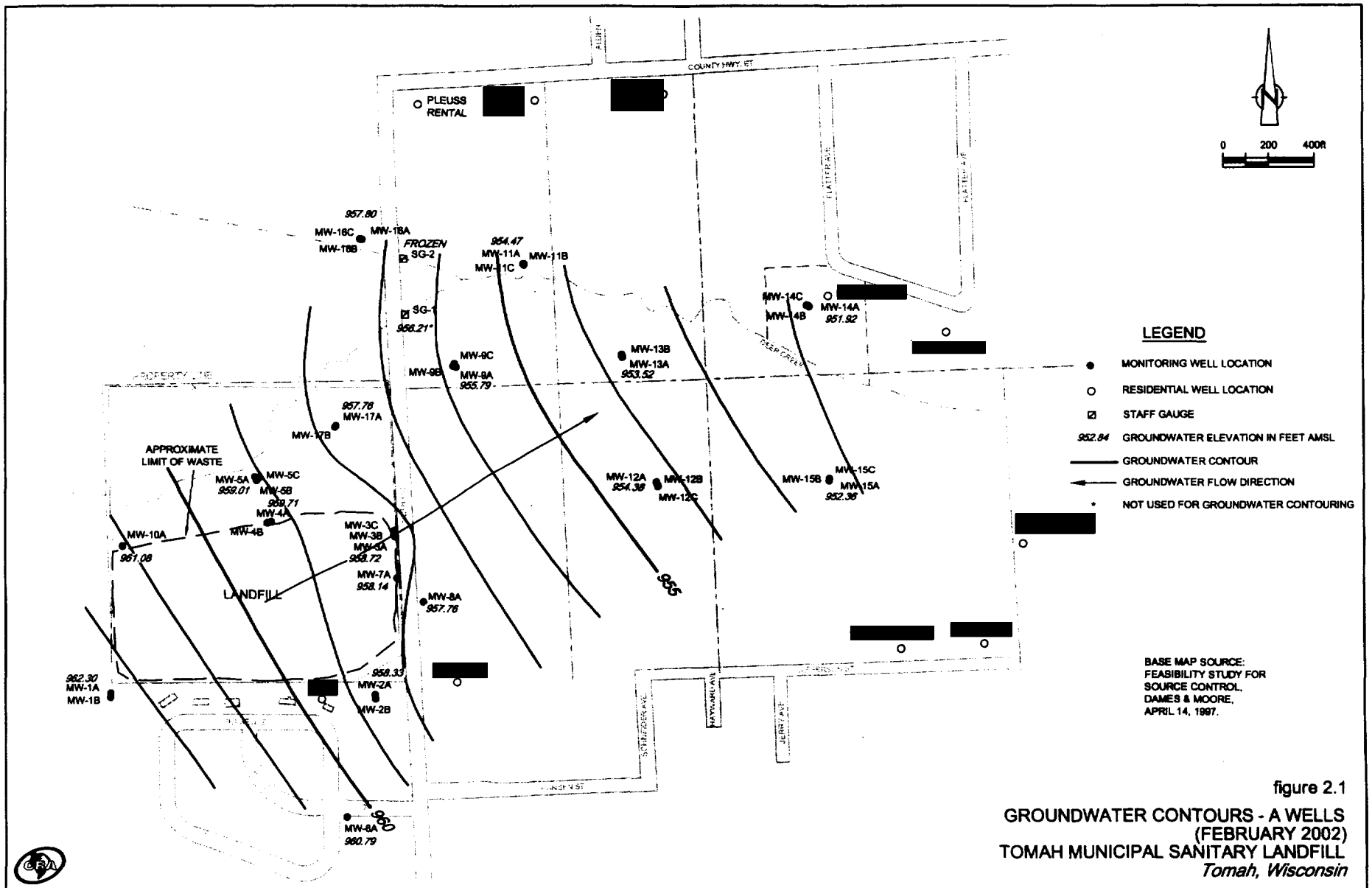


figure 2.1

GROUNDWATER CONTOURS - A WELLS
(FEBRUARY 2002)
TOMAH MUNICIPAL SANITARY LANDFILL
Tomah, Wisconsin

12865-80(026)GN-SP004 APR 16/2002

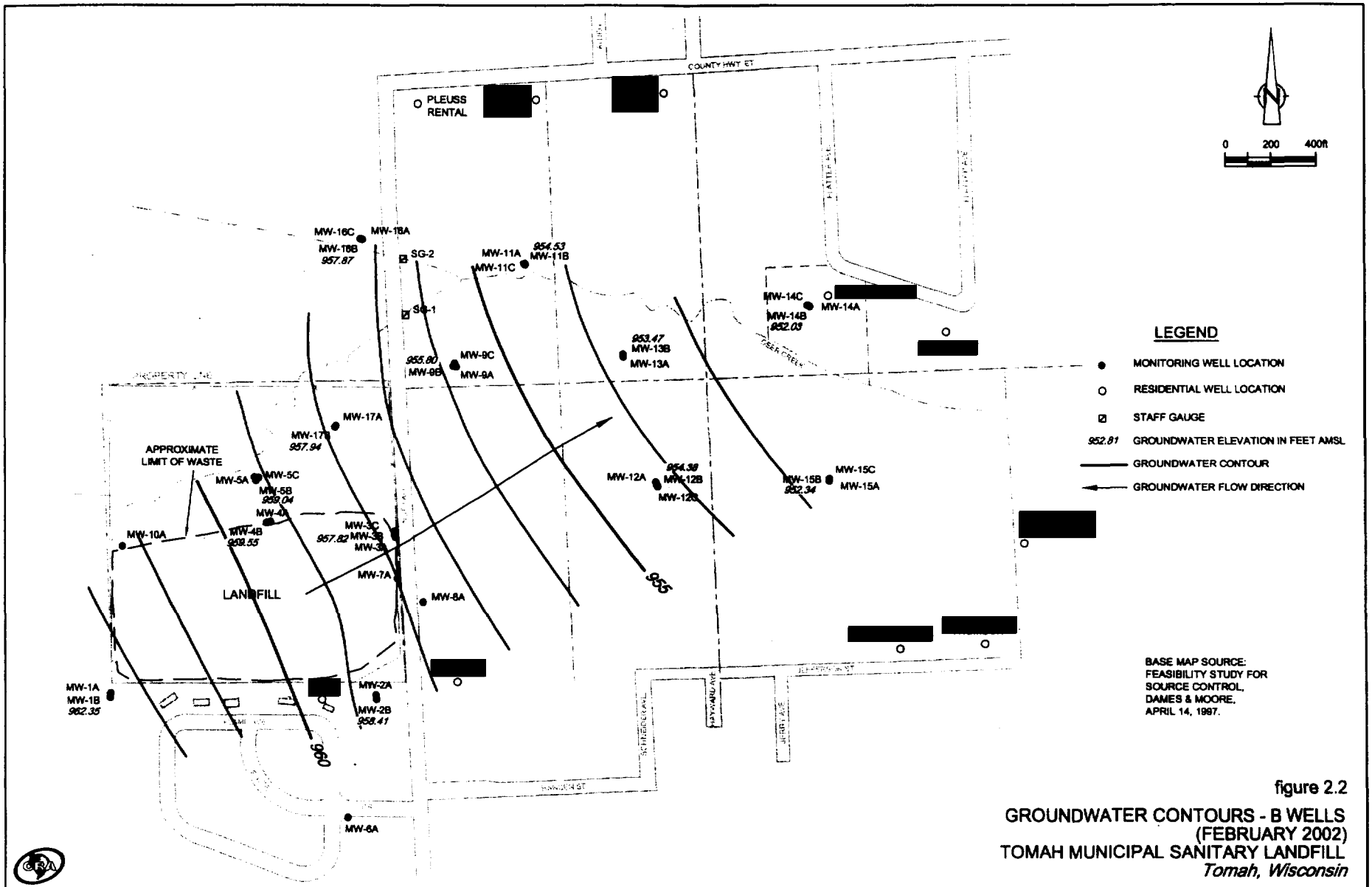


figure 2.2

GROUNDWATER CONTOURS - B WELLS
(FEBRUARY 2002)
TOMAH MUNICIPAL SANITARY LANDFILL
Tomah, Wisconsin

12865-80(026)GN-SP005 APR 25/2002

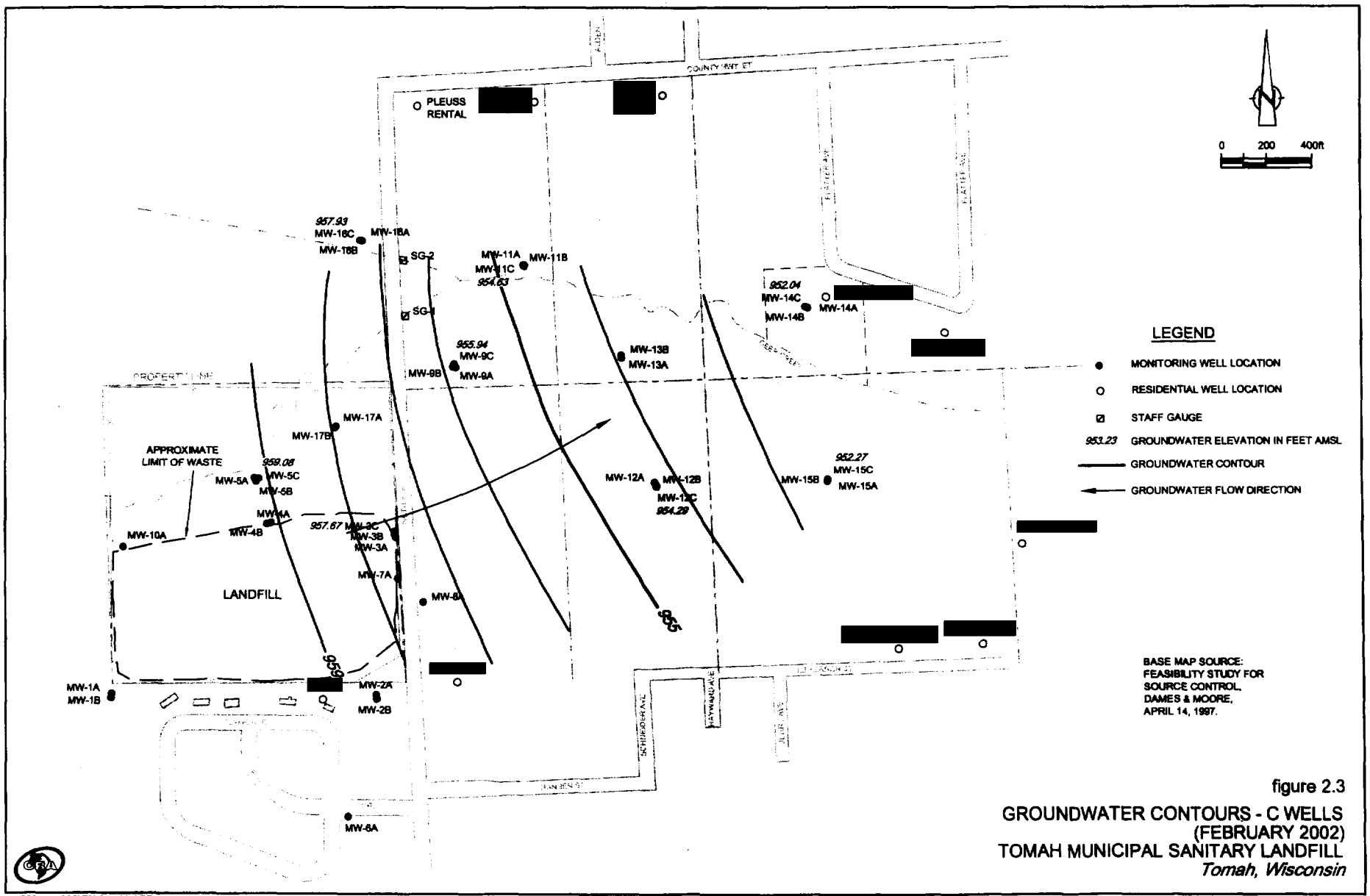


figure 2.3

GROUNDWATER CONTOURS - C WELLS
(FEBRUARY 2002)
TOMAH MUNICIPAL SANITARY LANDFILL
Tomah, Wisconsin

12865-80(026)GN-SP008 APR 25/2002

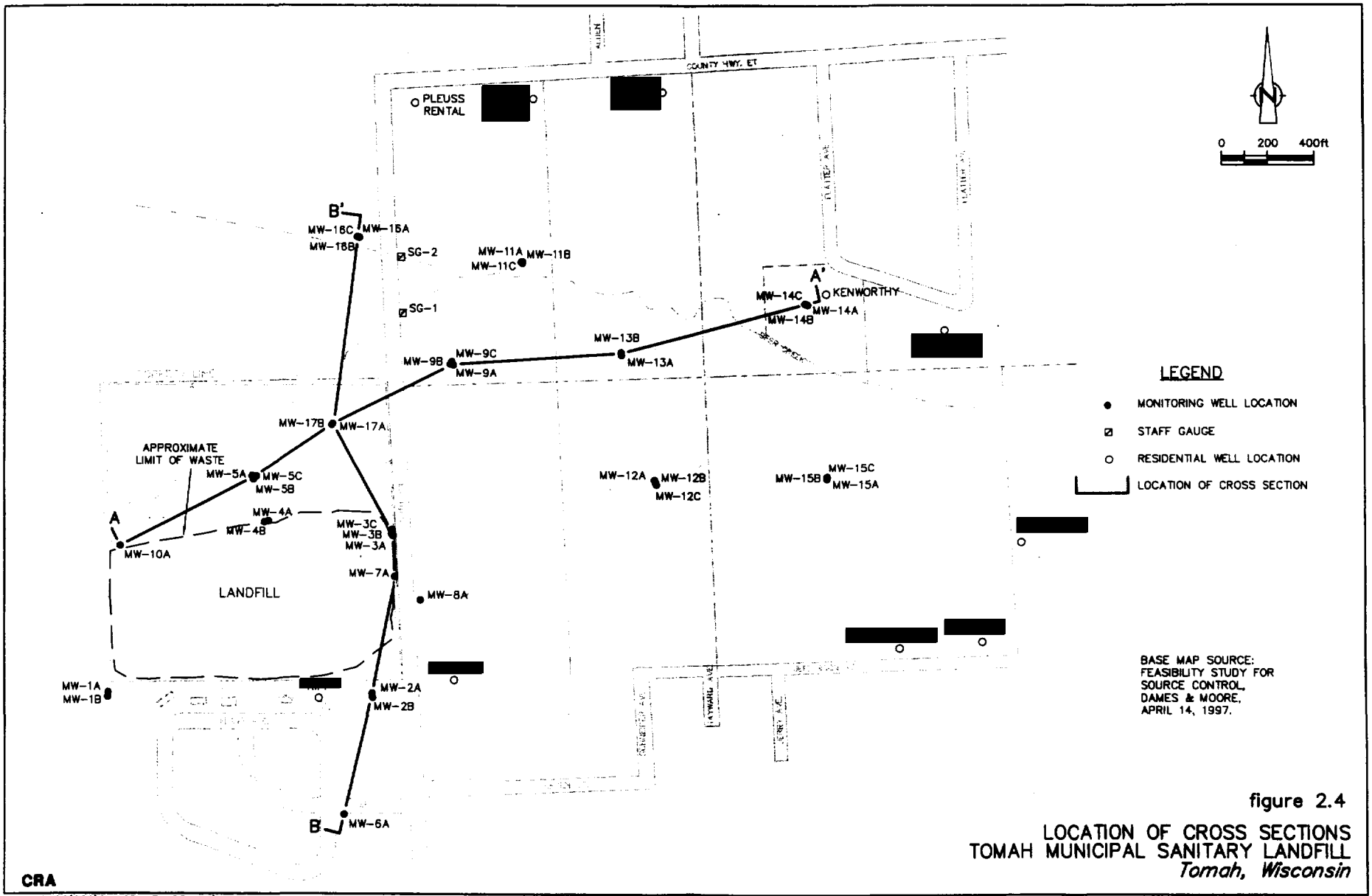


figure 2.4

LOCATION OF CROSS SECTIONS
TOMAH MUNICIPAL SANITARY LANDFILL
Tomah, Wisconsin

CRA

12865-80(026)GN-SP007 APR 16/2002

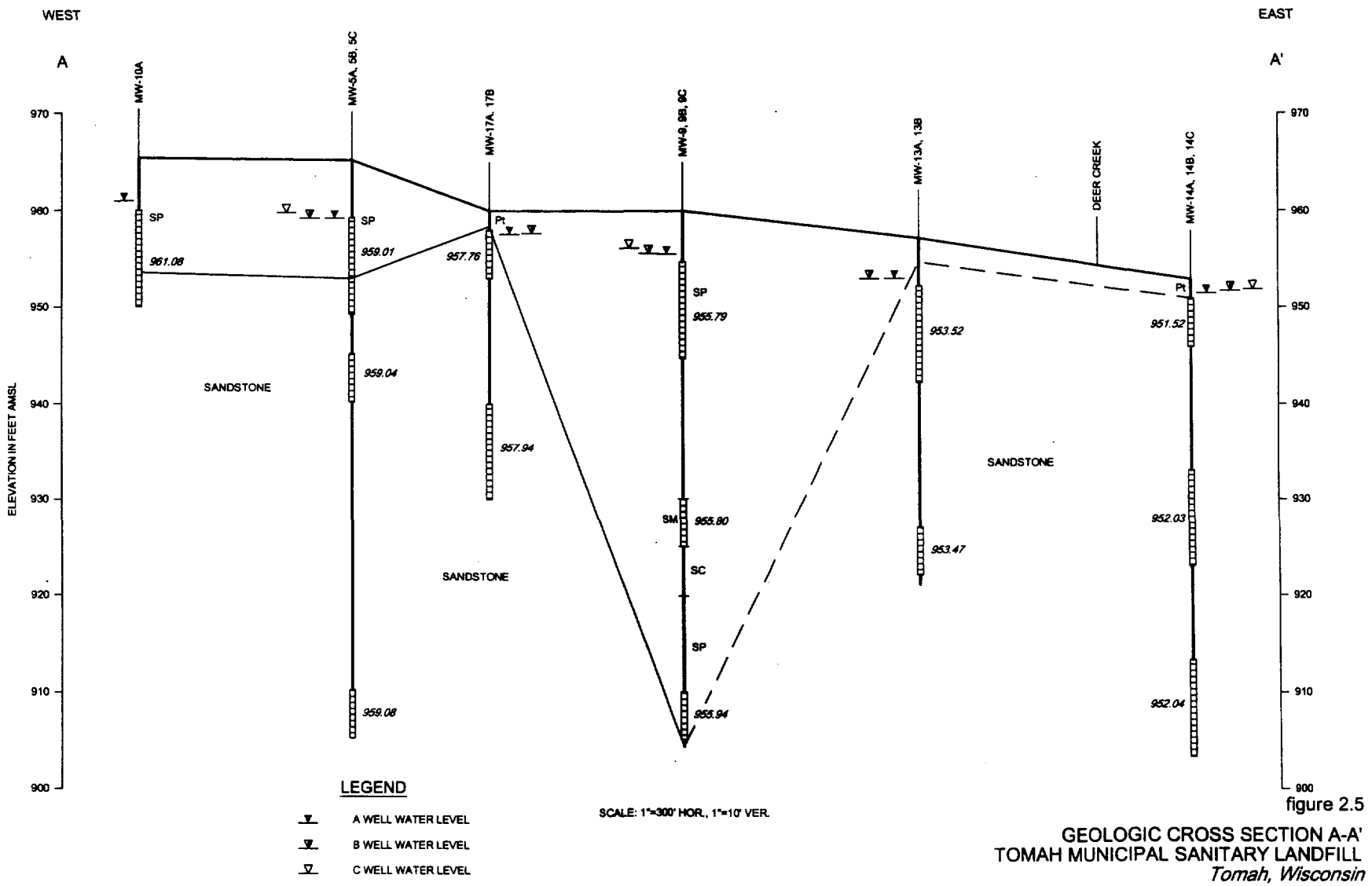


figure 2.5

GEOLOGIC CROSS SECTION A-A'
TOMAH MUNICIPAL SANITARY LANDFILL
Tomah, Wisconsin

12865-80(026)GN-SP008 APR 16/2002

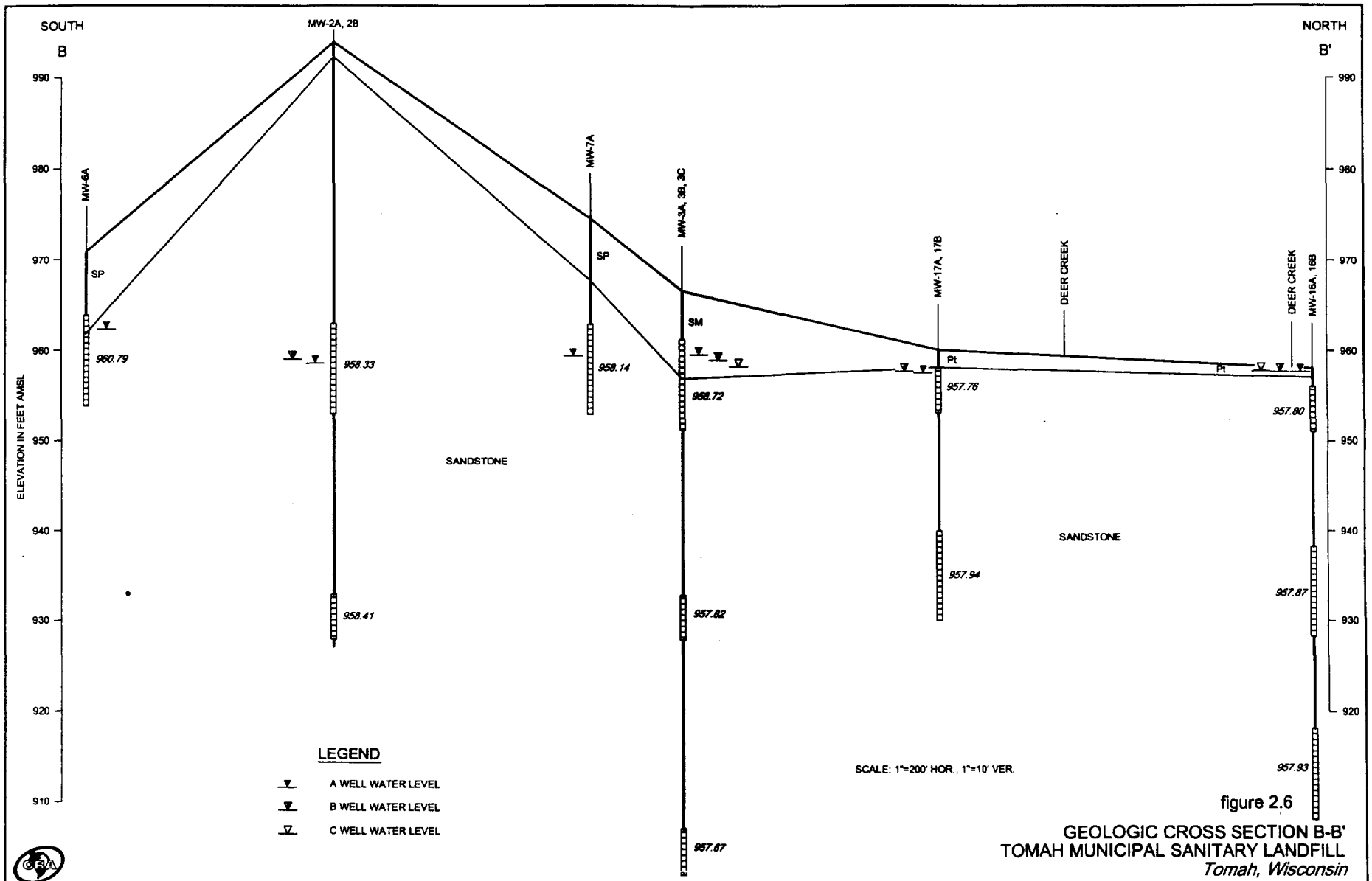


figure 2.6

GEOLOGIC CROSS SECTION B-B'
TOMAH MUNICIPAL SANITARY LANDFILL
Tomah, Wisconsin

12865-80(026)GN-SP009 APR 16/2002

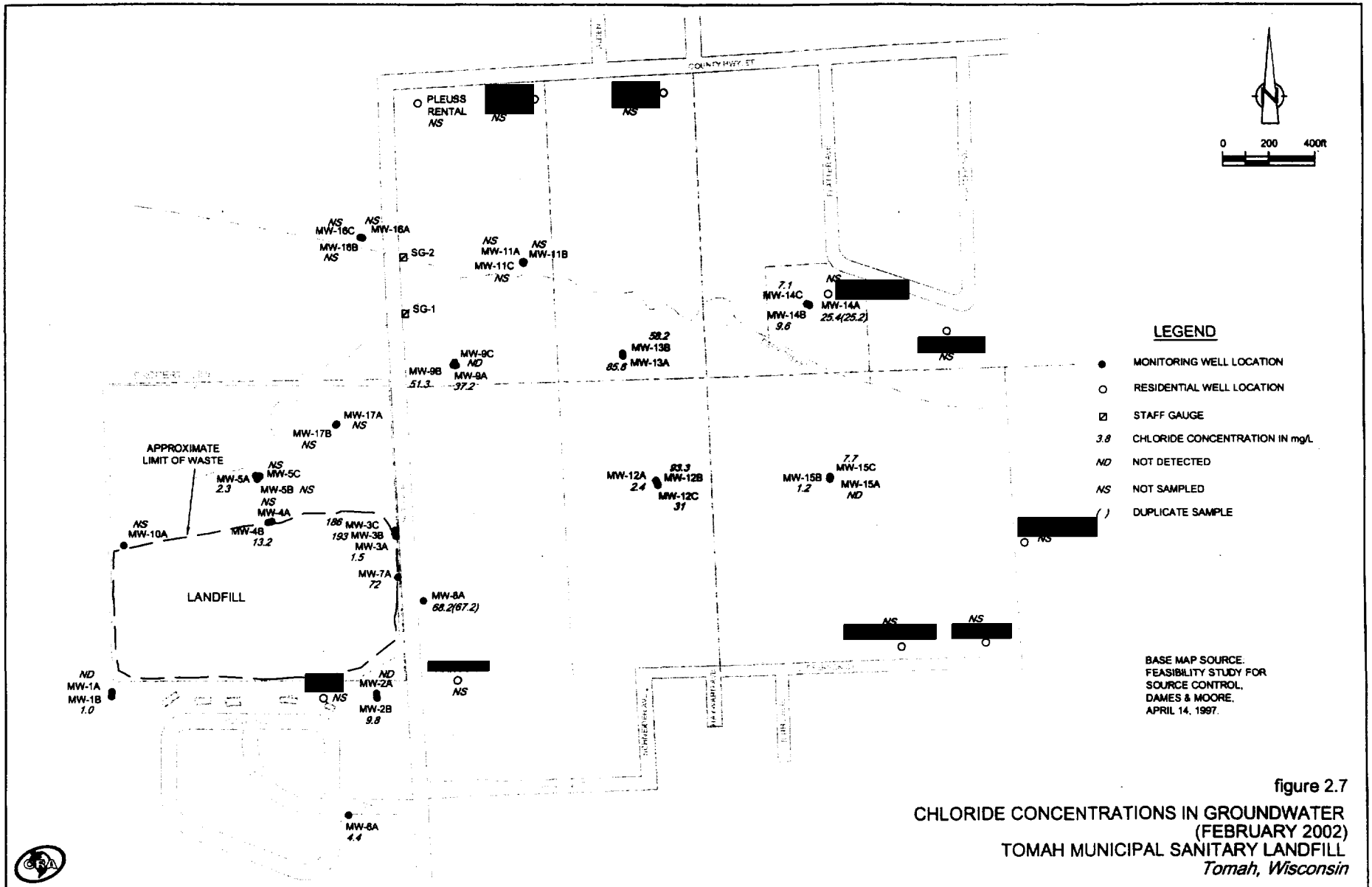


figure 2.7

CHLORIDE CONCENTRATIONS IN GROUNDWATER
(FEBRUARY 2002)
TOMAH MUNICIPAL SANITARY LANDFILL
Tomah, Wisconsin

12865-80(026)GN-SP010 APR 18/2002

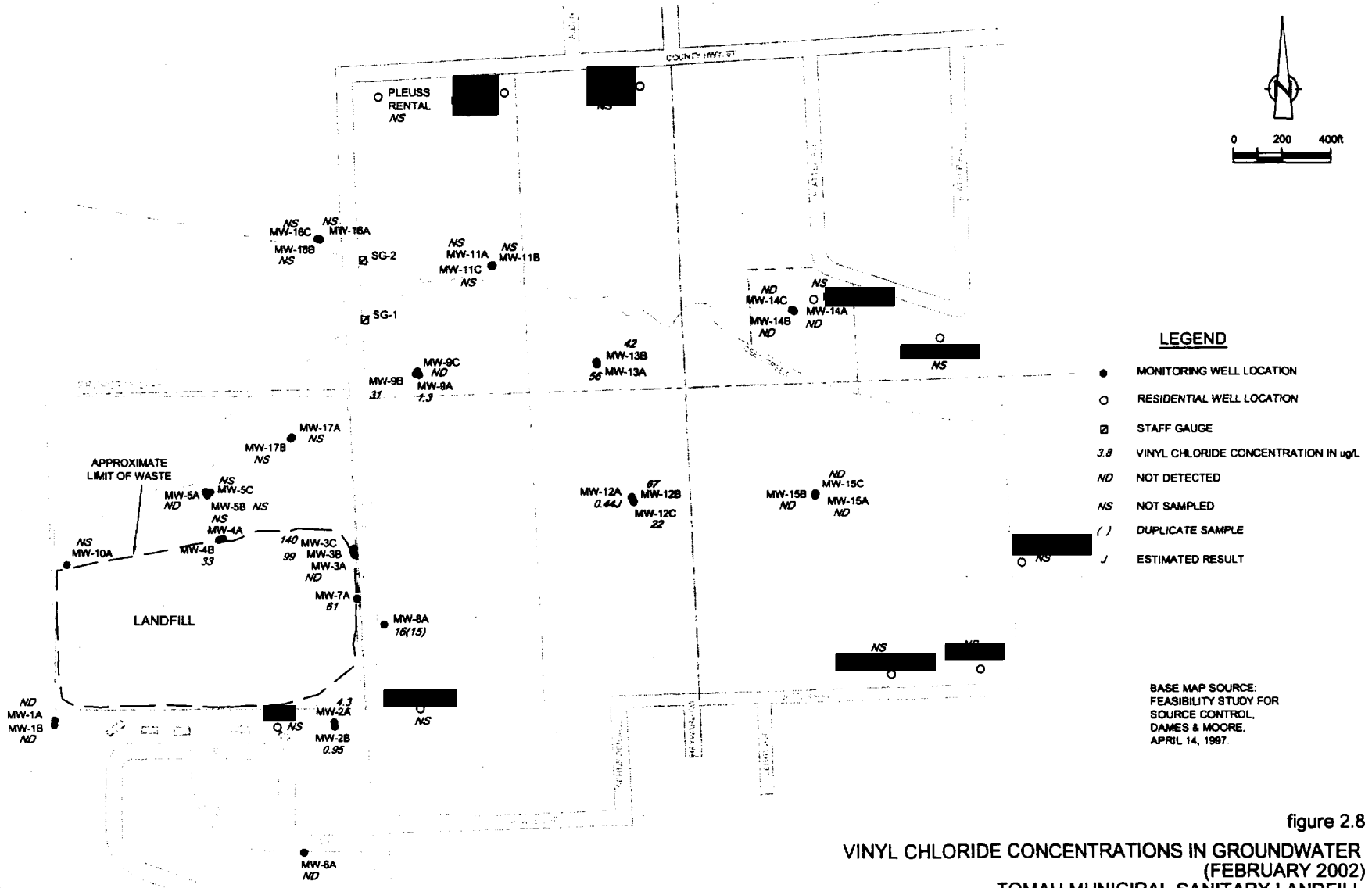


figure 2.8

VINYL CHLORIDE CONCENTRATIONS IN GROUNDWATER
(FEBRUARY 2002)
TOMAH MUNICIPAL SANITARY LANDFILL
Tomah, Wisconsin

12865-80(026)GN-SP011 APR 18/2002

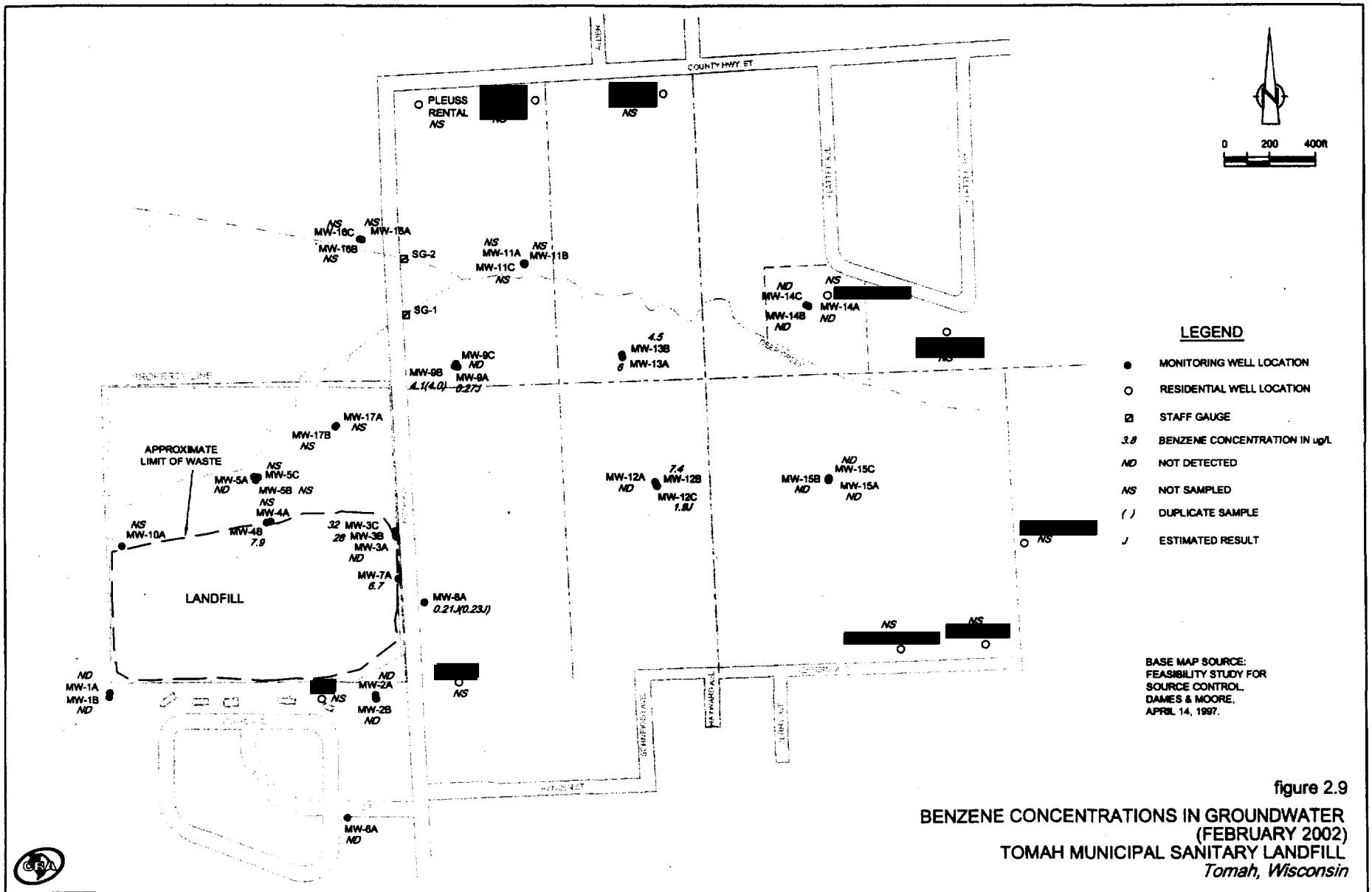


figure 2.9

BENZENE CONCENTRATIONS IN GROUNDWATER
(FEBRUARY 2002)
TOMAH MUNICIPAL SANITARY LANDFILL
Tomah, Wisconsin

12865-80(026)GN-SP014 APR 18/2002

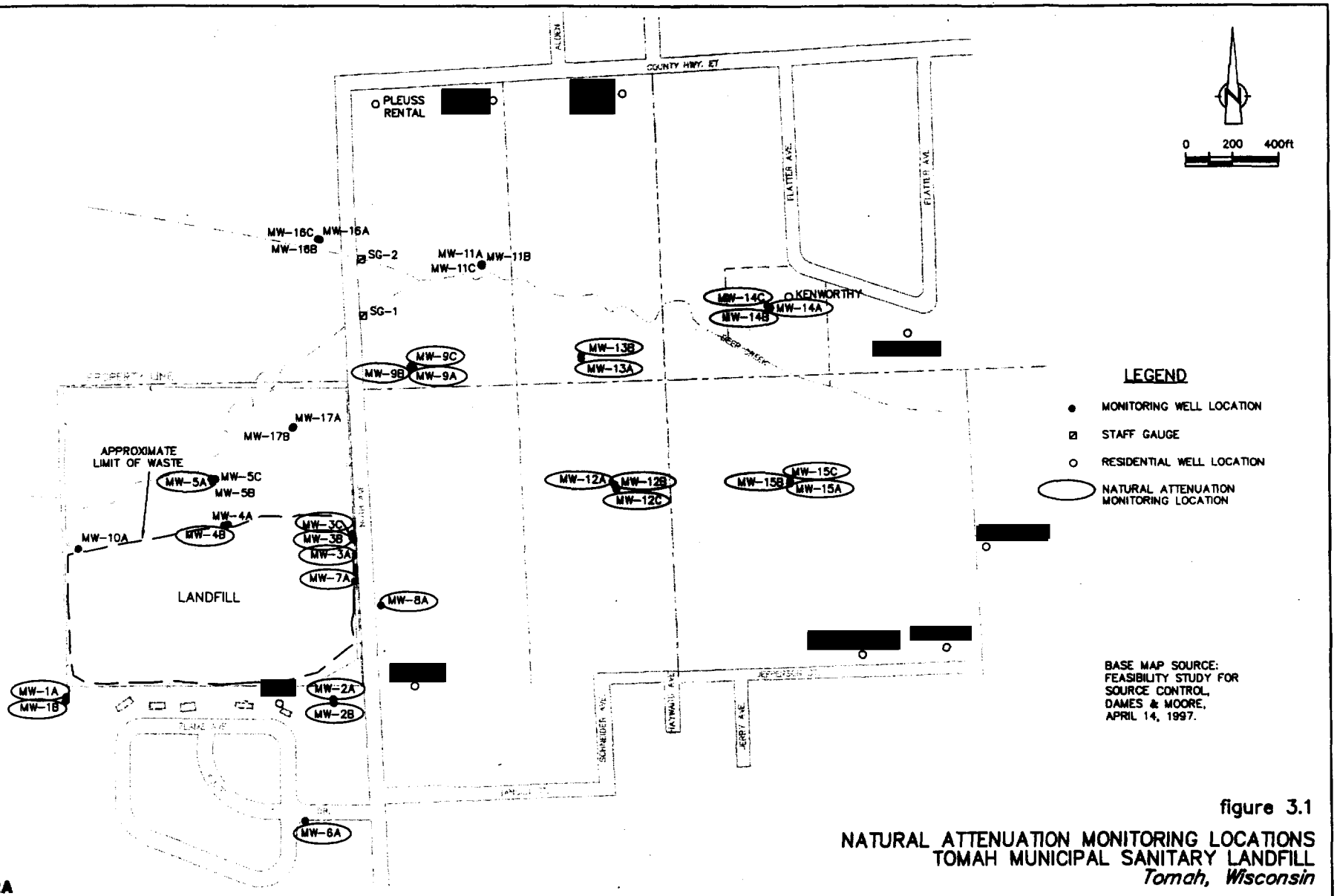


figure 3.1

NATURAL ATTENUATION MONITORING LOCATIONS
TOMAH MUNICIPAL SANITARY LANDFILL
Tomah, Wisconsin

CRA

12865-80(026)GN-SP013 APR 16/2002

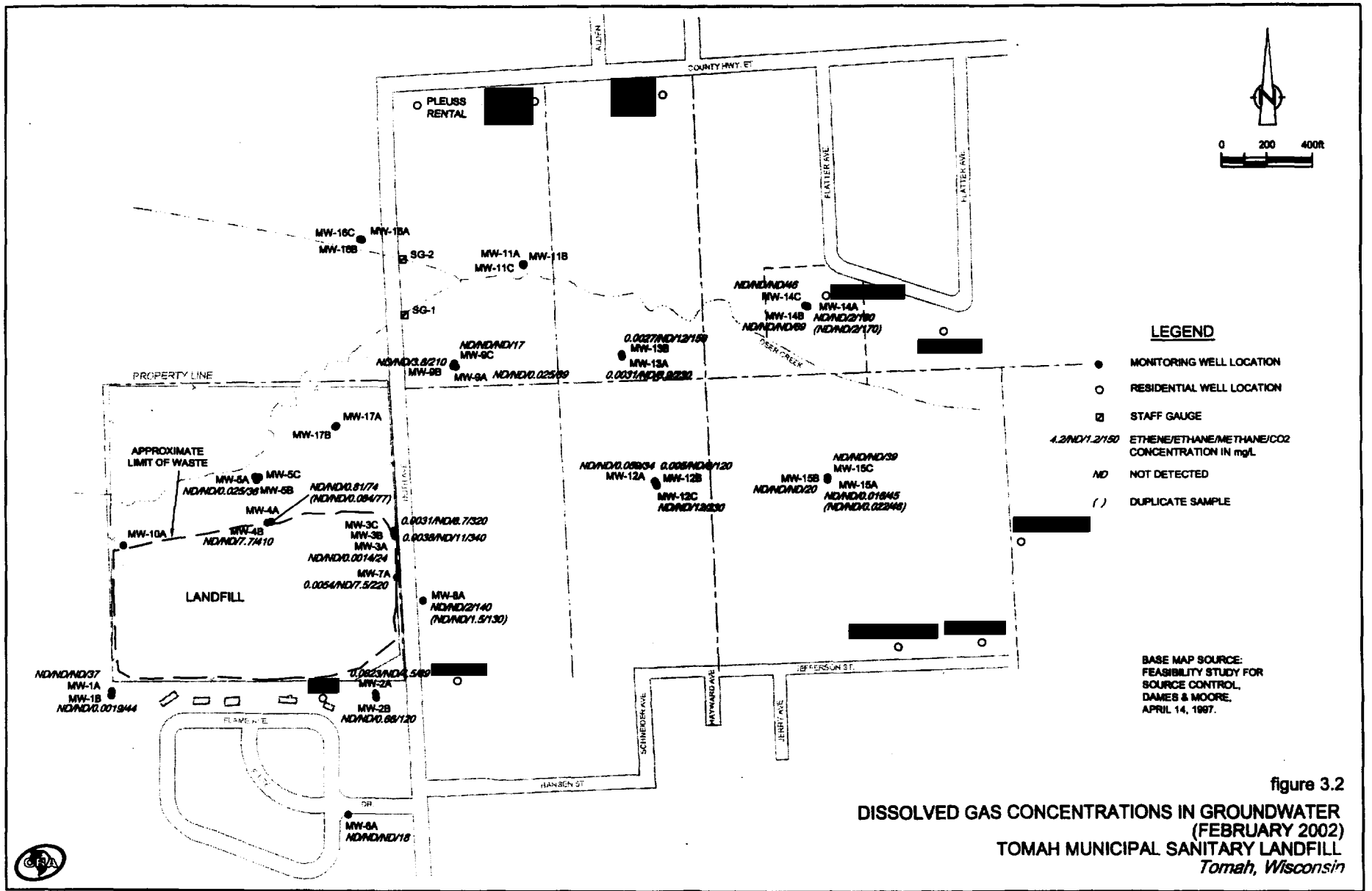


figure 3.2

DISSOLVED GAS CONCENTRATIONS IN GROUNDWATER (FEBRUARY 2002)
TOMAH MUNICIPAL SANITARY LANDFILL
Tomah, Wisconsin

12865-80(026)GN-SP012 APR 18/2002

TABLES

TABLE 2.1

GROUNDWATER SAMPLING AND ANALYSIS PROGRAM
TOMAH MUNICIPAL SANITARY LANDFILL
TOMAH, WISCONSIN

Sample Location	*Field Parameters* [1]	*Laboratory Parameters* [2,3]	*Intended Data Usage*	*Frequency*
Core Wells MW-9A[6], MW-9B[6], MW-9C[6], MW-12A[6], MW-12B[6], MW-12C[6], MW-13A[6], MW-13B[6], MW-15A[6], MW-15B[6], MW-15C[6]	• water level, pH, conductivity, temperature, Eh, DO, turbidity	• VOCs	• Monitor impact of cap, monitor plume expansion/reduction, establish long-term database.	Quarterly
Boundary Wells MW-2A[6], MW-2B[6], MW-3A[6], MW-3B[6], MW-3C[6], MW-4B[6], MW-5B, MW-7A[6], MW-8A[6], MW-14A[6], MW-14B[6], MW-14C[6]	• water level, pH, conductivity, temperature, Eh, DO, turbidity	• VOCs	• Monitor impact of cap, monitor plume expansion/reduction, establish long-term database.	Semi-Annually
Sentry Wells MW-1A[6], MW-1B[6], MW-4A, MW-5A[6], MW-5C, MW-6A[6], MW-10A, MW-11A, MW-11B, MW-11C, MW-17A, MW-17B	• water level, pH, conductivity, temperature, Eh, DO, turbidity	• VOCs, Total metals [4], Chloride	• Monitor impact of cap, monitor plume expansion/reduction, establish long-term database.	Annually
Residential Wells [5]	• pH, conductivity, temperature, Eh, DO, turbidity	• VOCs, Total metals [4], Chloride	• Identify potential impacts to downgradient groundwater consumers.	Annually
Deer Creek	• water level	• None	• Evaluate groundwater flow	Quarterly

Notes:

(1) Water levels will be collected quarterly at all monitoring wells.

(2) All monitoring wells will be analyzed for total metals and chloride during the annual round.

(3) Additional parameters may be collected as part of the groundwater investigation study. Parameters may include alkalinity, hardness, COD, nitrate, and sulfate.

(4) Metals parameters include arsenic and thallium. If sample results report metals above Wisconsin enforcement standards or federal maximum containment levels, groundwater from the well location will be sampled for dissolved metals, TSS, and TDS in addition to the parameters listed above during the next scheduled monitoring event.

(5) Residential wells include Pluess Rental, T. Pluess, J. Pluess, Kenworthy, Zdrojowy, Hanson, Ripp, Thundercloud, Schleicher, and Thomson.

(6) Natural Attenuation monitoring location sampled quarterly. See Table 3.2 for sampling parameters.

TABLE 2.2

GROUNDWATER ELEVATION SUMMARY
TOMAH MUNICIPAL SANITARY LANDFILL
TOMAH, WISCONSIN

Monitoring Well	*Top of Casing Elevation*	*7/12/00*	*11/13/00*	*2/19/01*	*5/22/01*	*8/7/01*	*11/27/01*	*2/25/02*
MW-1A	990.64	964.15	962.63	961.87	963.09	963.29	962.52	962.30
MW-1B	990.60	964.22	962.71	962.04	963.15	963.34	962.59	962.35
MW-2A	997.39	959.88	958.51	957.81	959.14	959.06	958.44	958.33
MW-2B	997.38	959.88	958.52	957.83	959.17	959.06	958.46	958.41
MW-3A	969.17	960.16	958.03	957.68	959.88	958.82	958.29	958.72
MW-3B	969.70	958.71	957.54	957.18	958.26	957.60	957.80	957.82
MW-3C	968.73	958.43	957.43	957.06	958.10	957.39	957.71	957.67
MW-4A	971.02	960.14	959.30	958.98	959.81	959.10	959.45	959.71
MW-4B	970.79	960.12	959.32	958.99	959.78	959.12	959.44	959.55
MW-5A	962.67	959.21	958.91	958.65	959.10	958.36	959.20	959.01
MW-5B	962.14	959.23	958.90	958.64	959.13	958.37	959.22	959.04
MW-5C	962.58	959.36	958.97	958.69	959.23	958.53	959.27	959.08
MW-6A	973.21	963.98	961.14	959.84	962.91	962.52	961.10	960.79
MW-7A	976.84	959.80	958.34	957.75	959.54	958.89	958.31	958.14
MW-8A	977.38	958.77	957.70	957.20	958.51	958.13	957.82	957.76
MW-9A	961.25	955.79	955.55	955.30	955.77	954.91	956.04	955.79
MW-9B	961.24	955.78	955.55	955.30	955.77	954.91	956.02	955.80
MW-9C	961.30	956.07	955.75	955.49	955.99	955.28	956.18	955.94
MW-10A	967.33	961.30	960.77	960.47	961.05	960.42	961.24	961.08
MW-11A	958.02	954.62	954.44	954.19	954.46	953.95	954.85	954.47
MW-11B	957.97	954.60	954.50	954.26	954.54	954.03	954.92	954.53
MW-11C	957.84	954.73	954.56	954.30	954.66	954.14	955.00	954.63
MW-12A	958.14	954.28	953.61	953.29	954.27	952.74	954.71	954.38
MW-12B	958.03	954.29	953.53	953.28	954.26	952.81	954.61	954.38
MW-12C	958.17	954.39	953.67	954.04	954.22	953.23	954.42	954.29
MW-13A	959.81	953.44	953.23	953.04	953.44	952.84	953.82	953.52
MW-13B	959.78	953.41	953.22	953.03	953.41	952.85	953.79	953.47
MW-14A	956.23	951.99	951.66	951.33	951.83	951.38	952.16	951.92
MW-14B	956.22	951.99	951.65	951.42	951.93	951.51	952.28	952.03
MW-14C	955.70	952.07	951.67	951.42	951.99	951.56	952.28	952.04
MW-15A	955.21	952.27	951.59	951.40	952.23	951.07	952.54	952.36
MW-15B	955.08	952.27	951.58	951.39	952.19	951.08	952.53	952.34
MW-15C	955.04	952.21	951.52	951.36	952.10	951.25	952.29	952.27
MW-16A	960.25	957.94	957.65	Frozen	957.83	956.83	957.95	957.80
MW-16B	960.32	958.02	957.67	957.24	957.87	956.84	957.98	957.87

TABLE 2.2

GROUNDWATER ELEVATION SUMMARY
TOMAH MUNICIPAL SANITARY LANDFILL
TOMAH, WISCONSIN

Monitoring Well	*Top of Casing Elevation*	*7/12/00*	*11/13/00*	*2/19/01*	*5/22/01*	*8/7/01*	*11/27/01*	*2/25/02*
MW-16C	960.46	958.09	957.77	957.40	957.98	957.02	958.09	957.93
MW-17A	961.50	957.76	957.17	956.90	957.69	956.24	957.83	957.76
MW-17B	961.75	957.77	957.21	957.17	957.70	956.35	957.80	957.94
SG-#1	957.92	956.22	956.22	Frozen	956.18	956.12	956.49	956.21
SG-#2	958.89		956.28	Frozen	956.34	956.06	956.63	Frozen

Notes:
Elevations are in feet above mean sea level.
Staff Gauges #1 and #2 are located on east side of Noth Road.
SG #1 is the south culvert and SG#2 in the north culvert.

TABLE 2.3

MONITORING WELL SAMPLE SUMMARY
TOMAH MUNICIPAL SANITARY LANDFILL
TOMAH, WISCONSIN

Well Location	Sample Number	pH	Specific Conductivity (uS)	Temperature (° C)	Eh (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Fe / Mn (mg/L)	Clarity	Volume Removed (gallons)
MW-1A	W-020226-PS-20	4.75	545	6.9	306	8.30	4.97	ND/ND	Clear	3.0
		4.65	542	7.8	299	8.33	3.86		Clear	4.5
		4.63	541	7.3	293	8.37	4.32		Clear	6.0
MW-1B	W-020226-PS-19	4.33	119	8.0	323	8.01	1.36	.5 / .3	Clear	1.5
		4.32	119	8.1	327	8.00	2.22		Clear	2.25
		4.34	119	8.1	330	7.99	1.84		Clear	3.0
MW-2A	W-020227-PS-21	4.20	49.6	9.5	NA	0.32	0.29	1.5 / ND	Clear	3.0
		4.22	50.1	9.5	NA	0.35	0.18		Clear	4.5
		4.26	50.4	9.5	NA	0.34	0.22		Clear	6.0
MW-2B	W-020227-PS-22	4.19	143	9.6	NA	0.20	0.0	ND/ND	Clear	1.5
		4.19	142	9.7	NA	0.21	0.66		Clear	2.25
		4.19	141	9.5	NA	0.19	0.32		Clear	3.0
MW-3A	W-020227-PS-28	5.37	212	6.2	NA	1.33	0.30	ND/ND	Clear	3.0
		5.37	215	6.1	NA	1.43	0.46		Clear	4.5
		5.48	205	6.1	NA	1.30	0.34		Clear	6.0
MW-3B	W-020227-PS-27	6.43	3050	9.9	NA	0.22	23.2	9.0 / ND	Clear	1.5
		6.43	2970	9.9	NA	0.19	8.21		Clear	2.25
		6.44	3080	9.9	NA	0.16	16.4		Clear	3.0
MW-3C	W-020227-PS-29	6.47	3030	8.9	NA	0.12	15.1	6.8 / ND	Clear	3.0
		6.46	3030	8.5	NA	0.14	3.97		Clear	4.5
		6.47	3060	8.9	NA	0.13	4.02		Clear	6.0
MW-4B	W-020226-PS-18	6.23	1159	10.6	-152	0.25	4.86	7.4 / ND	Clear	3.75
		6.23	1152	11.0	-150	0.26	4.22		Clear	4.5
		6.23	1150	11.1	-148	0.25	4.10		Clear	5.25
MW-5A	W-020226-PS-17	6.21	135	4.9	-121	0.14	4.82	4.8 / ND	Clear	2.25
		6.28	140	5.0	-141	0.13	5.02		Clear	3.0
		6.26	134	5.0	-145	0.13	4.61		Clear	3.75
MW-6A	W-020227-PS-26 (MS/MSD)	5.81	112	7.8	NA	9.13	1.60	ND/ND	Clear	2.4
		5.80	110	7.8	NA	9.25	1.53		Clear	3.6
		5.79	112	7.9	NA	9.26	1.51		Clear	4.8
MW-7A	W-020227-PS-25	6.34	908	8.2	NA	0.29	2.57	4.6 / ND	Clear	3.6
		6.35	933	8.2	NA	0.30	3.46		Clear	4.8
		6.36	969	8.3	NA	0.27	2.12		Clear	6.0
MW-8A	W-020227-PS-23	4.39	190	9.4	NA	0.29	0	ND/ND	Clear	3.5
	W-020227-PS-24 (Dup.)	4.39	204	9.4	NA	0.27	0		Clear	4.75
		4.40	205	9.4	NA	0.31	0		Clear	6.0
MW-9A	W-020226-PS-08	5.99	226	4.5	-97	0.25	5.4	1.9 / ND	Clear	2.4
		5.91	220	4.4	-98	0.27	5.21		Clear	4.2
		5.91	222	4.5	-101	0.25	6.1		Clear	6.0
MW-9B[2]	W-020226-PS-09	5.88	464	8.0	-177	0.40	2.1	4.0/ ND	Clear	0.75
	W-020226-PS-100 Voc's	6.00	471	8.1	-161	0.34	3.17		Clear	3.75
		5.97	471	8.1	-165	0.35	1.74		Clear	4.5
MW-9C[1]	W-020226-PS-10	5.60	29	7.2	100	9.20	9.7	ND/ND	Clear	3.0
		5.67	29	7.6	92	9.34	6.2		Clear	5.5
		5.62	28	7.6	95	9.74	4.79		Clear	7.0

TABLE 2.3

MONITORING WELL SAMPLE SUMMARY
TOMAH MUNICIPAL SANITARY LANDFILL
TOMAH, WISCONSIN

Well Location	*Sample Number*	*pH*	*Specific Conductivity (uS)*	*Temperature (° C)*	*Eh (mV)*	*Dissolved Oxygen (mg/L)*	*Turbidity (NTU)*	*Fe / Mn (mg/L)*	*Clarity*	*Volume Removed (gallons)*
MW-12A	W-020225-PS-05	4.94	74.2	4.8	172	1.39	6.0	.8 / ND	Clear	2.3
		5.04	74.4	5.1	177	0.95	5.0		Clear	3.0
		5.07	73.2	4.9	178	0.95	6.2		Clear	3.8
MW-12B	W-020225-PS-06	5.72	372	7.5	138	0.24	0.10	ND/ND	Clear	4.5
		5.73	372	7.6	142	0.23	0.20		Clear	6.0
		5.74	372	7.6	150	0.23	0.18		Clear	7.5
MW-12C	W-020225-PS-07	4.80	160	7.7	193	0.24	2.7	ND/ND	Clear	2.3
		4.74	167	7.5	192	0.27	3.3		Clear	3.8
		4.66	167	7.7	198	0.28	1.6		Clear	5.3
MW-13A	W-020226-PS-11	5.13	283	4.6	155	1.58	6.14	.2 / ND	Clear	6.0
		5.13	298	4.8	164	1.37	5.00		Clear	7.5
		5.13	297	4.8	168	1.41	4.65		Clear	9.0
MW-13B	W-020226-PS-12	5.37	248	8.1	136	0.25	20.4	ND/ND	Clear	2.25
		5.36	249	7.8	139	0.22	17.8		Clear	3.0
		5.37	248	8.0	133	0.21	13.2		Clear	3.75
MW-14A	W-020226-PS-13	5.58	277	3.7	-107	0.28	3.58	4.0/ ND	Clear	1.5
	W-020226-PS-14 (Dup.)	5.58	281	3.7	-115	0.22	3.21		Clear	2.25
		5.59	278	3.7	-112	0.22	3.23		Clear	3.0
MW-14B	W-020226-PS-15	4.88	141	7.2	181	2.24	2.70	ND/ND	Clear	4.5
	(MS/MSD)	4.87	142	7.4	193	2.20	3.38		Clear	6.0
		4.88	138	7.3	233	2.22	3.23		Clear	7.5
MW-14C[1]	W-020226-PS-16	4.89	195	8.0	184	6.90	15.4	ND/ND	Clear	4.5
		4.87	193	8.1	243	7.08	8.95		Clear	6.0
		4.85	194	8.1	252	7.05	6.20		Clear	7.5
MW-15A	W-020225-PS-03	5.23	76.3	4.0	142	1.40	2.85	ND/ND	Clear	5.0
	W-020225-PS-04 (Dup.)	5.24	76.3	4.0	153	1.53	2.00		Clear	5.8
		5.25	74.1	3.9	156	1.53	1.82		Clear	6.5
MW-15B	W-020225-PS-01	5.63	87.6	7.5	202	2.08	5.17	ND/ND	Clear	4.5
		5.59	88.5	7.6	205	2.00	4.65		Clear	6.0
		5.60	87.7	7.6	206	2.01	4.88		Clear	7.5
MW-15C	W-020225-PS-02	4.74	171	8.1	250	3.35	6.18	ND/ND	Clear	4.5
		4.65	169	7.8	255	3.38	3.90		Clear	6.0
		4.77	167	7.8	261	3.25	4.12		Clear	7.5

Notes:
Groundwater sampled February 25-27, 2002.
Additional Dissolved Oxygen reading taken within the well column after purging.
[1] MW-9C = 3.41 mg/L
[1] MW-14C = 1.01 mg/L
[4] MW-9B had additional VOC's collected after the initial sample collection and after 10 additional minutes of purging.
ND - Non-detect
NA - Equipment malfunction.

TABLE 2.4

SUMMARY OF DETECTED COMPOUNDS IN GROUNDWATER
TOMAH MUNICIPAL LANDFILL
TOMAH, WISCONSIN

LOCATION	DATE	DUP	Chloride mg/L	Nitrate mg/L	Sulfate mg/L	Total Alkalinity mg/L	Total Organic Carbon mg/L	Total Sulfide mg/L	Iron mg/L	Manganese mg/L	Ethene mg/L	Methane mg/L	Carbon dioxide mg/L	1,1,1-Trichloroethane µg/L	1,1-Dichloroethane µg/L	1,1-Dichloroethene µg/L	1,2-Dichloroethane µg/L	1,2-Dichloropropane µg/L	Benzene µg/L
Wisconsin Enforcement Standards			250	5	250	–	–	–	0.3	0.05	–	–	–	200	850	7	5	5	5
Core Wells																			
MW-9A	2/26/02		37.2	0.11	6.8	68	16	< 1	1.7	0.44	< 0.001	0.25	89	< 1	< 1	< 1	< 1	< 1	0.27 J
MW-9B	2/26/02		51.3	< 0.1	< 1	210	8	< 1	25.5	2.8	< 0.001	3.8	210	< 1	0.75 J	< 1	< 1	< 1	4.1
MW-9B	2/26/02	D												< 1	0.71 J	< 1	< 1	< 1	4
MW-9C	2/26/02		< 1	< 0.1	< 1	12	< 1	< 1	< 0.1	< 0.015	< 0.001	< 0.001	17	< 1	< 1	< 1	< 1	< 1	< 1
MW-12A	2/25/02		2.4	0.54 J	10.8	5.8	2	< 1	0.46	0.048	< 0.001	0.059	34	< 1	0.56 J	< 1	< 1	< 1	< 1
MW-12B	2/25/02		93.3	< 0.1 UJ	8.1	90	3	< 1	< 0.1	0.33	0.005	8	120	< 2.9	33	< 2.9	< 2.9	0.7 J	7.4
MW-12C	2/25/02		31	0.36 J	29.6	13	2	< 1	< 0.1	0.32	< 0.001	12	230	7.6	6.7	1.8 J	< 4	1.2 J	1.9 J
MW-13A	2/26/02		85.6	0.78	9	39	10	< 1	0.2	0.35	0.0031	8.9	230	< 2	1.4 J	< 2	2.2	1.4 J	6
MW-13B	2/26/02		58.2	2.1	2	52	4	1.3	< 0.1	< 0.015	0.0027	12	150	< 1.7	0.54 J	< 1.7	4.8	1.7	4.5
MW-15A	2/25/02		< 1	0.53 J	11	11	2	< 1	0.18	0.016	< 0.001	0.016	45	< 1	< 1	< 1	< 1	< 1	< 1
MW-15A	2/25/02	D	< 1	0.54 J	11	11	2	< 1	0.17	0.017	< 0.001	0.022	46	< 1	< 1	< 1	< 1	< 1	< 1
MW-15B	2/25/02		1.2	1.1 J	14.4	8.2	< 1	< 1	0.22	< 0.015	< 0.001	< 0.001	20	< 1	< 1	< 1	< 1	< 1	< 1
MW-15C	2/25/02		7.7	14.6 J	21.7	< 5	1	< 1	0.11	0.43	< 0.001	< 0.001	39	< 1	< 1	< 1	< 1	< 1	< 1
Boundary Wells																			
MW-2A	2/27/02		< 1	< 0.1	14.7	7.3	2	< 1	1.6	0.66	0.0023	4.5	89	< 1	< 1	< 1	< 1	< 1	< 1
MW-2B	2/27/02		9.8	3.2	22.5	5.6	1	< 1	< 0.1	1.3	< 0.001	0.66	120	< 1	< 1	< 1	< 1	< 1	< 1
MW-3A	2/27/02		1.5	31.3 J	6.2	6.9	2	< 1	< 0.1	1.2	< 0.001	0.0014	24	< 1	< 1	< 1	< 1	< 1	< 1
MW-3B	2/27/02		193	< 0.1 UJ	< 1	1100	53	< 1	42.9	0.058	0.0038	11	340	< 2.9	0.5 J	< 2.9	< 2.9	2.5 J	28
MW-3C	2/27/02		186	< 0.1 UJ	< 1	1100	66	< 1	29.4	0.03	0.0031	8.7	320	< 5	1.7 J	< 5	< 5	3.9 J	32
MW-4B	2/26/02		13.2	< 0.1	3.3	690	23	< 1	64	0.18	< 0.001	7.7	410	< 1	< 1	< 1	< 1	0.64 J	7.9
MW-7A	2/27/02		72	< 0.1	13.6	460	18	< 1	49.4	0.5	0.0054	7.5	220	< 2.5	1 J	< 2.5	< 2.5	2.4 J	6.7
MW-8A	2/27/02		68.2	1.4	18.7	7.1	2	< 1	< 0.1	0.59	< 0.001	2	140	2	1.7	< 1	< 1	< 1	0.21 J
MW-8A	2/27/02	D	67.2	1.4	17.7	7.1	2	< 1	< 0.1	0.57	< 0.001	1.5	130	1.9	1.7	< 1	< 1	< 1	0.23 J
MW-14A	2/26/02		25.4	< 0.1	18.4	83	31	< 1	8.5	0.2	< 0.001	2	180	< 1	< 1	< 1	< 1	< 1	< 1
MW-14A	2/26/02	D	25.2	< 0.1	18.8	82	31	< 1	8.8	0.22	< 0.001	2	170	< 1	< 1	< 1	< 1	< 1	< 1
MW-14B	2/26/02		8.2	10.3	15.5	9.2	1	< 1	< 0.1	< 0.015	< 0.001	< 0.001	69	< 1	< 1	< 1	< 1	< 1	< 1
MW-14C	2/26/02		7	8.6	11	6.5	< 1	< 1	< 0.1	< 0.015	< 0.001	< 0.001	46	< 1	< 1	< 1	< 1	< 1	< 1
Sentry Wells																			
MW-1A	2/26/02		< 1	1.8	10.5	< 5	1	< 1	< 0.1	0.032	< 0.001	< 0.001	37	< 1	< 1	< 1	< 1	< 1	< 1
MW-1B	2/26/02		1	1.7	37.8	< 5	2	< 1	< 0.1	0.48	< 0.001	0.0019	44	< 1	< 1	< 1	< 1	< 1	< 1
MW-5A	2/26/02		2.3	< 0.1	5	56	5	< 1	12.4	4.1	< 0.001	0.025	36	< 1	< 1	< 1	< 1	< 1	< 1
MW-6A	2/27/02		4.4	1.2 J	2.9	26	< 1	< 1	0.19	< 0.015	< 0.001	< 0.001	18	< 1	< 1	< 1	< 1	< 1	< 1

TABLE 2.4

SUMMARY OF DETECTED COMPOUNDS IN GROUNDWATER
TOMAH MUNICIPAL LANDFILL
TOMAH, WISCONSIN

LOCATION	DATE	DUP	Chlorobenzene µg/L	Chloroethane µg/L	cis-1,2-Dichloroethene µg/L	Dichlorodifluoromethane µg/L	Ethylbenzene µg/L	Methylene chloride µg/L	Tetrachloroethene µg/L	Toluene µg/L	trans-1,2-Dichloroethene µg/L	Trichloroethene µg/L	Trichlorofluoromethane µg/L	Vinyl chloride µg/L	Xylenes, Total µg/L	Total VOCs µg/L
Wisconsin Enforcement Standards			100	400	70	1000	700	5	5	343	100	5	3490	0.2	10000	–
Core Wells																
MW-9A	2/26/02		< 1	< 2	< 0.5	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	1.3	< 1	1.57
MW-9B	2/26/02		0.54 J	1.2 J	3.4	< 1	< 1	< 1	< 1	0.21 J	< 0.5	0.24 J	< 1	31	< 1	41.44
MW-9B	2/26/02	D	0.54 J	1.3 J	3.2	< 1	< 1	< 1	< 1	0.22 J	< 0.5	0.24 J	< 1	31	< 1	41.21
MW-9C	2/26/02		< 1	< 2	< 0.5	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 0.5	< 1	ND
MW-12A	2/25/02		< 1	< 2	0.65	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	0.44 J	< 1	1.65
MW-12B	2/25/02		< 2.9	7.2	14	< 2.9	< 2.9	1.6 J	1 J	< 2.9	< 1.4	0.64 J	< 2.9	67	< 2.9	132.54
MW-12C	2/25/02		< 4	< 8	110	5.2	< 4	9.7	8.8	< 4	0.86 J	3 J	1.9 J	29	< 4	180.66
MW-13A	2/26/02		< 2	1.9 J	24	< 2	< 2	1.1 J	< 2	< 2	< 1	0.49 J	< 2	55	0.74 J	95.23
MW-13B	2/26/02		< 1.7	< 3.3	16	< 1.7	< 1.7	4.6	0.58 J	< 1.7	< 0.84	0.75 J	< 1.7	42	1.3 J	76.77
MW-15A	2/25/02		< 1	< 2	< 0.5	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 0.5	< 1	ND
MW-15A	2/25/02	D	< 1	< 2	< 0.5	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 0.5	< 1	ND
MW-15B	2/25/02		< 1	< 2	< 0.5	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 0.5	< 1	ND
MW-15C	2/25/02		< 1	< 2	< 0.5	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 0.5	< 1	ND
Boundary Wells																
MW-2A	2/27/02		< 1	< 2	< 0.5	1.4	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	4.3	< 1	5.7
MW-2B	2/27/02		< 1	< 2	< 0.5	1.3	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	0.95	< 1	2.25
MW-3A	2/27/02		< 1	< 2	< 0.5	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 0.5	< 1	ND
MW-3B	2/27/02		5.2	2.1 J	< 1.4	< 2.9	33	< 2.9	< 2.9	12	< 1.4	< 2.9	< 2.9	99	86	268.3
MW-3C	2/27/02		2.6 J	2.6 J	< 2.5	< 5	18	< 5	< 5	10	< 2.5	< 5	< 5	140	35	245.8
MW-4B	2/26/02		1.1	1.3 J	0.27 J	< 1	0.13 J	< 1	< 1	0.7 J	< 0.5	< 1	< 1	33	0.68 J	45.72
MW-7A	2/27/02		0.4 J	1.9 J	< 1.2	< 2.5	12	< 2.5	< 2.5	4.9	< 1.2	< 2.5	< 2.5	61	22	112.3
MW-8A	2/27/02		< 1	< 2	< 0.5	0.43 J	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	16	< 1	20.34
MW-8A	2/27/02	D	< 1	< 2	0.25 J	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	15	< 1	19.08
MW-14A	2/26/02		< 1	< 2	< 0.5	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 0.5	< 1	ND
MW-14A	2/26/02	D	< 1	< 2	< 0.5	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 0.5	< 1	ND
MW-14B	2/26/02		< 1	< 2	< 0.5	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 0.5	< 1	ND
MW-14C	2/26/02		< 1	< 2	< 0.5	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 0.5	< 1	ND
Sentry Wells																
MW-1A	2/26/02		< 1	< 2	< 0.5	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 0.5	< 1	ND
MW-1B	2/26/02		< 1	< 2	< 0.5	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 0.5	< 1	ND
MW-5A	2/26/02		< 1	< 2	< 0.5	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 0.5	< 1	ND
MW-6A	2/27/02		< 1	< 2	< 0.5	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 0.5	< 1	ND

Notes.
D - Duplicate.
J - Estimated result. Result is less than reporting limit.
U - Analyte is non-detect with the associated value being the quantitation limit.
ND - Analyte was not detected.
-- - No enforcement standard.
Shaded- Exceedence of Wisconsin Enforcement Standard

TABLE 2.5

HISTORICAL WDNR ENFORCEMENT STANDARD EXCEEDENCES IN GROUNDWATER
TOMAH MUNICIPAL SANITARY LANDFILL
TOMAH, WISCONSIN

			Number of Exceedences					*Date of Most Recent Exceedence*
Compound	*ES*	*Units*	*Feb-01*	*May-01*	*Aug-01* [1]	*Nov-01*	*Feb-02*	
1,1-Dichloroethene	7	ug/L	0	0	0	0	0	11/13/00
1,1,2,2-Tetrachloroethane	0.2	ug/L	0	0	1	0	0	8/7/01
1,2-Dichloroethane	5	ug/L	1	0	0	1 (5.5 µg/L)	0	11/28/01
1,2-Dichloroethene, Total	70	ug/L	0	0	0	0	0	8/28/95
1,2-Dichloropropane	5	ug/L	0	0	0	0	0	11/15/00
Antimony	6	ug/L	0	0	0	0	0	10/27/98
Arsenic	50	ug/L	0	0	0	0	0	8/14/97
Barium	2	mg/L	0	0	0	0	0	10/29/98
Benzene	5	ug/L	9	7	0	4 (8.3 - 36 µg/L)	6(6 - 32 µg/L)	2/27/02
Beryllium	4	ug/L	0	0	0	0	0	8/13/97
bis(2-ethylhexyl)phthalate	6	ug/L	0	0	0	0	0	10/30/98
Boron	960	ug/L	0	0	0	0	0	10/29/98
Bromodichloromethane	0.6	ug/L	0	0	0	0	0	12/20/96
Cadmium	0.005	mg/L	0	0	0	0	0	8/12/97
Chloride	250	mg/L	1	0	0	0	0	2/19/01
Chromium	0.1	mg/L	0	0	0	0	0	8/13/97
cis-1,2-Dichloroethene	70	ug/L	0	0	0	1 (96 µg/L)	1(110 µg/L)	2/25/02
Cobalt	0.04	mg/L	0	0	0	0	0	10/27/98
Fluoride	4	mg/L	0	0	0	0	0	12/20/96
Iron	0.3	mg/L	22	24	0	0	11(0.46 - 64 µg/L)	5/21/01
Iron, Dissolved	1.3	mg/L	17	14	0	16 (0.53 - 80.7 mg/L)	0	11/30/01
Lead	15	ug/L	0	0	0	0	0	10/30/98
Manganese	0.05	mg/L	27	30	0	0	18(0.058-4.1 µg/L)	2/27/02
Manganese, Dissolved	1.05	mg/L	26	23	0	16 (0.054 - 6.2mg/L)	0	11/30/01
Mercury	2	ug/L	0	0	0	0	0	12/21/96
Methylene chloride	5	ug/L	2	2	2	0	1(9.7 µg/L)	2/25/02
Nickel	0.1	mg/L	0	0	0	0	0	8/14/97
Nitrogen, Nitrate	10	mg/L	0	0	0	0	4(8.6 - 31.3 J µg/L)	2/27/02
Sulfate	250	mg/L	0	0	0	0	0	9/22/94
Tetrachloroethene	5	ug/L	1	1	1	1 (9.1 µg/L)	1(8.8 µg/L)	2/25/02
Tetrahydrofuran	50	ug/L	0	0	0	0	0	9/21/94
Thallium	2	ug/L	1	2	0	0	0	5/22/01
Toluene	343	ug/L	0	0	0	0	0	12/20/96
Vanadium	0.03	mg/L	0	0	0	0	0	10/30/98
Vinyl chloride	0.2	ug/L	24	18	6	14 (1.6 - 190 µg/L)	16(0.44 - 140 µg/L)	2/27/02

Notes:
[1] Core wells sampled only.
J - Estimated result. Result is less than reporting limit.

TABLE 3.1

NATURAL ATTENUATION MONITORING WELL SUMMARY
TOMAH MUNICIPAL SANITARY LANDFILL
TOMAH, WISCONSIN

Well	*Aquifer Monitored*	*Top of Casing Elevations (ft. AMSL)*	*Ground Surface Elevations (ft. AMSL)*	*Depth (ft. bgs)*	*Screen Length (ft)*	*Mid- Screen Well Elevation (ft. AMSL)*
Source Area						
MW-3A	OB/SS	969.17	966.7	15.5	10	956.2
MW-3B	SS	969.70	966.8	39	5	930.3
MW-3C	SS	968.73	966.3	65	10	906.3
MW-4B	SS	970.79	968.4	30	5	940.9
MW-7A	SS	976.84	974.3	24.6	10	954.7
Background						
MW-1A	SS	990.64	987.8	33.5	10	959.3
MW-1B	SS	990.60	988.2	55	5	935.7
MW-6A	OB/SS	973.21	970.9	16	10	959.9
Plume						
MW-2A	SS	997.39	994.9	41.5	10	958.4
MW-2B	SS	997.38	994.9	66	5	931.4
MW-5A	OB	962.67	960.4	10	5	952.9
MW-8A	SS	977.38	978.2	28.5	15	957.2
MW-9A	OB	961.25	960.1	14.8	10	950.3
MW-9B	OB	961.24	956.0	35	5	923.5
MW-9C	OB	961.30	960.1	56.5	5	906.1
MW-12A	SS	958.14	956.2	16.9	10	944.3
MW-12B	SS	958.03	955.8	37.4	5	920.9
MW-12C	SS	958.17	955.6	61.7	5	896.4
MW-13A	SS	959.81	957.3	17.6	10	944.7
MW-13B	SS	959.78	957.3	37.1	5	922.7
Outer Plume						
MW-14A	SS	956.23	953.9	7	5	949.4
MW-14B	SS	956.22	954.1	29.5	10	929.6
MW-14C	SS	955.70	954.0	49.5	10	909.5
MW-15A	SS	955.21	952.9	7	5	948.4
MW-15B	SS	955.08	952.8	29.5	10	928.3
MW-15C	SS	955.04	952.8	49.5	10	908.3

Notes:
OB = unconsolidated overburden
SS = sandstone

TABLE 3.2

NATURAL ATTENUATION SAMPLING PARAMETERS
TOMAH LANDFILL
TOMAH, WISCONSIN

TCL VOCs

1,1,1-trichloroethane
1,1,2,2-tetrachloroethane
1,1,2-trichloroethane
1,1-dichloroethane
1,1-dichloroethene
1,2-dichloroethane
cis-1,2-dichloroethene
trans-1,2-dichloroethene
1,2-dichloropropane
2-butanone
2-hexanone
4-methyl-2-pentanone
Acetone
Benzene
Bromodichloromethane
Bromoform
Bromomethane
Carbon disulfide
Carbon tetrachloride
Chlorobenzene
Chloroethane
Chloroform
Chloromethane
cis-1,3-dichloropropene
Dibromochloromethane
Ethylbenzene
Methylene chloride
Styrene
Tetrachloroethene
Toluene
Total xylenes
trans-1,3-dichloropropene
Trichloroethene
Vinyl chloride

Field Parameters

Dissolved Oxygen [1]
Eh [1]
pH [1]
Specific Conductance [1]
Temperature [1]

Dissolved Gases

Ethane
Ethene
Methane
Carbon Dioxide

Inorganic Natural Attenuation Parameters

Alkalinity
Chloride
Iron (II) [1]
Manganese [1]
Nitrate
Nitrite
Sulfate
Sulfide
Total Organic Carbon

Note:

[1] Parameters measured in the field during sample collection.

TABLE 4.1

GAS EXTRACTION SYSTEM SAMPLING AND ANALYSIS PROGRAM
TOMAH MUNICIPAL SANITARY LANDFILL
TOMAH, WISCONSIN

Sample Matrix	*Field Para.neters*	*Laboratory Parameters*	*Intended Data Usage*	*Frequency*	*Total Per Year*
Blower Discharge	• % methane, % oxygen, temperature, flow rate, pressure	• VOC	• Assess performance of remedy and determine need for off-gas treatment	Semi-Annual	2
Condensate Tank	• pH, generation rate, tank water level	• BOD, COD, TSS, oil and grease, ammonia nitrogen, total metals, VOC, SVOC	• POTW discharge approval	As needed prior to discharge	NA
Perimeter Gas Probes	• % methane, % oxygen, pressure	• NA	• Assess potential for off-Site gas migration	Quarterly *	NA
Gas Extraction Wells	• % methane, % oxygen, pressure	• NA	• Assess landfill gas removal and system balancing	Quarterly *	NA

Notes:

(1) One trip blank sample will be shipped with each cooler of water samples collected for VOC analysis

(2) One field duplicate/matrix/year

(3) Assume condensate tank will be emptied two times per year

NA - Not applicable

* These locations will be monitored monthly until further notice.

TABLE 4.2

GAS EXTRACTION SYSTEM SUMMARY
TOMAH MUNICIPAL SANITARY LANDFILL
TOMAH, WISCONSIN

Location	*Time*	*Date*	*CH4 % by Volume*	*CO2 % by Volume*	*O2 % by Volume*	*Balance % by Volume*	*Static Pressure in. WC*	*Diff Pressure in. WC*	*Temperature ° F*	*Adj Flow (cfm)*
Blower Inlet	10:27	2/13/02	1.7	7.9	12.4	78	-7.9	7.97	NR	NR
Blower Inlet	11:19	3/27/02	1.9	8.8	11.3	78	-7.8	7.96	NR	NR
Blower Inlet	10:53	4/16/02	0.9	5.3	14.7	79.1	-8	8.14	NR	NR
Blower Outlet	10:30	2/13/02	2.2	9.4	10.5	77.9	-3.2	8.81	64	168.3
Blower Outlet	11:22	3/27/02	1.9	9.4	11	77.7	-5.4	9.91	73	176.4
Blower Outlet	10:55	4/16/02	1.6	8.4	11.4	78.6	-5.3	9.39	90	169.1
EW01	14:01	2/13/02	0	0.9	20	79.1	-5.3	0.3	41	20
EW01	14:38	3/27/02	0	0.5	20.1	79.4	-5.3	0.26	40	19
EW01	13:55	4/16/02	0	0.3	20.3	79.4	-5.8	0.23	44	17
EW01	13:30	4/19/02	0	0.8	19.7	79.5	-6.8	0.24	43	18
EW02	14:03	2/13/02	0	1.2	19.7	79.1	-1.7	0	50	0
EW02	14:41	3/27/02	0	0.7	19.8	79.5	-1.8	0	68	0
EW02	13:57	4/16/02	24.6	0.5	19.9	55	-2.2	-0.01	90	0
EW02	13:27	4/19/02	0	0.8	19.6	79.6	-2.8	-0.01	64	0
EW02	13:39	4/19/02	0	0.9	19.5	79.6	-6	0.35	53	21
EW03	14:06	2/13/02	0	1.1	19.5	79.4	-5.8	0.13	50	13
EW03	14:43	3/27/02	0	0.8	19.7	79.5	-5.6	0.13	49	13
EW03	13:59	4/16/02	0	0.7	19.8	79.5	-6.2	0.16	53	14
EW03	13:33	4/19/02	0	0.9	19.7	79.4	-7.2	0.15	51	14
EW04	14:08	2/13/02	0	1.1	19.8	79.1	-1.8	0	48	0
EW04	14:45	3/27/02	0	0.5	19.9	79.6	-1.9	0	63	0
EW04	14:01	4/16/02	0	0.2	20	79.8	-0.6	0.46	84	24
EW05	14:11	2/13/02	0	3.8	17	79.2	-5.8	0.04	49	6
EW05	14:47	3/27/02	0	3.1	16.9	80	-5.8	0.01	51	1
EW05	14:03	4/16/02	0	2.8	16.9	80.3	-6.5	0.01	57	1
EW06	14:13	2/13/02	0.4	5.2	15.2	79.2	-5.4	0.12	57	11
EW06	14:50	3/27/02	0.6	4.7	15.3	79.4	-5.4	0.08	55	9
EW06	14:05	4/16/02	0.6	4.5	15.5	79.4	-6.1	0.06	59	8
EW07	14:15	2/13/02	1	10.2	11	77.8	-6	0.06	61	8
EW07	14:52	3/27/02	0.8	8.4	11.7	79.1	-6.2	0.05	61	6
EW07	14:07	4/16/02	0.9	7.9	11.7	79.5	-6.7	0.03	65	4

TABLE 4.2

GAS EXTRACTION SYSTEM SUMMARY
TOMAH MUNICIPAL SANITARY LANDFILL
TOMAH, WISCONSIN

Location	*Time*	*Date*	*CH4 % by Volume*	*CO2 % by Volume*	*O2 % by Volume*	*Balance % by Volume*	*Static Pressure in. WC*	*Diff Pressure in. WC*	*Temperature ° F*	*Adj Flow (cfm)*
EW08	14:17	2/13/02	0	8.3	11	80.7	-2.3	0.01	53	1
EW08	14:54	3/27/02	0	5.2	14.4	80.4	-2.6	0	70	0
EW08	14:10	4/16/02	0	5.7	13.1	81.2	-3.6	0	89	0
EW09	14:20	2/13/02	0.2	8.4	11.1	80.3	-4.9	0.14	47	13
EW09	14:56	3/27/02	0.1	7.1	12.1	80.7	-5.2	0.11	49	11
EW09	14:12	4/16/02	0.1	7	12.5	80.4	-5.8	0.11	54	11
EW10	14:24	2/13/02	0.4	11.6	7.9	80.1	-2.7	0.16	58	14
EW10	15:07	3/27/02	0.3	9.6	10.2	79.9	-2.8	0.03	65	3
EW10	12:47	4/16/02	0.3	9.3	10.2	80.2	-3.6	0.22	85	16
EW11	14:27	2/13/02	6.2	18.3	2	73.5	-6.4	0	40	0
EW11	15:10	3/27/02	5.6	19.1	1.6	73.7	-6.4	0.01	59	1
EW11	12:50	4/16/02	5.1	17.4	1.9	75.6	-7	0	86	0
EW12	14:48	2/13/02	3.2	12.4	8	76.4	-5.7	0.17	50	14
EW12	15:12	3/27/02	3.3	10.7	9.3	76.7	-5.6	0.13	62	12
EW12	12:53	4/16/02	3.3	10.7	9.3	76.7	-6.5	0.08	82	9
EW13	14:52	2/13/02	23	25.4	1.6	50	-6.4	0.01	44	1
EW13	14:16	3/27/02	19.6	25.5	1.2	53.7	-6.4	0.06	57	7
EW13	13:08	4/16/02	17.1	25.3	1.6	56	-7.1	0.02	82	2
EW14	13:19	2/13/02	5.4	18.1	1.8	74.7	-6.5	0.64	42	30
EW14	15:15	3/27/02	6.6	16.7	2.9	73.8	-5.9	0.06	59	7
EW14	13:05	4/16/02	7.3	18.3	2	72.4	-6.8	0	84	0
EW15	13:43	2/13/02	10.6	20.5	2.5	66.4	-6.6	0.06	42	7
EW15	14:13	3/27/02	8.5	18.2	3.1	70.2	-6.6	0.07	58	9
EW15	13:11	4/16/02	6.2	15.5	4.3	74	-7.1	0.06	83	6
EW16	13:22	2/13/02	2.5	18.9	0.2	78.4	-6.7	0.01	40	1
EW16	13:55	3/27/02	2	16	2.7	79.3	-6.7	0	58	0
EW16	13:25	4/16/02	2.2	15.7	2.5	79.6	-7	0	85	0
EW17	13:46	2/13/02	1.3	17.1	0.4	81.2	-6.5	0	40	0
EW17	14:21	3/27/02	0.8	14.9	2.2	82.1	-6.4	0	60	0
EW17	13:15	4/16/02	0.8	15.9	1.7	81.6	-7	0.01	89	1

TABLE 4.2

GAS EXTRACTION SYSTEM SUMMARY
TOMAH MUNICIPAL SANITARY LANDFILL
TOMAH, WISCONSIN

Location	*Time*	*Date*	*CH4 % by Volume*	*CO2 % by Volume*	*O2 % by Volume*	*Balance % by Volume*	*Static Pressure in. WC*	*Diff Pressure in. WC*	*Temperature ° F*	*Adj Flow (cfm)*
EW18	13:25	2/13/02	3.4	18.6	0	78	-5.2	0.08	41	10
EW18	13:58	3/27/02	2.4	15.4	2.4	79.8	-5.3	0.07	56	8
EW18	13:29	4/16/02	2.4	17	0.8	79.8	-6	0.06	85	6
EW19	13:29	2/13/02	0	0.2	20.1	79.7	-6.5	0	43	0
EW19	14:01	3/27/02	0	0.2	20.5	79.3	-6.4	0	63	0
EW19	13:32	4/16/02	0	0.5	20	79.5	-6.8	0	89	0
EW20	13:49	2/13/02	0	12.9	5.5	81.6	-5.3	0.25	46	18
EW20	14:26	3/27/02	0	10	8	82	-5.4	0.2	60	15
EW20	13:44	4/16/02	0	9.9	8.9	81.2	-6	0.18	82	14
GP08	13:56	2/13/02	0	0	20.7	79.3	0	0	42	NA
GP08	14:34	3/27/02	0	0	20.8	79.2	0	0	62	NA
GP08	13:51	4/16/02	0	0	21.2	78.8	0	0.01	89	NA
GP09	12:11	2/13/02	0	0.2	20.7	79.1	0	0.01	NA	NA
GP09	12:39	3/27/02	0	0	21.1	78.9	0	0	NA	NA
GP09	12:26	4/16/02	0	0.1	20.6	79.3	0	0.01	NA	NA
GP10	11:41	2/13/02	0	0.2	20.6	79.2	0	0.01	34	NA
GP10	12:10	3/27/02	0	0.1	20.9	79	0	0	54	NA
GP10	11:39	4/16/02	0	0.1	20.7	79.2	0	0.02	88	NA
GP11	11:23	2/13/02	0	0	20.7	79.3	-0.5	0.48	NA	NA
GP11	11:53	3/27/02	0	0	20.7	79.3	-0.6	0.56	NA	NA
GP11	11:21	4/16/02	0	0.1	20.7	79.2	-0.7	0.84	NA	NA
GP12	15:22	2/13/02	0	0.3	20.5	79.2	0	-0.03	44	NA
GP12	15:43	3/27/02	0	0.2	20.5	79.3	0	-0.02	62	NA
GP12		4/16/02	0	DATA DIDN'T STORE IN GEM			0		93	NA
GP13	11:49	2/13/02	0	0.6	20.3	79.1	0	0	NA	NA
GP13	12:17	3/27/02	0	0.1	20.7	79.2	0	0.01	NA	NA
GP13	11:45	4/16/02	0	0.3	20.4	79.3	0	0	NA	NA
GP14A	11:27	2/13/02	0	0.2	20.5	79.3	0	0	NA	NA
GP14A	12:03	3/27/02	0	0.2	20.5	79.3	0	0	NA	NA
GP14A	11:26	4/16/02	0	0.3	20.4	79.3	0	-0.02	NA	NA

TABLE 4.2

GAS EXTRACTION SYSTEM SUMMARY
TOMAH MUNICIPAL SANITARY LANDFILL
TOMAH, WISCONSIN

Location	*Time*	*Date*	*CH4 % by Volume*	*CO2 % by Volume*	*O2 % by Volume*	*Balance % by Volume*	*Static Pressure in. WC*	*Diff Pressure in. WC*	*Temperature ° F*	*Adj Flow (cfm)*
GP14B	11:33	2/13/02	0	1.3	19.6	79.1	-0.1	0.1	NA	NA
GP14B	12:01	3/27/02	0	0.8	20	79.2	0	0.13	NA	NA
GP14B	11:31	4/16/02	0	0.6	20.3	79.1	-0.3	0.32	NA	NA
GP15	11:17	2/13/02	0	0.2	20.3	79.5	-0.2	0.19	NA	NA
GP15	11:46	3/27/02	0	0.1	20.2	79.7	-0.1	0.12	NA	NA
GP15	11:14	4/16/02	0	0.3	20	79.7	-0.5	0.54	NA	NA
GP16	12:04	2/13/02	0	0	21.1	78.9	0	0.15	NA	NA
GP16	12:32	3/27/02	0	0	21.1	78.9	-0.2	0.14	NA	NA
GP16	12:20	4/16/02	0	0	20.8	79.2	0	0.19	NA	NA
GP16	13:55	4/19/02	0	0	20.8	79.2	-0.2	0.34	NA	NA
GP17	**11:57**	**2/13/02**	**0**	**0**	**21**	**79**	**0**	**0.02**	**32**	**NA**
GP17	**12:23**	**3/27/02**	**0**	**0**	**21.1**	**78.9**	**0**	**0.06**	**58**	**NA**
GP17	**12:13**	**4/16/02**	**0**	**0**	**20.7**	**79.3**	**0**	**0.1**	**90**	**NA**
GP18	15:05	2/13/02	0	0.3	20	79.7	-0.2	0.27	40	NA
GP18	15:02	3/27/02	0	0.1	20.3	79.6	-0.1	0.22	72	NA
GP18	14:19	4/16/02	0	0.1	20.5	79.4	-0.6	0.82	93	NA
GP19	15:13	2/13/02	0	0.1	20.7	79.2	-0.4	0.56	40	NA
GP19	15:35	3/27/02	0	0	20.6	79.4	-0.7	0.78	61	NA
GP19	12:43	4/16/02	0	0	20.6	79.4	-1.3	1.31	89	NA
GP20	14:37	2/13/02	0	1.3	19.5	79.2	-0.5	0.57	41	NA
GP20	15:25	3/27/02	0	0.5	19.9	79.6	-0.8	0.83	60	NA
GP20	12:59	4/16/02	0	0.8	19.9	79.3	-1.2	1.26	88	NA
GP21	13:13	2/13/02	0	0	21.1	78.9	-0.8	0.82	36	NA
GP21	13:50	3/27/02	0	0	21.2	78.8	-0.7	0.8	58	NA
GP21	13:22	4/16/02	0	0	20.7	79.3	-1.4	1.38	89	NA
GP22	13:35	2/13/02	0	0	21	79	0	0.06	36	NA
GP22	14:07	3/27/02	0	0	21.3	78.7	-0.1	0.04	60	NA
GP22	13:39	4/16/02	0	0	21.1	78.9	0	-0.01	89	NA

Notes:
WC - Water column.
cfm - Cubic feet per minute.
NR - Not recorded due to sample port style.
NA - Not applicalbe.

TABLE 4.3

MASS LOADING CALCULATIONS
TOMAH MUNICIPAL SANITARY LANDFILL
TOMAH, WISCONSIN

Analand [1]	*Blower Dicharge Concentration (ppbv)*	*Conversion Factor*	*Blower Dicharge Concentration (mg/m3)*	*Blower Discharge Flow Rate (cfm)*	*Calculated Blower Dicharge Mass*		*WDNR Limit*	
					(lbs/hr)	*(lbs/yr)*	*(lbs/hr)*	*(lbs/yr)*
1,1-Dichloroethane	6.2	4.12	0.03	168.3	0.0000	--	67.4568	--
1,2,4-Trimethylbenzene	190	5.00	0.95	168.3	0.0006	--	10.4112	--
1,3,5-Trimethylbenzene	80	5.00	0.40	168.3	0.0003	--	10.4112	--
1,4-Dichlorobenzene	51	6.11	0.31	168.3	0.0002	--	15.624	--
Benzene	69	2.00	0.14	168.3	--	0.8	--	300
Chlorobenzene	19	4.68	0.09	168.3	0.0001	0.5	29.148	--
Chloroethane	31	2.68	0.08	168.3	--	0.5	--	2,103,914
cis-1,2-Dichloroethene	50	4.03	0.20	168.3	0.0001	--	65.7912	--
Ethylbenzene	260	4.42	1.15	168.3	--	6.3	36.228	210,391
Tetrachloroethene	28	6.90	0.19	168.3	0.0001	--	27.9	--
Toluene	220	3.83	0.84	168.3	0.0005	4.7	31.2312	84,157
Trichloroethene	11	5.47	0.06	168.3	0.0000	--	22.4856	--
Vinyl chloride	1200	2.60	3.12	168.3	--	17.2	--	300
Xylenes	710	4.42	3.13	168.3	0.0020	--	36.228	--

Notes:
(1) Detected analands regulated under WDNR NR445.
-- No regulatory limit.
Blower discharge sampled February 13, 2002.

APPENDICES

A

APPENDIX A

REVISED GROUNDWATER MONITORING PLAN APPROVAL

12805

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

AL → BS → RF → File

REPLY TO THE ATTENTION OF SR-6J

July 2, 2001

Mr. Roger Schumer
International Paper
International Place II
6400 Poplar Avenue
Tower II 5-23
Memphis, TN 38197

Re: Revised Monitoring Plan
Tomah Municipal Landfill Superfund Site
Tomah, Wisconsin

Dear Mr. Schumer:

The United States Environmental Protection Agency (U.S. EPA) has received the your letter dated June 19, 2001, proposing a revised monitoring plan for the groundwater monitoring and gas extraction systems at the Tomah Municipal Sanitary Landfill Superfund site, Tomah, Wisconsin. U.S. EPA and the Wisconsin Department of Natural Resources have reviewed this document and conditionally approve the proposal for both systems with a general comment on the application of monitored natural attenuation (MNA) and timeframes for completion of the remedial investigation and feasibility study (RI/FS).

The Agencies believe that it may be useful to have a meeting to discuss the application of MNA at the site. This meeting can help ensure that the proper MNA framework is being followed and that appropriate data is collected to make remedial decisions for groundwater at the site. The Agencies believe that if MNA is shown to be an effective remedy for groundwater at the site that timetables for completion of the RI/FS for the groundwater operable unit can be accelerated. For example, it is possible that a RI Report can be completed within sixty days after completing the eighth post-capping round of groundwater data (after the next full year of monitoring). An FS Report can then be submitted within sixty days of completing the second year of monitoring or even sooner. If MNA is shown to be effective and potentially applicable to the site, these timeframes could allow ample time to continue monitoring in order to determine the effects of the gas extraction system and cap near the landfill and be able to calculate a reduction in loading and the time frame needed for the source control remedial action to bring groundwater back to standards. Please contact me to set up a date and time for the meeting.

If you have any questions please feel free to call me at (312) 886-1842.

Sincerely yours,

Matthew J. Mankowski
Remedial Project Manager

cc: Bill Evans, Wisconsin Dept. of Natural Resources,
P.O. Box 4001, 1300 W. Clairemont Ave.,
Eau Claire, Wisconsin 54701

B

APPENDIX B

GROUNDWATER LABORATORY DATA
FEBRUARY 2002

CASE NARRATIVE

A2B270135

The following report contains the analytical results for seventeen water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the Tomah Landfill-Wisconsin Site, project number 12865-90. The samples were received February 27, 2002, according to documented sample acceptance procedures.

Dissolved Gases and Carbon Dioxide were analyzed at STL's Los Angeles, California Air Toxics Laboratory.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. Preliminary results were provided to Grant Anderson on March 13, 2002. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

GC/MS VOLATILES

Sample(s) which contain results between the MDL and the RL have been flagged with J. There is the possibility of false positive or misidentification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation will be performed only down to the standard reporting limit (SRL). The acceptance criteria for quality control criteria may not be met at these quantitation levels.

GENERAL CHEMISTRY

Nitrate for sample PS-02 was originally analyzed within the recommended sample holding time but required a dilution. It was reanalyzed at the proper dilution; however, the sample holding time had been exceeded.

Samples PS-01, PS-03, PS-04, PS-05, PS-06, and PS-07, submitted for Nitrate, were received on the last day of the recommended sample holding time. The samples were loaded on the instrument the same day; however, the analyses were not completed until after midnight; therefore, the analyses were performed after the recommended sample holding times had expired.

Samples PS-01, PS-02, PS-03, PS-04, PS-05, PS-06, and PS-07, submitted for Nitrite, were received on the last day of the recommended sample holding time. The samples were loaded on the instrument the same day; however, the analyses were not completed until after midnight; therefore, the analyses were performed after the recommended sample holding times had expired.

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*

- 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.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- 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, PAH, and Herbicide methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A2B270135

PARAMETER	ANALYTICAL METHOD
Alkalinity	MCAWW 310.1
Chloride	MCAWW 300.0A
Dissolved Gases in Water	RSK SOP-175
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Nitrate as N	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A
Sulfate	MCAWW 300.0A
Sulfide	MCAWW 376.1
Total Organic Carbon	MCAWW 415.1
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.

RSK Sample Prep and Calculations for Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibration Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

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

SAMPLE SUMMARY

A2B270135

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EVMV9	001	W-020225-PS-01	02/25/02	
EVM86	002	W-020225-PS-02	02/25/02	
EVM87	003	W-020225-PS-03	02/25/02	
EVM89	004	W-020225-PS-04	02/25/02	
EVM9A	005	W-020225-PS-05	02/25/02	
EVM9C	006	W-020225-PS-06	02/25/02	
EVM9D	007	W-020225-PS-07	02/25/02	
EVM9E	008	W-020226-PS-08	02/26/02	
EVM9F	009	W-020226-PS-09	02/26/02	
EVM9G	010	W-020226-PS-100	02/26/02	
EVM9L	011	W-020226-PS-10	02/26/02	
EVM9T	012	W-020226-PS-11	02/26/02	
EVM9V	013	W-020226-PS-12	02/26/02	
EVM9X	014	W-020226-PS-13	02/26/02	
EVM91	015	W-020226-PS-14	02/26/02	
EVM92	016	W-020226-PS-15	02/26/02	
EVM96	017	W-020226-PS-16	02/26/02	
EVM97	018	TRIP BLANK	02/26/02	

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.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-01

GC/MS Volatiles MW 15B

Lot-Sample #...: A2B270135-001 Work Order #...: EVMV91AA Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02
Prep Date.....: 03/05/02 Analysis Date..: 03/05/02
Prep Batch #...: 2065130
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-01

GC/MS Volatiles

Lot-Sample #...: A2B270135-001 Work Order #...: EVMV91AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-01

GC Volatiles

Lot-Sample #...:	A2B270135-001	Work Order #...:	EVMV91AD	Matrix.....:	WG
Date Sampled...:	02/25/02	Date Received..:	02/27/02		
Prep Date.....:	02/28/02	Analysis Date..:	02/28/02		
Prep Batch #...:	2060203				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	20	0.17	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-01

GC Volatiles

Lot-Sample #...:	A2B270135-001	Work Order #...:	EVMV91AE	Matrix.....:	WG
Date Sampled...:	02/25/02	Date Received..:	02/27/02		
Prep Date.....:	03/04/02	Analysis Date..:	03/04/02		
Prep Batch #...:	2064215				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	ND	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-01

TOTAL Metals

Lot-Sample #...: A2B270135-001 Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Iron	0.22	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVMV91AN
		Dilution Factor: 1				
Manganese	ND	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVMV91AP
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-01

General Chemistry

Lot-Sample #...: A2B270135-001 Work Order #...: EVMV9 Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	1.2	1.0	mg/L	MCAWW 300.0A	02/28/02	2059508
		Dilution Factor: 1				
Nitrate	1.1	0.10	mg/L	MCAWW 300.0A	02/28/02	2059515
		Dilution Factor: 1				
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2059511
		Dilution Factor: 1				
Sulfate	14.4	1.0	mg/L	MCAWW 300.0A	02/28/02	2059517
		Dilution Factor: 1				
Total Alkalinity	8.2	5.0	mg/L	MCAWW 310.1	02/27/02	2059129
		Dilution Factor: 1				
Total Organic Carbon	ND	1	mg/L	MCAWW 415.1	02/28/02	2060314
		Dilution Factor: 1				
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	02/28/02	2059223
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-02

GC/MS Volatiles MW-15C

Lot-Sample #...: A2B270135-002 Work Order #...: EVM861AA Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2065130
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-02

GC/MS Volatiles

Lot-Sample #...: A2B270135-002 Work Order #...: EVM861AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-02

GC Volatiles

Lot-Sample #...:	A2B270135-002	**Work Order #...:**	EVM861AC	**Matrix.....:**	WG
Date Sampled...:	02/25/02	**Date Received..:**	02/27/02		
Prep Date.....:	02/28/02	**Analysis Date..:**	02/28/02		
Prep Batch #...:	2060203				
Dilution Factor:	1	**Method.....:**	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	39	0.17	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-02

GC Volatiles

Lot-Sample #...: A2B270135-002 Work Order #...: EVM861AD Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02
Prep Date.....: 03/04/02 Analysis Date..: 03/04/02
Prep Batch #...: 2064215
Dilution Factor: 1 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	ND	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-02

TOTAL Metals

Lot-Sample #...: A2B270135-002 Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Iron	0.11	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVM861AM
		Dilution Factor: 1				
Manganese	0.43	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVM861AN
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-02

General Chemistry

Lot-Sample #...: A2B270135-002 Work Order #...: EVM86 Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	7.7	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059508
Nitrate	14.6	0.20 Dilution Factor: 2	mg/L	MCAWW 300.0A	02/28/02	2059528
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059511
Sulfate	21.7	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059517
Total Alkalinity	ND	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	02/27/02	2059129
Total Organic Carbon	1	1 Dilution Factor: 1	mg/L	MCAWW 415.1	02/28/02	2060314
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	02/28/02	2059223

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-03

GC/MS Volatiles MW-15A

Lot-Sample #...: A2B270135-003 Work Order #...: EVM871AA Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2065130
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-03

GC/MS Volatiles

Lot-Sample #...: A2B270135-003 Work Order #...: EVM871AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-03

GC Volatiles

Lot-Sample #...: A2B270135-003 Work Order #...: EVM871AC Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02
Prep Date.....: 02/28/02 Analysis Date..: 02/28/02
Prep Batch #...: 2060203
Dilution Factor: 1 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	45	0.17	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020225-PS-03

GC Volatiles

Lot-Sample #...:	A2B270135-003	Work Order #...:	EVM871AD	Matrix.....:	WG
Date Sampled...:	02/25/02	Date Received..:	02/27/02		
Prep Date.....:	03/04/02	Analysis Date..:	03/04/02		
Prep Batch #...:	2064215				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	0.016	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-03

TOTAL Metals

Lot-Sample #...: A2B270135-003 Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Iron	0.18	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVM871AM
		Dilution Factor: 1				
Manganese	0.016	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVM871AN
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020225-PS-03

General Chemistry

Lot-Sample #...: A2B270135-003 Work Order #...: EVM87 Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059508
Nitrate	0.53	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059515
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059511
Sulfate	11.0	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059517
Total Alkalinity	11	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	02/27/02	2059129
Total Organic Carbon	2	1 Dilution Factor: 1	mg/L	MCAWW 415.1	02/28/02	2060314
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	02/28/02	2059223

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020225-PS-04

GC/MS Volatiles MW-15A (dup)

Lot-Sample #...: A2B270135-004 **Work Order #...:** EVM891AA **Matrix.....:** WG
Date Sampled...: 02/25/02 **Date Received..:** 02/27/02
Prep Date.....: 03/06/02 **Analysis Date..:** 03/06/02
Prep Batch #...: 2065130
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-04

GC/MS Volatiles

Lot-Sample #...: A2B270135-004 Work Order #...: EVM891AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-04

GC Volatiles

Lot-Sample #...:	A2B270135-004	Work Order #...:	EVM891AC	Matrix.....:	WG
Date Sampled...:	02/25/02	Date Received..:	02/27/02		
Prep Date.....:	03/04/02	Analysis Date..:	03/04/02		
Prep Batch #...:	2063400				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	46	0.17	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020225-PS-04

GC Volatiles

Lot-Sample #...:	A2B270135-004	Work Order #...:	EVM891AD	Matrix.....:	WG
Date Sampled...:	02/25/02	Date Received..:	02/27/02		
Prep Date.....:	03/05/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2064255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	0.022	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-04

TOTAL Metals

Lot-Sample #...: A2B270135-004 Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Iron	0.17	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVM891AM
		Dilution Factor: 1				
Manganese	0.017	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVM891AN
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-04

General Chemistry

Lot-Sample #...: A2B270135-004 Work Order #...: EVM89 Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	ND	1.0	mg/L	MCAWW 300.0A	02/28/02	2059508
		Dilution Factor: 1				
Nitrate	0.54	0.10	mg/L	MCAWW 300.0A	02/28/02	2059515
		Dilution Factor: 1				
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2059511
		Dilution Factor: 1				
Sulfate	11.0	1.0	mg/L	MCAWW 300.0A	02/28/02	2059517
		Dilution Factor: 1				
Total Alkalinity	11	5.0	mg/L	MCAWW 310.1	02/27/02	2059129
		Dilution Factor: 1				
Total Organic Carbon	2	1	mg/L	MCAWW 415.1	02/28/02	2060314
		Dilution Factor: 1				
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	02/28/02	2059223
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-05

GC/MS Volatiles MW - 12A

Lot-Sample #...: A2B270135-005 Work Order #...: EVM9A1AA Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2065130
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	0.56 J	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	0.65	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	0.44 J	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-05

GC/MS Volatiles

Lot-Sample #...: A2B270135-005 Work Order #...: EVM9A1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020225-PS-05

GC Volatiles

Lot-Sample #...:	A2B270135-005	**Work Order #...:**	EVM9A1AC	**Matrix.....:**	WG
Date Sampled...:	02/25/02	**Date Received..:**	02/27/02		
Prep Date.....:	03/04/02	**Analysis Date..:**	03/04/02		
Prep Batch #...:	2063400				
Dilution Factor:	1	**Method.....:**	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	34	0.17	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-05

GC Volatiles

Lot-Sample #...:	A2B270135-005	Work Order #...:	EVM9A1AD	Matrix.....:	WG
Date Sampled...:	02/25/02	Date Received..:	02/27/02		
Prep Date.....:	03/05/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2064255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	0.059	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020225-PS-05

TOTAL Metals

Lot-Sample #...: A2B270135-005 Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Iron	0.46	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVM9A1AM
		Dilution Factor: 1				
Manganese	0.048	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVM9A1AN
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-05

General Chemistry

Lot-Sample #...: A2B270135-005 Work Order #...: EVM9A Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	2.4	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059508
Nitrate	0.54	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059515
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059511
Sulfate	10.8	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059517
Total Alkalinity	5.8	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	02/27/02	2059129
Total Organic Carbon	2	1 Dilution Factor: 1	mg/L	MCAWW 415.1	02/28/02	2060314
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	02/28/02	2059223

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020225-PS-06

GC/MS Volatiles MW 12B

Lot-Sample #...: A2B270135-006 Work Order #...: EVM9C1AA Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02
Prep Date.....: 03/05/02 Analysis Date..: 03/05/02
Prep Batch #...: 2065130
Dilution Factor: 2.86 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	29	ug/L
Benzene	7.4	2.9	ug/L
Bromodichloromethane	ND	2.9	ug/L
Bromoform	ND	2.9	ug/L
Bromomethane	ND	5.7	ug/L
2-Butanone	ND	29	ug/L
Carbon disulfide	ND	2.9	ug/L
Carbon tetrachloride	ND	2.9	ug/L
Chlorobenzene	ND	2.9	ug/L
Dibromochloromethane	ND	2.9	ug/L
Chloroethane	7.2	5.7	ug/L
Chloroform	ND	2.9	ug/L
Chloromethane	ND	5.7	ug/L
1,1-Dichloroethane	33	2.9	ug/L
1,2-Dichloroethane	ND	2.9	ug/L
1,1-Dichloroethene	ND	2.9	ug/L
cis-1,2-Dichloroethene	14	1.4	ug/L
trans-1,2-Dichloroethene	ND	1.4	ug/L
1,2-Dichloropropane	0.70 J	2.9	ug/L
cis-1,3-Dichloropropene	ND	2.9	ug/L
trans-1,3-Dichloropropene	ND	2.9	ug/L
Ethylbenzene	ND	2.9	ug/L
2-Hexanone	ND	29	ug/L
Methylene chloride	1.6 J	2.9	ug/L
4-Methyl-2-pentanone	ND	14	ug/L
Styrene	ND	2.9	ug/L
1,1,2,2-Tetrachloroethane	ND	2.9	ug/L
Tetrachloroethene	1.0 J	2.9	ug/L
Toluene	ND	2.9	ug/L
1,1,1-Trichloroethane	ND	2.9	ug/L
1,1,2-Trichloroethane	ND	2.9	ug/L
Trichloroethene	0.64 J	2.9	ug/L
Vinyl chloride	67	1.4	ug/L
Xylenes (total)	ND	2.9	ug/L
Dichlorodifluoromethane	ND	2.9	ug/L
Trichlorofluoromethane	ND	2.9	ug/L

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CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020225-PS-06

GC/MS Volatiles

Lot-Sample #...: A2B270135-006 Work Order #...: EVM9C1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	88	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020225-PS-06

GC Volatiles

Lot-Sample #...:	A2B270135-006	Work Order #...:	EVM9C1AC	Matrix.....:	WG
Date Sampled...:	02/25/02	Date Received..:	02/27/02		
Prep Date.....:	03/04/02	Analysis Date..:	03/04/02		
Prep Batch #...:	2063400				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	120	0.17	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020225-PS-06

GC Volatiles

Lot-Sample #...:	A2B270135-006	Work Order #...:	EVM9C1AD	Matrix.....:	WG
Date Sampled...:	02/25/02	Date Received..:	02/27/02		
Prep Date.....:	03/05/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2064255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	0.0050	0.0010	mg/L
Methane	8.0	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020225-PS-06

TOTAL Metals

Lot-Sample #...: A2B270135-006 Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Iron	ND	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVM9C1AM
		Dilution Factor: 1				
Manganese	0.33	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVM9C1AN
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-06

General Chemistry

Lot-Sample #...: A2B270135-006 Work Order #...: EVM9C Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	93.3	1.0	mg/L	MCAWW 300.0A	02/28/02	2059508
		Dilution Factor: 1				
Nitrate	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2059515
		Dilution Factor: 1				
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2059511
		Dilution Factor: 1				
Sulfate	8.1	1.0	mg/L	MCAWW 300.0A	02/28/02	2059517
		Dilution Factor: 1				
Total Alkalinity	90	5.0	mg/L	MCAWW 310.1	02/27/02	2059129
		Dilution Factor: 1				
Total Organic Carbon	3	1	mg/L	MCAWW 415.1	02/28/02	2060314
		Dilution Factor: 1				
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	02/28/02	2059223
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-07

GC/MS Volatiles MW-12C

Lot-Sample #...: A2B270135-007 Work Order #...: EVM9D1AA Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02
Prep Date.....: 03/05/02 Analysis Date..: 03/05/02
Prep Batch #...: 2065130
Dilution Factor: 4 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	40	ug/L
Benzene	1.9 J	4.0	ug/L
Bromodichloromethane	ND	4.0	ug/L
Bromoform	ND	4.0	ug/L
Bromomethane	ND	8.0	ug/L
2-Butanone	ND	40	ug/L
Carbon disulfide	ND	4.0	ug/L
Carbon tetrachloride	ND	4.0	ug/L
Chlorobenzene	ND	4.0	ug/L
Dibromochloromethane	ND	4.0	ug/L
Chloroethane	ND	8.0	ug/L
Chloroform	ND	4.0	ug/L
Chloromethane	ND	8.0	ug/L
1,1-Dichloroethane	6.7	4.0	ug/L
1,2-Dichloroethane	ND	4.0	ug/L
1,1-Dichloroethene	1.8 J	4.0	ug/L
cis-1,2-Dichloroethene	110	2.0	ug/L
trans-1,2-Dichloroethene	0.86 J	2.0	ug/L
1,2-Dichloropropane	1.2 J	4.0	ug/L
cis-1,3-Dichloropropene	ND	4.0	ug/L
trans-1,3-Dichloropropene	ND	4.0	ug/L
Ethylbenzene	ND	4.0	ug/L
2-Hexanone	ND	40	ug/L
Methylene chloride	9.7	4.0	ug/L
4-Methyl-2-pentanone	ND	20	ug/L
Styrene	ND	4.0	ug/L
1,1,2,2-Tetrachloroethane	ND	4.0	ug/L
Tetrachloroethene	8.8	4.0	ug/L
Toluene	ND	4.0	ug/L
1,1,1-Trichloroethane	7.6	4.0	ug/L
1,1,2-Trichloroethane	ND	4.0	ug/L
Trichloroethene	3.0 J	4.0	ug/L
Vinyl chloride	22	2.0	ug/L
Xylenes (total)	ND	4.0	ug/L
Dichlorodifluoromethane	5.2	4.0	ug/L
Trichlorofluoromethane	1.9 J	4.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-07

GC/MS Volatiles

Lot-Sample #...: A2B270135-007 Work Order #...: EVM9D1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-07

GC Volatiles

Lot-Sample #...:	A2B270135-007	Work Order #...:	EVM9D1AC	Matrix.....:	WG
Date Sampled...:	02/25/02	Date Received..:	02/27/02		
Prep Date.....:	03/04/02	Analysis Date..:	03/04/02		
Prep Batch #...:	2063400				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	230	0.17	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-07

GC Volatiles

Lot-Sample #...:	A2B270135-007	Work Order #...:	EVM9D1AD	Matrix.....:	WG
Date Sampled...:	02/25/02	Date Received..:	02/27/02		
Prep Date.....:	03/05/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2064255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	12	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020225-PS-07

TOTAL Metals

Lot-Sample #...: A2B270135-007 Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Iron	ND	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVM9D1AM
		Dilution Factor: 1				
Manganese	0.32	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVM9D1AN
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020225-PS-07

General Chemistry

Lot-Sample #...: A2B270135-007 Work Order #...: EVM9D Matrix.....: WG
Date Sampled...: 02/25/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	31.0	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059508
Nitrate	0.36	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059515
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059517
Sulfate	29.6	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059517
Total Alkalinity	13	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	02/27/02	2059129
Total Organic Carbon	2	1 Dilution Factor: 1	mg/L	MCAWW 415.1	02/28/02	2060314
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	02/28/02	2059223

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-08

GC/MS Volatiles MW-9A

Lot-Sample #...: A2B270135-008 Work Order #...: EVM9E1AA Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2065130
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	0.27 J	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	1.3	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-08

GC/MS Volatiles

Lot-Sample #...: A2B270135-008 Work Order #...: EVM9E1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-08

GC Volatiles

Lot-Sample #...:	A2B270135-008	Work Order #...:	EVM9E1AC	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/04/02	Analysis Date..:	03/04/02		
Prep Batch #...:	2063400				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	89	0.17	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-08

GC Volatiles

Lot-Sample #...:	A2B270135-008	Work Order #...:	EVM9E1AD	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/05/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2064255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	0.25	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-08

TOTAL Metals

Lot-Sample #...: A2B270135-008 Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Iron	1.7	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVM9E1AM
		Dilution Factor: 1				
Manganese	0.44	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVM9E1AN
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-08

General Chemistry

Lot-Sample #...: A2B270135-008 Work Order #...: EVM9E Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	37.2	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059508
Nitrate	0.11	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059515
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	205951
Sulfate	6.8	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059517
Total Alkalinity	68	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	02/27/02	2059129
Total Organic Carbon	16	1 Dilution Factor: 1	mg/L	MCAWW 415.1	02/28/02	2060314
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	02/28/02	2059223

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-09

GC/MS Volatiles MW-9B 42 min

Lot-Sample #...: A2B270135-009 Work Order #...: EVM9F1AA Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2065130
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	4.1	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	0.54 J	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	1.2 J	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	0.75 J	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	3.4	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	0.21 J	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	0.24 J	1.0	ug/L
Vinyl chloride	31	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-09

GC/MS Volatiles

Lot-Sample #...: A2B270135-009 Work Order #...: EVM9F1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-09

GC Volatiles

Lot-Sample #...:	A2B270135-009	Work Order #...:	EVM9F1AC	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/04/02	Analysis Date..:	03/04/02		
Prep Batch #...:	2063400				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	210	0.17	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-09

GC Volatiles

Lot-Sample #...: A2B270135-009 Work Order #...: EVM9F1AD Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02
Prep Date.....: 03/05/02 Analysis Date..: 03/05/02
Prep Batch #...: 2064255
Dilution Factor: 1 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	3.8	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-09

TOTAL Metals

Lot-Sample #...: A2B270135-009 Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Iron	25.5	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVM9F1AM
		Dilution Factor: 1				
Manganese	2.8	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVM9F1AN
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-09

General Chemistry

Lot-Sample #...: A2B270135-009 Work Order #...: EVM9F Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	51.3	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059508
Nitrate	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059515
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059511
Sulfate	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059517
Total Alkalinity	210	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	02/27/02	2059129
Total Organic Carbon	8	1 Dilution Factor: 1	mg/L	MCAWW 415.1	02/28/02	2060314
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	02/28/02	2059223

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-100

GC/MS Volatiles MW-9B 52 min

Lot-Sample #...: A2B270135-010 Work Order #...: EVM9G1AA Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2065130
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	4.0	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	0.54 J	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	1.3 J	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	0.71 J	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	3.2	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	0.22 J	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	0.24 J	1.0	ug/L
Vinyl chloride	31	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-100

GC/MS Volatiles

Lot-Sample #...: A2B270135-010 Work Order #...: EVM9G1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-10

GC/MS Volatiles MW-9C

Lot-Sample #...: A2B270135-011 Work Order #...: EVM9L1AA Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2065130
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-10

GC/MS Volatiles

Lot-Sample #...: A2B270135-011 Work Order #...: EVM9L1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-10

GC Volatiles

Lot-Sample #...:	A2B270135-011	Work Order #...:	EVM9L1AC	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/04/02	Analysis Date..:	03/04/02		
Prep Batch #...:	2063400				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	17	0.17	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-10

GC Volatiles

Lot-Sample #...:	A2B270135-011	Work Order #...:	EVM9L1AD	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/06/02	Analysis Date..:	03/06/02		
Prep Batch #...:	2065255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	ND	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-10

TOTAL Metals

Lot-Sample #...: A2B270135-011 Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Iron	ND	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVM9L1AM
		Dilution Factor: 1				
Manganese	ND	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVM9L1AN
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-10

General Chemistry

Lot-Sample #...: A2B270135-011 Work Order #...: EVM9L Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	ND	1.0	mg/L	MCAWW 300.0A	02/28/02	2059508
		Dilution Factor: 1				
Nitrate	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2059515
		Dilution Factor: 1				
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2059517
		Dilution Factor: 1				
Sulfate	ND	1.0	mg/L	MCAWW 300.0A	02/28/02	2059517
		Dilution Factor: 1				
Total Alkalinity	12	5.0	mg/L	MCAWW 310.1	02/27/02	2059129
		Dilution Factor: 1				
Total Organic Carbon	ND	1	mg/L	MCAWW 415.1	02/28/02	2060314
		Dilution Factor: 1				
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	02/28/02	2059223
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-11

GC/MS Volatiles MW - 13A

Lot-Sample #...: A2B270135-012 Work Order #...: EVM9T1AA Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02
Prep Date.....: 03/05/02 Analysis Date..: 03/05/02
Prep Batch #...: 2065130
Dilution Factor: 2 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	20	ug/L
Benzene	**6.0**	**2.0**	**ug/L**
Bromodichloromethane	ND	2.0	ug/L
Bromoform	ND	2.0	ug/L
Bromomethane	ND	4.0	ug/L
2-Butanone	ND	20	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	2.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	2.0	ug/L
Chloroethane	**1.9 J**	**4.0**	**ug/L**
Chloroform	ND	2.0	ug/L
Chloromethane	ND	4.0	ug/L
1,1-Dichloroethane	**1.4 J**	**2.0**	**ug/L**
1,2-Dichloroethane	**2.2**	**2.0**	**ug/L**
1,1-Dichloroethene	ND	2.0	ug/L
cis-1,2-Dichloroethene	**24**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	**1.4 J**	**2.0**	**ug/L**
cis-1,3-Dichloropropene	ND	2.0	ug/L
trans-1,3-Dichloropropene	ND	2.0	ug/L
Ethylbenzene	ND	2.0	ug/L
2-Hexanone	ND	20	ug/L
Methylene chloride	**1.1 J**	**2.0**	**ug/L**
4-Methyl-2-pentanone	ND	10	ug/L
Styrene	ND	2.0	ug/L
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L
Tetrachloroethene	ND	2.0	ug/L
Toluene	ND	2.0	ug/L
1,1,1-Trichloroethane	ND	2.0	ug/L
1,1,2-Trichloroethane	ND	2.0	ug/L
Trichloroethene	**0.49 J**	**2.0**	**ug/L**
Vinyl chloride	**56**	**1.0**	**ug/L**
Xylenes (total)	**0.74 J**	**2.0**	**ug/L**
Dichlorodifluoromethane	ND	2.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L

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CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-11

GC/MS Volatiles

Lot-Sample #...: A2B270135-012 Work Order #...: EVM9T1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-11

GC Volatiles

Lot-Sample #...:	A2B270135-012	Work Order #...:	EVM9T1AC	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/04/02	Analysis Date..:	03/04/02		
Prep Batch #...:	2063400				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	230	0.17	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-11

GC Volatiles

Lot-Sample #...:	A2B270135-012	Work Order #...:	EVM9T1AD	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/05/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2064255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	0.0031	0.0010	mg/L
Methane	8.9	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-11

TOTAL Metals

Lot-Sample #...: A2B270135-012 Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Iron	0.20	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVM9T1AM
		Dilution Factor: 1				
Manganese	0.33	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVM9T1AN
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-11

General Chemistry

Lot-Sample #...: A2B270135-012 Work Order #...: EVM9T Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	85.6	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059508
Nitrate	0.78	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059515
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059511
Sulfate	9.0	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059517
Total Alkalinity	39	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	02/27/02	2059129
Total Organic Carbon	10	1 Dilution Factor: 1	mg/L	MCAWW 415.1	02/28/02	2060314
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	02/28/02	2059223

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-12

GC/MS Volatiles MW-13B

Lot-Sample #...: A2B270135-013 Work Order #...: EVM9V1AA Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02
Prep Date.....: 03/05/02 Analysis Date..: 03/05/02
Prep Batch #...: 2065130
Dilution Factor: 1.67 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	17	ug/L
Benzene	**4.5**	**1.7**	**ug/L**
Bromodichloromethane	ND	1.7	ug/L
Bromoform	ND	1.7	ug/L
Bromomethane	ND	3.3	ug/L
2-Butanone	ND	17	ug/L
Carbon disulfide	ND	1.7	ug/L
Carbon tetrachloride	ND	1.7	ug/L
Chlorobenzene	ND	1.7	ug/L
Dibromochloromethane	ND	1.7	ug/L
Chloroethane	ND	3.3	ug/L
Chloroform	ND	1.7	ug/L
Chloromethane	ND	3.3	ug/L
1,1-Dichloroethane	**0.54 J**	**1.7**	**ug/L**
1,2-Dichloroethane	**4.8**	**1.7**	**ug/L**
1,1-Dichloroethene	ND	1.7	ug/L
cis-1,2-Dichloroethene	**16**	**0.84**	**ug/L**
trans-1,2-Dichloroethene	ND	0.84	ug/L
1,2-Dichloropropane	**1.7**	**1.7**	**ug/L**
cis-1,3-Dichloropropene	ND	1.7	ug/L
trans-1,3-Dichloropropene	ND	1.7	ug/L
Ethylbenzene	ND	1.7	ug/L
2-Hexanone	ND	17	ug/L
Methylene chloride	**4.6**	**1.7**	**ug/L**
4-Methyl-2-pentanone	ND	8.4	ug/L
Styrene	ND	1.7	ug/L
1,1,2,2-Tetrachloroethane	ND	1.7	ug/L
Tetrachloroethene	**0.58 J**	**1.7**	**ug/L**
Toluene	ND	1.7	ug/L
1,1,1-Trichloroethane	ND	1.7	ug/L
1,1,2-Trichloroethane	ND	1.7	ug/L
Trichloroethene	**0.75 J**	**1.7**	**ug/L**
Vinyl chloride	**42**	**0.84**	**ug/L**
Xylenes (total)	**1.3 J**	**1.7**	**ug/L**
Dichlorodifluoromethane	ND	1.7	ug/L
Trichlorofluoromethane	ND	1.7	ug/L

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-12

GC/MS Volatiles

Lot-Sample #...: A2B270135-013 Work Order #...: EVM9V1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-12

GC Volatiles

Lot-Sample #...:	A2B270135-013	**Work Order #...:**	EVM9V1AC	**Matrix.....:**	WG
Date Sampled...:	02/26/02	**Date Received..:**	02/27/02		
Prep Date.....:	03/04/02	**Analysis Date..:**	03/04/02		
Prep Batch #...:	2063400				
Dilution Factor:	1	**Method.....:**	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	150	0.17	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-12

GC Volatiles

Lot-Sample #...:	A2B270135-013	Work Order #...:	EVM9V1AD	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/05/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2064255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	0.0027	0.0010	mg/L
Methane	12	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-12

TOTAL Metals

Lot-Sample #...: A2B270135-013 Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Manganese	ND	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVM9V1AN
		Dilution Factor: 1				
Iron	ND	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVM9V1AM
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-12

General Chemistry

Lot-Sample #...: A2B270135-013 Work Order #...: EVM9V Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	58.2	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059508
Nitrate	2.1	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059515
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059513
Sulfate	2.0	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059517
Total Alkalinity	52	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	02/27/02	2059129
Total Organic Carbon	4	1 Dilution Factor: 1	mg/L	MCAWW 415.1	02/28/02	2060314
Total Sulfide	1.3	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	02/28/02	2059223

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-13

GC/MS Volatiles MW 144

Lot-Sample #...: A2B270135-014 Work Order #...: EVM9X1AA Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2065130
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-13

GC/MS Volatiles

Lot-Sample #...: A2B270135-014 Work Order #...: EVM9X1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-13

GC Volatiles

Lot-Sample #...:	A2B270135-014	Work Order #...:	EVM9X1AC	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/05/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2064257				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	180	0.17	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-13

GC Volatiles

Lot-Sample #...:	A2B270135-014	Work Order #...:	EVM9X1AD	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/05/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2064255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	2.0	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-13

TOTAL Metals

Lot-Sample #...: A2B270135-014 Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Iron	8.5	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVM9X1AM
		Dilution Factor: 1				
Manganese	0.20	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVM9X1AN
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-13

General Chemistry

Lot-Sample #...: A2B270135-014 Work Order #...: EVM9X Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	25.4	1.0	mg/L	MCAWW 300.0A	02/28/02	2059508
		Dilution Factor: 1				
Nitrate	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2059515
		Dilution Factor: 1				
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2059511
		Dilution Factor: 1				
Sulfate	18.4	1.0	mg/L	MCAWW 300.0A	02/28/02	2059517
		Dilution Factor: 1				
Total Alkalinity	83	5.0	mg/L	MCAWW 310.1	02/28/02	2059129
		Dilution Factor: 1				
Total Organic Carbon	31	1	mg/L	MCAWW 415.1	02/28/02	2060314
		Dilution Factor: 1				
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	02/28/02	2059223
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-14

GC/MS Volatiles MW 14A (dup)

Lot-Sample #...: A2B270135-015 Work Order #...: EVM911AA Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2065130
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-14

GC/MS Volatiles

Lot-Sample #...: A2B270135-015 Work Order #...: EVM911AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-14

GC Volatiles

Lot-Sample #...:	A2B270135-015	Work Order #...:	EVM911AC	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/05/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2064257				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	170	0.17	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-14

GC Volatiles

Lot-Sample #...:	A2B270135-015	Work Order #...:	EVM911AD	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/05/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2064255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	2.0	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-14

TOTAL Metals

Lot-Sample #...: A2B270135-015 Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Iron	8.8	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVM911AM
		Dilution Factor: 1				
Manganese	0.22	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVM911AN
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-14

General Chemistry

Lot-Sample #...: A2B270135-015 Work Order #...: EVM91 Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	25.2	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059508
Nitrate	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059515
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	205951
Sulfate	18.8	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059517
Total Alkalinity	82	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	02/28/02	2059129
Total Organic Carbon	31	1 Dilution Factor: 1	mg/L	MCAWW 415.1	02/28/02	2060314
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	02/28/02	2059223

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-15

GC/MS Volatiles MW-14B

Lot-Sample #...: A2B270135-016 Work Order #...: EVM921AA Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02
Prep Date.....: 03/05/02 Analysis Date..: 03/05/02
Prep Batch #...: 2065130
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-15

GC/MS Volatiles

Lot-Sample #...: A2B270135-016 Work Order #...: EVM921AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-15

GC Volatiles

Lot-Sample #...:	A2B270135-016	Work Order #...:	EVM921AE	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/05/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2064257				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	69	0.17	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-15 DUP

GC Volatiles

Lot-Sample #...:	A2B270135-016	Work Order #...:	EVM921CF	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/05/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2064257				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	72	0.17	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-15

GC Volatiles

Lot-Sample #...:	A2B270135-016	Work Order #...:	EVM921AH	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/05/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2064255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	ND	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-15 DUP

GC Volatiles

Lot-Sample #...:	A2B270135-016	Work Order #...:	EVM921CG	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/05/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2064255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methane	ND	0.0010	mg/L
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-15

TOTAL Metals

Lot-Sample #...: A2B270135-016 **Matrix.....:** WG
Date Sampled...: 02/26/02 **Date Received..:** 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Iron	ND	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVM921A8
		Dilution Factor: 1				
Manganese	ND	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVM921CC
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-15

General Chemistry

Lot-Sample #...: A2B270135-016 Work Order #...: EVM92 Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	8.2	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059508
Nitrate	10.3	0.20 Dilution Factor: 2	mg/L	MCAWW 300.0A	02/28/02	2059528
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	205951
Sulfate	15.5	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2059517
Total Alkalinity	9.2	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	02/28/02	2059129
Total Organic Carbon	1	1 Dilution Factor: 1	mg/L	MCAWW 415.1	02/28/02	2060314
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	02/28/02	2059223

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-16

GC/MS Volatiles MW 14C

Lot-Sample #...: A2B270135-017 Work Order #...: EVM961AA Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2065130
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-16

GC/MS Volatiles

Lot-Sample #...: A2B270135-017 Work Order #...: EVM961AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-16

GC Volatiles

Lot-Sample #...:	A2B270135-017	**Work Order #...:**	EVM961AC	**Matrix.....:**	WG
Date Sampled...:	02/26/02	**Date Received..:**	02/27/02		
Prep Date.....:	03/05/02	**Analysis Date..:**	03/05/02		
Prep Batch #...:	2064257				
Dilution Factor:	1	**Method.....:**	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	**46**	**0.17**	**mg/L**

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-16

GC Volatiles

Lot-Sample #...:	A2B270135-017	Work Order #...:	EVM961AD	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/27/02		
Prep Date.....:	03/06/02	Analysis Date..:	03/06/02		
Prep Batch #...:	2065255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	ND	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-16

TOTAL Metals

Lot-Sample #...: A2B270135-017 Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2059102						
Iron	ND	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVM961AM
		Dilution Factor: 1				
Manganese	ND	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVM961AN
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-16

General Chemistry

Lot-Sample #...: A2B270135-017 Work Order #...: EVM96 Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/27/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	7.0	1.0	mg/L	MCAWW 300.0A	02/28/02	2059508
		Dilution Factor: 1				
Nitrate	8.6	0.10	mg/L	MCAWW 300.0A	02/28/02	2059515
		Dilution Factor: 1				
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2059517
		Dilution Factor: 1				
Sulfate	11.0	1.0	mg/L	MCAWW 300.0A	02/28/02	2059517
		Dilution Factor: 1				
Total Alkalinity	6.5	5.0	mg/L	MCAWW 310.1	02/28/02	2059129
		Dilution Factor: 1				
Total Organic Carbon	ND	1	mg/L	MCAWW 415.1	02/28/02	2060314
		Dilution Factor: 1				
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	02/28/02	2059223
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A2B270135-018 Work Order #...: EVM971AA Matrix.....: WQ
Date Sampled...: 02/26/02 Date Received..: 02/27/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2065130
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A2B270135-018 Work Order #...: EVM971AA Matrix.....: WQ

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A2B270135 Work Order #...: EV0JF1AA Matrix.....: WATER
MB Lot-Sample #: A2C060000-130

Prep Date.....: 03/05/02
Analysis Date..: 03/05/02 Prep Batch #...: 2065130
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
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
Acetone	ND	10	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	2.0	ug/L	SW846 8260B
2-Butanone	ND	10	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	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
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	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
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
Vinyl chloride	ND	0.50	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A2B270135 Work Order #...: EV0JF1AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Toluene-d8	95	(76 - 110)		
4-Bromofluorobenzene	94	(74 - 116)		

NOTE(S):

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

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVRTP1AA **Matrix.....:** WATER
MB Lot-Sample #: M2C010000-203

Prep Date.....: 02/28/02
Analysis Date..: 02/28/02 **Prep Batch #...:** 2060203
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Carbon dioxide	ND	0.17	mg/L	RSK SOP-175

NOTE(S):

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

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVWJP1AA **Matrix.....:** WATER
MB Lot-Sample #: M2C040000-400

Prep Date.....: 03/04/02
Analysis Date..: 03/04/02 **Prep Batch #...:** 2063400
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Carbon dioxide	ND	0.17	mg/L	RSK SOP-175

NOTE(S):

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

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVXFC1AA **Matrix.....:** WATER
MB Lot-Sample #: M2C050000-257

Prep Date.....: 03/05/02
Analysis Date..: 03/05/02 **Prep Batch #...:** 2064257
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Carbon dioxide	ND	0.17	mg/L	RSK SOP-175

NOTE(S):

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

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVW8R1AA **Matrix.....:** WATER
MB Lot-Sample #: M2C050000-215

Prep Date.....: 03/04/02
Analysis Date..: 03/04/02 **Prep Batch #...:** 2064215
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	ND	0.0010	mg/L	RSK SOP-175
Ethane	ND	0.0020	mg/L	RSK SOP-175
Ethene	ND	0.0010	mg/L	RSK SOP-175

NOTE(S):

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

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVXE81AA **Matrix.....:** WATER
MB Lot-Sample #: M2C050000-255

Prep Date.....: 03/05/02
Analysis Date..: 03/05/02 **Prep Batch #...:** 2064255
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	ND	0.0010	mg/L	RSK SOP-175
Ethane	ND	0.0020	mg/L	RSK SOP-175
Ethene	ND	0.0010	mg/L	RSK SOP-175

NOTE(S):
Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EV09H1AA **Matrix.....:** WATER
MB Lot-Sample #: M2C060000-255

Prep Date.....: 03/06/02
Analysis Date..: 03/06/02 **Prep Batch #...:** 2065255
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	ND	0.0010	mg/L	RSK SOP-175
Ethane	ND	0.0020	mg/L	RSK SOP-175
Ethene	ND	0.0010	mg/L	RSK SOP-175

NOTE(S):

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

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A2B270135 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A2B280000-102 **Prep Batch #...:** 2059102						
Iron	ND	0.10	mg/L	SW846 6010B	02/28-03/02/02	EVPC01AA
		Dilution Factor: 1				
Manganese	ND	0.015	mg/L	SW846 6010B	02/28-03/02/02	EVPC01AC
		Dilution Factor: 1				

NOTE(S):

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

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A2B270135 **Matrix.....: WATER**

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		Work Order #: EVQ7V1AA		MB Lot-Sample #:	A2B280000-508	
	ND	1.0	mg/L	MCAWW 300.0A	02/28/02	2059508
		Dilution Factor: 1				
Nitrate		Work Order #: EVQ781AA		MB Lot-Sample #:	A2B280000-515	
	ND	0.10	mg/L	MCAWW 300.0A	02/27/02	2059515
		Dilution Factor: 1				
Nitrate		Work Order #: EVQ9N1AA		MB Lot-Sample #:	A2B280000-528	
	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2059528
		Dilution Factor: 1				
Nitrite		Work Order #: EVQ721AA		MB Lot-Sample #:	A2B280000-511	
	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2059511
		Dilution Factor: 1				
Sulfate		Work Order #: EVQ8D1AA		MB Lot-Sample #:	A2B280000-517	
	ND	1.0	mg/L	MCAWW 300.0A	02/27/02	2059517
		Dilution Factor: 1				
Total Alkalinity		Work Order #: EVPEK1AA		MB Lot-Sample #:	A2B280000-129	
	ND	5.0	mg/L	MCAWW 310.1	02/27-02/28/02	2059129
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: EVTA01AA		MB Lot-Sample #:	A2C010000-314	
	ND	1	mg/L	MCAWW 415.1	02/28/02	2060314
		Dilution Factor: 1				
Total Sulfide		Work Order #: EVPPV1AA		MB Lot-Sample #:	A2B280000-223	
	ND	1.0	mg/L	MCAWW 376.1	02/28/02	2059223
		Dilution Factor: 1				

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 #...: A2B270135 **Work Order #...:** EV0JF1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A2C060000-130 EV0JF1AD-LCSD
Prep Date.....: 03/05/02 **Analysis Date..:** 03/05/02
Prep Batch #...: 2065130
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	10	9.7	ug/L	97		SW846 8260B
	10	9.4	ug/L	94	3.8	SW846 8260B
Trichloroethene	10	10	ug/L	104		SW846 8260B
	10	10	ug/L	101	3.5	SW846 8260B
Benzene	10	9.5	ug/L	95		SW846 8260B
	10	9.6	ug/L	96	0.56	SW846 8260B
Toluene	10	9.6	ug/L	96		SW846 8260B
	10	9.6	ug/L	96	0.14	SW846 8260B
Chlorobenzene	10	9.5	ug/L	95		SW846 8260B
	10	9.6	ug/L	96	0.95	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	99	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
	100	(61 - 128)
Toluene-d8	96	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	96	(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 #...: A2B270135 **Work Order #...:** EV0JF1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A2C060000-130 EV0JF1AD-LCSD
Prep Date.....: 03/05/02 **Analysis Date..:** 03/05/02
Prep Batch #...: 2065130
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	97	(63 - 130)			SW846 8260B
	94	(63 - 130)	3.8	(0-20)	SW846 8260B
Trichloroethene	104	(75 - 122)			SW846 8260B
	101	(75 - 122)	3.5	(0-20)	SW846 8260B
Benzene	95	(80 - 116)			SW846 8260B
	96	(80 - 116)	0.56	(0-20)	SW846 8260B
Toluene	96	(74 - 119)			SW846 8260B
	96	(74 - 119)	0.14	(0-20)	SW846 8260B
Chlorobenzene	95	(76 - 117)			SW846 8260B
	96	(76 - 117)	0.95	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	99	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
	100	(61 - 128)
Toluene-d8	96	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	96	(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 DATA REPORT

GC Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVRTP1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C010000-203 EVRTP1AD-LCSD
Prep Date.....: 02/28/02 **Analysis Date..:** 02/28/02
Prep Batch #...: 2060203
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Carbon dioxide	**18**	**19**	**mg/L**	**105**		**RSK SOP-175**
	18	**17**	**mg/L**	**93**	**12**	**RSK SOP-175**

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 Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVRTP1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C010000-203 EVRTP1AD-LCSD
Prep Date.....: 02/28/02 **Analysis Date..:** 02/28/02
Prep Batch #...: 2060203
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Carbon dioxide	**105**	**(60 - 125)**			**RSK SOP-175**
	93	**(60 - 125)**	**12**	**(0-20)**	**RSK SOP-175**

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 Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVWJP1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C040000-400 EVWJP1AD-LCSD
Prep Date.....: 03/04/02 **Analysis Date..:** 03/04/02
Prep Batch #...: 2063400
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Carbon dioxide	18	17	mg/L	95		RSK SOP-175
	18	17	mg/L	92	3.4	RSK SOP-175

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 Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVWJP1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C040000-400 EVWJP1AD-LCSD
Prep Date.....: 03/04/02 **Analysis Date..:** 03/04/02
Prep Batch #...: 2063400
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Carbon dioxide	**95**	**(60 - 125)**			**RSK SOP-175**
	92	**(60 - 125)**	**3.4**	**(0-20)**	**RSK SOP-175**

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 Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVXFC1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C050000-257 EVXFC1AD-LCSD
Prep Date.....: 03/05/02 **Analysis Date..:** 03/05/02
Prep Batch #...: 2064257
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Carbon dioxide	18	18	mg/L	103		RSK SOP-175
	18	20	mg/L	114	11	RSK SOP-175

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 Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVXFC1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C050000-257 EVXFC1AD-LCSD
Prep Date.....: 03/05/02 **Analysis Date..:** 03/05/02
Prep Batch #...: 2064257
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Carbon dioxide	103	(60 - 125)			RSK SOP-175
	114	(60 - 125)	11	(0-20)	RSK SOP-175

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 Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVW8R1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C050000-215 EVW8R1AD-LCSD
Prep Date.....: 03/04/02 **Analysis Date..:** 03/04/02
Prep Batch #...: 2064215
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Ethane	0.61	0.58	mg/L	95		RSK SOP-175
	0.61	0.53	mg/L	86	9.7	RSK SOP-175
Ethene	0.57	0.56	mg/L	98		RSK SOP-175
	0.57	0.50	mg/L	88	10	RSK SOP-175
Methane	0.33	0.32	mg/L	99		RSK SOP-175
	0.33	0.29	mg/L	88	12	RSK SOP-175

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 Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVW8R1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C050000-215 EVW8R1AD-LCSD
Prep Date.....: 03/04/02 **Analysis Date..:** 03/04/02
Prep Batch #...: 2064215
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Ethane	**95**	**(65 - 130)**			**RSK SOP-175**
	86	**(65 - 130)**	**9.7**	**(0-20)**	**RSK SOP-175**
Ethene	**98**	**(70 - 130)**			**RSK SOP-175**
	88	**(70 - 130)**	**10**	**(0-20)**	**RSK SOP-175**
Methane	**99**	**(60 - 135)**			**RSK SOP-175**
	88	**(60 - 135)**	**12**	**(0-30)**	**RSK SOP-175**

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 Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVXE81AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C050000-255 EVXE81AD-LCSD
Prep Date.....: 03/05/02 **Analysis Date..:** 03/05/02
Prep Batch #...: 2064255
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Ethane	**0.61**	**0.62**	**mg/L**	**102**		**RSK SOP-175**
	0.61	**0.69**	**mg/L**	**113**	**10**	**RSK SOP-175**
Ethene	**0.57**	**0.60**	**mg/L**	**105**		**RSK SOP-175**
	0.57	**0.67**	**mg/L**	**117**	**10**	**RSK SOP-175**
Methane	**0.33**	**0.35**	**mg/L**	**107**		**RSK SOP-175**
	0.33	**0.42**	**mg/L**	**130**	**19**	**RSK SOP-175**

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 Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVXE81AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C050000-255 EVXE81AD-LCSD
Prep Date.....: 03/05/02 **Analysis Date..:** 03/05/02
Prep Batch #...: 2064255
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Ethane	**102**	**(65 - 130)**			**RSK SOP-175**
	113	**(65 - 130)**	**10**	**(0-20)**	**RSK SOP-175**
Ethene	**105**	**(70 - 130)**			**RSK SOP-175**
	117	**(70 - 130)**	**10**	**(0-20)**	**RSK SOP-175**
Methane	**107**	**(60 - 135)**			**RSK SOP-175**
	130	**(60 - 135)**	**19**	**(0-30)**	**RSK SOP-175**

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 Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EV09H1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C060000-255 EV09H1AD-LCSD
Prep Date.....: 03/06/02 **Analysis Date..:** 03/06/02
Prep Batch #...: 2065255
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Ethane	**0.61**	**0.63**	**mg/L**	**103**		**RSK SOP-175**
	0.61	**0.58**	**mg/L**	**95**	**8.2**	**RSK SOP-175**
Ethene	**0.57**	**0.60**	**mg/L**	**105**		**RSK SOP-175**
	0.57	**0.56**	**mg/L**	**98**	**7.1**	**RSK SOP-175**
Methane	**0.33**	**0.35**	**mg/L**	**107**		**RSK SOP-175**
	0.33	**0.32**	**mg/L**	**99**	**8.0**	**RSK SOP-175**

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 Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EV09H1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C060000-255 EV09H1AD-LCSD
Prep Date.....: 03/06/02 **Analysis Date..:** 03/06/02
Prep Batch #...: 2065255
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Ethane	**103**	**(65 - 130)**			**RSK SOP-175**
	95	**(65 - 130)**	**8.2**	**(0-20)**	**RSK SOP-175**
Ethene	**105**	**(70 - 130)**			**RSK SOP-175**
	98	**(70 - 130)**	**7.1**	**(0-20)**	**RSK SOP-175**
Methane	**107**	**(60 - 135)**			**RSK SOP-175**
	99	**(60 - 135)**	**8.0**	**(0-30)**	**RSK SOP-175**

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

TOTAL Metals

Client Lot #...: A2B270135 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A2B280000-102 Prep Batch #...: 2059102							
Iron	1.0	1.1	mg/L	110	SW846 6010B	02/28-03/02/02	EVPC01AD
			Dilution Factor: 1				
Manganese	0.50	0.50	mg/L	100	SW846 6010B	02/28-03/02/02	EVPC01AE
			Dilution Factor: 1				

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A2B270135 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A2B280000-102 Prep Batch #...: 2059102					
Iron	110	(77 - 127)	SW846 6010B	02/28-03/02/02	EVPC01AD
		Dilution Factor: 1			
Manganese	100	(80 - 120)	SW846 6010B	02/28-03/02/02	EVPC01AE
		Dilution Factor: 1			

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: A2B270135 **Matrix.....: WATER**

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate		WO#:EVQ781AC-LCS/EVQ781AD-LCSD					LCS Lot-Sample#: A2B280000-515	
	2.5	2.5	mg/L	99		MCAWW 300.0A	02/28/02	2059515
	2.5	2.5	mg/L	99	0.0	MCAWW 300.0A	02/28/02	2059515

Dilution Factor: 1

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: A2B270135 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate		WO#:EVQ781AC-LCS/EVQ781AD-LCSD				LCS Lot-Sample#: A2B280000-515	
	99	(90 - 110)			MCAWW 300.0A	02/28/02	2059515
	99	(90 - 110)	0.0	(0-20)	MCAWW 300.0A	02/28/02	2059515

Dilution Factor: 1

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A2B270135 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			Work Order #: EVQ7V1AC LCS Lot-Sample#: A2B280000-508				
	50.0	47.6	mg/L	95	MCAWW 300.0A	02/28/02	2059508
			Dilution Factor: 1				
Nitrate			Work Order #: EVQ9N1AC LCS Lot-Sample#: A2B280000-528				
	2.5	2.4	mg/L	98	MCAWW 300.0A	02/28/02	2059528
			Dilution Factor: 1				
Nitrite			Work Order #: EVQ721AC LCS Lot-Sample#: A2B280000-511				
	2.5	2.5	mg/L	99	MCAWW 300.0A	02/28/02	2059511
			Dilution Factor: 1				
Sulfate			Work Order #: EVQ8D1AC LCS Lot-Sample#: A2B280000-517				
	50.0	48.7	mg/L	97	MCAWW 300.0A	02/27/02	2059517
			Dilution Factor: 1				
Total Alkalinity			Work Order #: EVPEK1AC LCS Lot-Sample#: A2B280000-129				
	45	43	mg/L	95	MCAWW 310.1	02/27-02/28/02	2059129
			Dilution Factor: 1				
Total Organic Carbon			Work Order #: EVTA01AC LCS Lot-Sample#: A2C010000-314				
	38	38	mg/L	98	MCAWW 415.1	02/28/02	2060314
			Dilution Factor: 1				
Total Sulfide			Work Order #: EVPPV1AC LCS Lot-Sample#: A2B280000-223				
	20	19	mg/L	93	MCAWW 376.1	02/28/02	2059223
			Dilution Factor: 1				

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A2B270135 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		Work Order #: EVQ7V1AC LCS Lot-Sample#: A2B280000-508			
	95	(90 - 110)	MCAWW 300.0A	02/28/02	2059508
		Dilution Factor: 1			
Nitrate		Work Order #: EVQ9N1AC LCS Lot-Sample#: A2B280000-528			
	98	(90 - 110)	MCAWW 300.0A	02/28/02	2059528
		Dilution Factor: 1			
Nitrite		Work Order #: EVQ721AC LCS Lot-Sample#: A2B280000-511			
	99	(88 - 110)	MCAWW 300.0A	02/28/02	2059511
		Dilution Factor: 1			
Sulfate		Work Order #: EVQ8D1AC LCS Lot-Sample#: A2B280000-517			
	97	(90 - 110)	MCAWW 300.0A	02/27/02	2059517
		Dilution Factor: 1			
Total Alkalinity		Work Order #: EVPEK1AC LCS Lot-Sample#: A2B280000-129			
	95	(90 - 127)	MCAWW 310.1	02/27-02/28/02	2059129
		Dilution Factor: 1			
Total Organic Carbon		Work Order #: EVTA01AC LCS Lot-Sample#: A2C010000-314			
	98	(88 - 115)	MCAWW 415.1	02/28/02	2060314
		Dilution Factor: 1			
Total Sulfide		Work Order #: EVPPV1AC LCS Lot-Sample#: A2B280000-223			
	93	(79 - 110)	MCAWW 376.1	02/28/02	2059223
		Dilution Factor: 1			

NOTE(S):

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

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVM921AC-MS **Matrix.....:** WG
MS Lot-Sample #: A2B270135-016 EVM921AD-MSD
Date Sampled...: 02/26/02 **Date Received..:** 02/27/02
Prep Date.....: 03/05/02 **Analysis Date..:** 03/05/02
Prep Batch #...: 2065130
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,1-Dichloroethene	ND	10	9.4	ug/L	94		SW846 8260B
	ND	10	9.2	ug/L	92	1.9	SW846 8260B
Trichloroethene	ND	10	9.8	ug/L	98		SW846 8260B
	ND	10	10	ug/L	101	3.2	SW846 8260B
Benzene	ND	10	9.2	ug/L	92		SW846 8260B
	ND	10	9.3	ug/L	93	1.0	SW846 8260B
Toluene	ND	10	9.4	ug/L	94		SW846 8260B
	ND	10	9.1	ug/L	91	3.4	SW846 8260B
Chlorobenzene	ND	10	9.5	ug/L	95		SW846 8260B
	ND	10	9.3	ug/L	93	1.7	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
	100	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	98	(61 - 128)
Toluene-d8	98	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	95	(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 EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A2B270135 **Work Order #...:** EVM921AC-MS **Matrix.....:** WG
MS Lot-Sample #: A2B270135-016 EVM921AD-MSD
Date Sampled...: 02/26/02 **Date Received..:** 02/27/02
Prep Date.....: 03/05/02 **Analysis Date..:** 03/05/02
Prep Batch #...: 2065130
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	94	(62 - 130)			SW846 8260B
	92	(62 - 130)	1.9	(0-20)	SW846 8260B
Trichloroethene	98	(62 - 130)			SW846 8260B
	101	(62 - 130)	3.2	(0-20)	SW846 8260B
Benzene	92	(78 - 118)			SW846 8260B
	93	(78 - 118)	1.0	(0-20)	SW846 8260B
Toluene	94	(70 - 119)			SW846 8260B
	91	(70 - 119)	3.4	(0-20)	SW846 8260B
Chlorobenzene	95	(76 - 117)			SW846 8260B
	93	(76 - 117)	1.7	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
	100	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	98	(61 - 128)
Toluene-d8	98	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	95	(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

TOTAL Metals

Client Lot #...: A2B270135 **Matrix.....:** WG
Date Sampled...: 02/26/02 **Date Received..:** 02/27/02

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A2B270135-016 **Prep Batch #...:** 2059102									
Iron									
	ND	1.0	1.1	mg/L	113		SW846 6010B	02/28-03/02/02	EVM921A9
	ND	1.0	1.1	mg/L	112	1.5	SW846 6010B	02/28-03/02/02	EVM921C?
			Dilution Factor: 1						
Manganese									
	ND	0.50	0.50	mg/L	100		SW846 6010B	02/28-03/02/02	EVM921CI
	ND	0.50	0.50	mg/L	99	0.91	SW846 6010B	02/28-03/02/02	EVM921C8
			Dilution Factor: 1						

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A2B270135 **Matrix.....:** WG
Date Sampled...: 02/26/02 **Date Received..:** 02/27/02

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A2B270135-016 **Prep Batch #...:** 2059102							
Iron	113	(75 - 125)			SW846 6010B	02/28-03/02/02	EVM921A9
	112	(75 - 125)	1.5	(0-20)	SW846 6010B	02/28-03/02/02	EVM921CA
		Dilution Factor: 1					
Manganese	100	(75 - 125)			SW846 6010B	02/28-03/02/02	EVM921CD
	99	(75 - 125)	0.91	(0-20)	SW846 6010B	02/28-03/02/02	EVM921CE
		Dilution Factor: 1					

NOTE(S):

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

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A2B270135 **Matrix.....:** WG
Date Sampled...: 02/26/02 **Date Received..:** 02/27/02

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			WO#: EVM921AR-MS/EVM921AT-MSD				MS Lot-Sample #: A2B270135-016		
	8.2	50.0	58.0	mg/L	99		MCAWW 300.0A	02/28/02	205950
	8.2	50.0	59.7	mg/L	103	2.9	MCAWW 300.0A	02/28/02	2059508
			Dilution Factor: 1						
Nitrate			WO#: EVM921A6-MS/EVM921A7-MSD				MS Lot-Sample #: A2B270135-016		
	10.3	2.5	12.8	mg/L	100		MCAWW 300.0A	02/28/02	205952
	10.3	2.5	12.8	mg/L	99	0.15	MCAWW 300.0A	02/28/02	205952
			Dilution Factor: 1						
Nitrite			WO#: EVM921AV-MS/EVM921AW-MSD				MS Lot-Sample #: A2B270135-016		
	ND	2.5	2.6	mg/L	104		MCAWW 300.0A	02/28/02	205951
	ND	2.5	2.7	mg/L	107	2.3	MCAWW 300.0A	02/28/02	2059511
			Dilution Factor: 1						
Sulfate			WO#: EVM921A0-MS/EVM921A1-MSD				MS Lot-Sample #: A2B270135-016		
	15.5	50.0	64.9	mg/L	99		MCAWW 300.0A	02/28/02	2059517
	15.5	50.0	66.1	mg/L	101	1.9	MCAWW 300.0A	02/28/02	205951
			Dilution Factor: 1						
Total Alkalinity			WO#: EVM921A3-MS/EVM921A4-MSD				MS Lot-Sample #: A2B270135-016		
	9.2	500	430	mg/L	84		MCAWW 310.1	02/28/02	205912
	9.2	500	440	mg/L	85	1.1	MCAWW 310.1	02/28/02	205912
			Dilution Factor: 1						
Total Organic Carbon			WO#: EVM921AK-MS/EVM921AL-MSD				MS Lot-Sample #: A2B270135-016		
	1	25	27	mg/L	103		MCAWW 415.1	02/28/02	2060 4
	1	25	27	mg/L	104	1.2	MCAWW 415.1	02/28/02	2060
			Dilution Factor: 1						
Total Sulfide			WO#: EVM921AN-MS/EVM921AP-MSD				MS Lot-Sample #: A2B270135-016		
	ND	20	20	mg/L	96		MCAWW 376.1	02/28/02	205922
	ND	20	19	mg/L	93	3.3	MCAWW 376.1	02/28/02	205922
			Dilution Factor: 1						

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A2B270135 **Matrix.....:** WG
Date Sampled...: 02/26/02 **Date Received..:** 02/27/02

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		WO#: EVM921AR-MS/EVM921AT-MSD				MS Lot-Sample #:	A2B270135-016
	99	(56 - 137)			MCAWW 300.0A	02/28/02	2059508
	103	(56 - 137)	2.9	(0-20)	MCAWW 300.0A	02/28/02	2059508
		Dilution Factor: 1					
Nitrate		WO#: EVM921A6-MS/EVM921A7-MSD				MS Lot-Sample #:	A2B270135-016
	100	(47 - 154)			MCAWW 300.0A	02/28/02	2059528
	99	(47 - 154)	0.15	(0-30)	MCAWW 300.0A	02/28/02	2059528
		Dilution Factor: 1					
Nitrite		WO#: EVM921AV-MS/EVM921AW-MSD				MS Lot-Sample #:	A2B270135-016
	104	(45 - 156)			MCAWW 300.0A	02/28/02	2059511
	107	(45 - 156)	2.3	(0-62)	MCAWW 300.0A	02/28/02	2059511
		Dilution Factor: 1					
Sulfate		WO#: EVM921A0-MS/EVM921A1-MSD				MS Lot-Sample #:	A2B270135-016
	99	(38 - 155)			MCAWW 300.0A	02/28/02	2059517
	101	(38 - 155)	1.9	(0-20)	MCAWW 300.0A	02/28/02	2059517
		Dilution Factor: 1					
Total Alkalinity		WO#: EVM921A3-MS/EVM921A4-MSD				MS Lot-Sample #:	A2B270135-016
	84	(10 - 160)			MCAWW 310.1	02/28/02	2059129
	85	(10 - 160)	1.1	(0-24)	MCAWW 310.1	02/28/02	2059129
		Dilution Factor: 1					
Total Organic Carbon		WO#: EVM921AK-MS/EVM921AL-MSD				MS Lot-Sample #:	A2B270135-016
	103	(72 - 136)			MCAWW 415.1	02/28/02	2060314
	104	(72 - 136)	1.2	(0-20)	MCAWW 415.1	02/28/02	2060314
		Dilution Factor: 1					
Total Sulfide		WO#: EVM921AN-MS/EVM921AP-MSD				MS Lot-Sample #:	A2B270135-016
	96	(72 - 110)			MCAWW 376.1	02/28/02	2059223
	93	(72 - 110)	3.3	(0-20)	MCAWW 376.1	02/28/02	2059223
		Dilution Factor: 1					

NOTE(S):

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

SAMPLE DUPLICATE EVALUATION REPORT

GC Volatiles

Client Lot #...: A2B270135 Work Order #...: EVM921AE -SMP Matrix.....: WG
SD Lot-Sample #: A2B270135-016 EVM921CF -DUP
Date Sampled...: 02/26/02 Date Received..: 02/27/02
Prep Date.....: 03/05/02 Analysis Date..: 03/05/02
Prep Batch #...: 2064257
Dilution Factor: 1

PARAMETER	SAMPLE RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD
Carbon dioxide	69	72	mg/L	4.3	(0-20)	RSK SOP-175

SAMPLE DUPLICATE EVALUATION REPORT

GC Volatiles

Client Lot #...: A2B270135 Work Order #...: EVM921AH -SMP Matrix.....: WG
SD Lot-Sample #: A2B270135-016 EVM921CG -DUP
Date Sampled...: 02/26/02 Date Received..: 02/27/02
Prep Date.....: 03/05/02 Analysis Date..: 03/05/02
Prep Batch #...: 2064255
Dilution Factor: 1

PARAMETER	SAMPLE RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD
Methane	ND	ND	mg/L	0	(0-30)	RSK SOP-175
Ethane	ND	ND	mg/L	0	(0-20)	RSK SOP-175
Ethene	ND	ND	mg/L	0	(0-20)	RSK SOP-175

CHAIN OF CUSTODY RECORD

148

CRA
CONESTOGA–ROVERS & ASSOCIATES
1801 OLD HWY. 8, SUITE 114
ST. PAUL, MN 55112 (612)639–0913

SHIPPED TO (Laboratory Name): STL

REFERENCE NUMBER: 12865-90

SAMPLER'S SIGNATURE: Dan Nelson PRINTED NAME: DAN NELSON

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: VOCs, TOC, Sulfide, Ferrous Iron, Carbon Dioxide, Ethane/Ethene/Methane, Alk. as Alkalinity, Nitrate, Sulfate	REMARKS
	2/25/02		W-020225-PS-01	WATER	12	X X X X X X X	
			-02		12	X X X X X X X	
			-03		12	X X X X X X X	
			-04		12	X X X X X X X	1 Temp Blank per Cooler (3)
			-05		12	X X X X X X X	
			-06		12	X X X X X X X	
			-07		12	X X X X X X X	1 trip blank (120cc)
	2/26/02		W-020226-PS-08	WATER	12	X X X X X X X	
			-09		12	X X X X X X X	
			-10D		3	X	
			-10		12	X X X X X X X	
			-11		12	X X X X X X X	
			-12		12	X X X X X X X	
			-13		12	X X X X X X X	
			-14		12	X X X X X X X	
			-15 (MS/MSD)		36	X X X X X X X	
			-16		12	X X X X X X X	

TOTAL NUMBER OF CONTAINERS

HEALTH/CHEMICAL HAZARDS

RELINQUISHED BY: ① Dan Nelson	DATE: 2/26/02 TIME: 15:00	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed-Ex P.O.N. WAY BILL No.

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

SAMPLE TEAM: Stanlis, P. Arnwat, R. Nelson, D.

RECEIVED FOR LABORATORY BY:
DATE: 2-27-02 TIME: 1025

№ 03799

1001 JULY 19/93 REV.0 (F-42)

STL North Canton

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA–ROVERS & ASSOCIATES
1801 OLD HWY. 8, SUITE 114
ST. PAUL, MN 55112 (612)639–0913

SHIPPED TO (Laboratory Name): STL

REFERENCE NUMBER: 12865-90

SAMPLER'S SIGNATURE: _____ PRINTED NAME: _____

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS	REMARKS
			MW-15B		12	X X X X X X X	
			MW-15C		12	X X X X X X X	
			MW-15A		12	X X X X X X X	
			MW-15A (Dup.)		12	X X X X X X X	
			MW-12A		12	X X X X X X X	
			MW-12B		12	X X X X X X X	
			MW-12C		12	X X X X X X X	
			MW-9A		12	X X X X X X X	
			MW-9B		12	X X X X X X X	
			-100 MW-9B		1	X	
			MW-9C		12	X X X X X X X	
			MW-13A		12	X X X X X X X	
			MW-13B		12	X X X X X X X	
			MW-14A		12	X X X X X X X	
			MW-14A (Dup.)		12	X X X X X X X	
			MW-14B		36	X X X X X X X	
			MW-14C		12	X X X X X X X	
TOTAL NUMBER OF CONTAINERS					813	HEALTH/CHEMICAL HAZARDS	

RELINQUISHED BY: ① _____	DATE: 1/26/93 TIME: 1500	RECEIVED BY: ② _____	DATE: TIME:
RELINQUISHED BY: ② _____	DATE: TIME:	RECEIVED BY: ③ _____	DATE: TIME:
RELINQUISHED BY: ③ _____	DATE: TIME:	RECEIVED BY: ④ _____	DATE: TIME:

METHOD OF SHIPMENT: Fed-Ex P.O.N. WAY BILL No.

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

SAMPLE TEAM: _____

RECEIVED FOR LABORATORY BY: _____ No 03799

DATE: _____ TIME: _____

1001 JULY 19/93 REV.0 (F-42)

12865-90

ANALYTICAL REPORT

MN FILE COPY

SEVERN TRENT SERVICES

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720-6961

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

RECEIVED
APR 0 1
CRA

Grant Anderson
Conestoga-Rovers & Assoc.,Inc.
PROJECT NO. 12865-90
TOMAH LANDFILL - WISCONSIN

SAMPLE SUMMARY

WO #	LABORATORY ID	SAMPLE IDENTIFICATION
EVPMA	A2B280125-001	W-020226-PS-17
EVPMG	A2B280125-002	W-020226-PS-18
EVPMH	A2B280125-003	W-020226-PS-19
EVPMJ	A2B280125-004	W-020226-PS-20
EVPMK	A2B280125-005	W-020227-PS-21
EVPML	A2B280125-006	W-020227-PS-22
EVPMM	A2B280125-007	W-020227-PS-23
EVPMN	A2B280125-008	W-020227-PS-24
EVPMP	A2B280125-009	W-020227-PS-25
EVPMQ	A2B280125-010	TRIP BLANK

SEVERN TRENT LABORATORIES, INC.

Amy L. McCormick

Amy L. McCormick
Project Manager

March 28, 2002

CASE NARRATIVE

A2B280125

The following report contains the analytical results for nine water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the Tomah Landfill – Wisconsin Site, project number 12865-90. The samples were received February 28, 2002, according to documented sample acceptance procedures.

Dissolved Gases and Carbon Dioxide were analyzed at STL's Los Angeles, California Air Toxics Laboratory.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. Preliminary results were provided to Grant Anderson on March 13, 2002. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

Sample Trip Blank, listed on the chain-of-custody, was analyzed per the sample label.

GC/MS VOLATILES

Sample(s) which contain results between the MDL and the RL have been flagged with J. There is the possibility of false positive or misidentification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation will be performed only down to the standard reporting limit (SRL). The acceptance criteria for quality control criteria 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*

- 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, PAH, and Herbicide methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#2157), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Kentucky (#90021), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), Missouri (#6090), New Jersey (#74001), New York (#10975), North Dakota (#R-156), Ohio (#6090), OhioVAP (#CL0024), Pennsylvania (#68-340), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

ANALYTICAL METHODS SUMMARY

A2B280125

PARAMETER	ANALYTICAL METHOD
Alkalinity	MCAWW 310.1
Chloride	MCAWW 300.0A
Dissolved Gases in Water	RSK SOP-175
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Nitrate as N	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A
Sulfate	MCAWW 300.0A
Sulfide	MCAWW 376.1
Total Organic Carbon	MCAWW 415.1
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.

RSK Sample Prep and Calculations for Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibration Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

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

SAMPLE SUMMARY

A2B280125

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EVPMA	001	W-020226-PS-17	02/26/02	
EVPMG	002	W-020226-PS-18	02/26/02	
EVPMH	003	W-020226-PS-19	02/26/02	
EVPMJ	004	W-020226-PS-20	02/26/02	
EVPMK	005	W-020227-PS-21	02/27/02	
EVPML	006	W-020227-PS-22	02/27/02	
EVPMM	007	W-020227-PS-23	02/27/02	
EVPMN	008	W-020227-PS-24	02/27/02	
EVPMP	009	W-020227-PS-25	02/27/02	
EVPMQ	010	TRIP BLANK	02/27/02	

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.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-17

MW-5A

GC/MS Volatiles

Lot-Sample #...: A2B280125-001 Work Order #...: EVPMA1AA Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/28/02
Prep Date.....: 03/07/02 Analysis Date..: 03/07/02
Prep Batch #...: 2066138
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-17

GC/MS Volatiles

Lot-Sample #...: A2B280125-001 Work Order #...: EVPMA1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-17

GC Volatiles

Lot-Sample #...:	A2B280125-001	**Work Order #...:**	EVPMA1AD	**Matrix.....:**	WG
Date Sampled...:	02/26/02	**Date Received..:**	02/28/02		
Prep Date.....:	03/06/02	**Analysis Date..:**	03/06/02		
Prep Batch #...:	2065253				
Dilution Factor:	1	**Method.....:**	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	36	0.17	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-17

GC Volatiles

Lot-Sample #...:	A2B280125-001	Work Order #...:	EVPMA1AE	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/28/02		
Prep Date.....:	03/06/02	Analysis Date..:	03/06/02		
Prep Batch #...:	2065255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	0.025	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-17

TOTAL Metals

Lot-Sample #...: A2B280125-001 Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/28/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2060108						
Iron	12.4	0.10	mg/L	SW846 6010B	03/01-03/02/02	EVPMA1AJ
		Dilution Factor: 1				
Manganese	4.1	0.015	mg/L	SW846 6010B	03/01-03/02/02	EVPMA1AK
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-17

General Chemistry

Lot-Sample #...: A2B280125-001 Work Order #...: EVPMA Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/28/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	2.3	1.0	mg/L	MCAWW 300.0A	02/28/02	2060147
		Dilution Factor: 1				
Nitrate	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2060159
		Dilution Factor: 1				
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2060155
		Dilution Factor: 1				
Sulfate	5.0	1.0	mg/L	MCAWW 300.0A	02/28/02	2060150
		Dilution Factor: 1				
Total Alkalinity	56	5.0	mg/L	MCAWW 310.1	02/28/02	2059550
		Dilution Factor: 1				
Total Organic Carbon	5	1	mg/L	MCAWW 415.1	02/28/02	2060315
		Dilution Factor: 1				
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	02/28/02	2059540
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-18

GC/MS Volatiles MW-4B

Lot-Sample #...: A2B280125-002 Work Order #...: EVPMG1AA Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/28/02
Prep Date.....: 03/07/02 Analysis Date..: 03/07/02
Prep Batch #...: 2066138
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	1.1	1.0	ug/L
Acetone	ND	10	ug/L
Benzene	7.9	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	1.3 J	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	0.27 J	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	0.64 J	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	0.13 J	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	0.70 J	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	33	0.50	ug/L
Xylenes (total)	0.68 J	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-18

GC/MS Volatiles

Lot-Sample #...: A2B280125-002 Work Order #...: EVPMG1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-18

GC Volatiles

Lot-Sample #...:	A2B280125-002	**Work Order #...:**	EVPMG1AD	**Matrix.....:**	WG
Date Sampled...:	02/26/02	**Date Received..:**	02/28/02		
Prep Date.....:	03/06/02	**Analysis Date..:**	03/06/02		
Prep Batch #...:	2065253				
Dilution Factor:	1	**Method.....:**	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	**410**	**0.17**	**mg/L**

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-18

GC Volatiles

Lot-Sample #...:	A2B280125-002	Work Order #...:	EVPMG1AE	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/28/02		
Prep Date.....:	03/06/02	Analysis Date..:	03/06/02		
Prep Batch #...:	2065255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	7.7	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-18

TOTAL Metals

Lot-Sample #...: A2B280125-002 **Matrix.....:** WG
Date Sampled...: 02/26/02 **Date Received..:** 02/28/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2060108						
Iron	64.0	0.10	mg/L	SW846 6010B	03/01-03/02/02	EVPMG1AJ
		Dilution Factor: 1				
Manganese	0.18	0.015	mg/L	SW846 6010B	03/01-03/02/02	EVPMG1AK
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-18

General Chemistry

Lot-Sample #...: A2B280125-002 **Work Order #...:** EVPMG **Matrix.....:** WG
Date Sampled...: 02/26/02 **Date Received..:** 02/28/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	13.2	1.0	mg/L	MCAWW 300.0A	02/28/02	2060147
		Dilution Factor: 1				
Nitrate	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2060159
		Dilution Factor: 1				
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2060155
		Dilution Factor: 1				
Sulfate	3.3	1.0	mg/L	MCAWW 300.0A	02/28/02	2060150
		Dilution Factor: 1				
Total Alkalinity	690	5.0	mg/L	MCAWW 310.1	02/28/02	2059550
		Dilution Factor: 1				
Total Organic Carbon	23	1	mg/L	MCAWW 415.1	02/28/02	2060315
		Dilution Factor: 1				
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	02/28/02	2059540
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-19

GC/MS Volatiles MW-1B

Lot-Sample #...: A2B280125-003 Work Order #...: EVPMH1AA Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/28/02
Prep Date.....: 03/07/02 Analysis Date..: 03/07/02
Prep Batch #...: 2066138
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-19

GC/MS Volatiles

Lot-Sample #...: A2B280125-003 Work Order #...: EVPMH1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-19

GC Volatiles

Lot-Sample #...:	A2B280125-003	**Work Order #...:**	EVPMH1AD	Matrix.....:	WG
Date Sampled...:	02/26/02	**Date Received..:**	02/28/02		
Prep Date.....:	03/06/02	**Analysis Date..:**	03/06/02		
Prep Batch #...:	2065253				
Dilution Factor:	1	**Method.....:**	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	**44**	**0.17**	**mg/L**

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-19

GC Volatiles

Lot-Sample #...:	A2B280125-003	Work Order #...:	EVPMH1AE	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/28/02		
Prep Date.....:	03/06/02	Analysis Date..:	03/06/02		
Prep Batch #...:	2065255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	0.0019	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-19

TOTAL Metals

Lot-Sample #...: A2B280125-003 Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/28/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2060108						
Iron	ND	0.10	mg/L	SW846 6010B	03/01-03/02/02	EVPMH1AJ
		Dilution Factor: 1				
Manganese	0.48	0.015	mg/L	SW846 6010B	03/01-03/02/02	EVPMH1AK
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-19

General Chemistry

Lot-Sample #...: A2B280125-003 Work Order #...: EVPMH Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/28/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	1.0	1.0	mg/L	MCAWW 300.0A	02/28/02	2060147
		Dilution Factor: 1				
Nitrate	1.7	0.10	mg/L	MCAWW 300.0A	02/28/02	2060159
		Dilution Factor: 1				
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2060155
		Dilution Factor: 1				
Sulfate	37.8	1.0	mg/L	MCAWW 300.0A	02/28/02	2060150
		Dilution Factor: 1				
Total Alkalinity	ND	5.0	mg/L	MCAWW 310.1	02/28/02	2059550
		Dilution Factor: 1				
Total Organic Carbon	2	1	mg/L	MCAWW 415.1	02/28/02	2060315
		Dilution Factor: 1				
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	02/28/02	2059540
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-20

GC/MS Volatiles MW - 1A

Lot-Sample #...: A2B280125-004 Work Order #...: EVPMJ1AA Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/28/02
Prep Date.....: 03/07/02 Analysis Date..: 03/07/02
Prep Batch #...: 2066138
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-20

GC/MS Volatiles

Lot-Sample #...: A2B280125-004 Work Order #...: EVPMJ1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020226-PS-20

GC Volatiles

Lot-Sample #...:	A2B280125-004	**Work Order #...:**	EVPMJ1AD	**Matrix.....:**	WG
Date Sampled...:	02/26/02	**Date Received..:**	02/28/02		
Prep Date.....:	03/06/02	**Analysis Date..:**	03/06/02		
Prep Batch #...:	2065253				
Dilution Factor:	1	**Method.....:**	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	37	0.17	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-20

GC Volatiles

Lot-Sample #...:	A2B280125-004	Work Order #...:	EVPMJ1AE	Matrix.....:	WG
Date Sampled...:	02/26/02	Date Received..:	02/28/02		
Prep Date.....:	03/06/02	Analysis Date..:	03/06/02		
Prep Batch #...:	2065255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	ND	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-20

TOTAL Metals

Lot-Sample #...: A2B280125-004 Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/28/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2060108						
Iron	ND	0.10	mg/L	SW846 6010B	03/01-03/02/02	EVPMJ1AJ
		Dilution Factor: 1				
Manganese	0.032	0.015	mg/L	SW846 6010B	03/01-03/02/02	EVPMJ1AK
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020226-PS-20

General Chemistry

Lot-Sample #...: A2B280125-004 Work Order #...: EVPMJ Matrix.....: WG
Date Sampled...: 02/26/02 Date Received..: 02/28/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060147
Nitrate	1.8	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060159
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060155
Sulfate	10.5	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060150
Total Alkalinity	ND	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	02/28/02	2059550
Total Organic Carbon	1	1 Dilution Factor: 1	mg/L	MCAWW 415.1	02/28/02	2060315
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	02/28/02	2059540

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-21

GC/MS Volatiles MW-2A

Lot-Sample #...: A2B280125-005 Work Order #...: EVPMK1AA Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 02/28/02
Prep Date.....: 03/07/02 Analysis Date..: 03/07/02
Prep Batch #...: 2066138
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	**4.3**	**0.50**	**ug/L**
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	**1.4**	**1.0**	**ug/L**
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-21

GC/MS Volatiles

Lot-Sample #...: A2B280125-005 Work Order #...: EVPMK1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-21

GC Volatiles

Lot-Sample #...:	A2B280125-005	Work Order #...:	EVPMK1AD	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	02/28/02		
Prep Date.....:	03/06/02	Analysis Date..:	03/06/02		
Prep Batch #...:	2065253				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	89	0.17	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-21

GC Volatiles

Lot-Sample #...:	A2B280125-005	Work Order #...:	EVPMK1AE	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	02/28/02		
Prep Date.....:	03/06/02	Analysis Date..:	03/06/02		
Prep Batch #...:	2065255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	0.0023	0.0010	mg/L
Methane	4.5	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-21

TOTAL Metals

Lot-Sample #...: A2B280125-005 Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 02/28/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2060108						
Iron	1.6	0.10	mg/L	SW846 6010B	03/01-03/02/02	EVPMK1AJ
		Dilution Factor: 1				
Manganese	0.66	0.015	mg/L	SW846 6010B	03/01-03/02/02	EVPMK1AK
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-21

General Chemistry

Lot-Sample #...: A2B280125-005 Work Order #...: EVPMK Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 02/28/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	ND	1.0	mg/L	MCAWW 300.0A	02/28/02	2060147
		Dilution Factor: 1				
Nitrate	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2060159
		Dilution Factor: 1				
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2060155
		Dilution Factor: 1				
Sulfate	14.7	1.0	mg/L	MCAWW 300.0A	02/28/02	2060150
		Dilution Factor: 1				
Total Alkalinity	7.3	5.0	mg/L	MCAWW 310.1	02/28/02	2059550
		Dilution Factor: 1				
Total Organic Carbon	2	1	mg/L	MCAWW 415.1	02/28/02	2060315
		Dilution Factor: 1				
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	02/28/02	2059540
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-22

GC/MS Volatiles MW-2B

Lot-Sample #...: A2B280125-006 Work Order #...: EVPML1AA Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 02/28/02
Prep Date.....: 03/07/02 Analysis Date..: 03/07/02
Prep Batch #...: 2066138
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	2.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	2.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	2.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	0.50	ug/L
Ethylbenzene	ND	0.50	ug/L
2-Hexanone	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	10	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-22

GC/MS Volatiles

Lot-Sample #...: A2B280125-006 Work Order #...: EVPML1AA Matrix.....: WG

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

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-22

GC Volatiles

Lot-Sample #...:	A2B280125-006	Work Order #...:	EVPML1AD	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	02/28/02		
Prep Date.....:	03/06/02	Analysis Date..:	03/06/02		
Prep Batch #...:	2065253				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	120	0.17	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-22

GC Volatiles

Lot-Sample #...:	A2B280125-006	Work Order #...:	EVPML1AE	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	02/28/02		
Prep Date.....:	03/06/02	Analysis Date..:	03/06/02		
Prep Batch #...:	2065255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	0.66	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-22

TOTAL Metals

Lot-Sample #...: A2B280125-006 **Matrix.....:** WG
Date Sampled...: 02/27/02 **Date Received..:** 02/28/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2060108						
Iron	ND	0.10	mg/L	SW846 6010B	03/01-03/02/02	EVPML1AJ
		Dilution Factor: 1				
Manganese	**1.3**	**0.015**	**mg/L**	**SW846 6010B**	**03/01-03/02/02**	**EVPML1AK**
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-22

General Chemistry

Lot-Sample #...: A2B280125-006 Work Order #...: EVPML Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 02/28/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	9.8	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060147
Nitrate	3.2	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060159
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060155
Sulfate	22.5	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060150
Total Alkalinity	5.6	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	02/28/02	2059550
Total Organic Carbon	1	1 Dilution Factor: 1	mg/L	MCAWW 415.1	02/28/02	2060315
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	02/28/02	2059540

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-23

GC/MS Volatiles MW-8A

Lot-Sample #...: A2B280125-007 **Work Order #...:** EVPMM1AA **Matrix.....:** WG
Date Sampled...: 02/27/02 **Date Received..:** 02/28/02
Prep Date.....: 03/07/02 **Analysis Date..:** 03/07/02
Prep Batch #...: 2066138
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Acetone	ND	10	ug/L
Benzene	**0.21 J**	**1.0**	**ug/L**
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	**1.7**	**1.0**	**ug/L**
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	**2.0**	**1.0**	**ug/L**
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	**16**	**0.50**	**ug/L**
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	**0.43 J**	**1.0**	**ug/L**
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-23

GC/MS Volatiles

Lot-Sample #...: A2B280125-007 **Work Order #...:** EVPMM1AA **Matrix.....:** WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-23

GC Volatiles

Lot-Sample #...:	A2B280125-007	Work Order #...:	EVPMM1AD	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	02/28/02		
Prep Date.....:	03/06/02	Analysis Date..:	03/06/02		
Prep Batch #...:	2065253				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	140	0.17	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-23

GC Volatiles

Lot-Sample #...:	A2B280125-007	Work Order #...:	EVPMM1AE	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	02/28/02		
Prep Date.....:	03/06/02	Analysis Date..:	03/06/02		
Prep Batch #...:	2065255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	2.0	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-23

TOTAL Metals

Lot-Sample #...: A2B280125-007 Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 02/28/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2060108						
Iron	ND	0.10	mg/L	SW846 6010B	03/01-03/02/02	EVPMM1AJ
		Dilution Factor: 1				
Manganese	0.59	0.015	mg/L	SW846 6010B	03/01-03/02/02	EVPMM1AK
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-23

General Chemistry

Lot-Sample #...: A2B280125-007 Work Order #...: EVPMM Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 02/28/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	68.2	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060147
Nitrate	1.4	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060159
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060155
Sulfate	18.7	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060150
Total Alkalinity	7.1	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	02/28/02	2059550
Total Organic Carbon	2	1 Dilution Factor: 1	mg/L	MCAWW 415.1	02/28/02	2060315
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	02/28/02	2059540

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-24

GC/MS Volatiles MW 8A (dup)

Lot-Sample #...: A2B280125-008 **Work Order #...:** EVPMN1AA **Matrix.....:** WG
Date Sampled...: 02/27/02 **Date Received..:** 02/28/02
Prep Date.....: 03/07/02 **Analysis Date..:** 03/07/02
Prep Batch #...: 2066138
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Acetone	ND	10	ug/L
enzene	**0.23 J**	**1.0**	**ug/L**
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	**1.7**	**1.0**	**ug/L**
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	**0.25 J**	**0.50**	**ug/L**
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	**1.9**	**1.0**	**ug/L**
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	**15**	**0.50**	**ug/L**
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-24

GC/MS Volatiles

Lot-Sample #...: A2B280125-008 Work Order #...: EVPMN1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-24

GC Volatiles

Lot-Sample #...:	A2B280125-008	**Work Order #...:**	EVPMN1AD	**Matrix.....:**	WG
Date Sampled...:	02/27/02	**Date Received..:**	02/28/02		
Prep Date.....:	03/06/02	**Analysis Date..:**	03/06/02		
Prep Batch #...:	2065253				
Dilution Factor:	1	**Method.....:**	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	130	0.17	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-24

GC Volatiles

Lot-Sample #...:	A2B280125-008	Work Order #...:	EVPMN1AE	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	02/28/02		
Prep Date.....:	03/06/02	Analysis Date..:	03/06/02		
Prep Batch #...:	2065255				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	1.5	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-24

TOTAL Metals

Lot-Sample #...: A2B280125-008 Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 02/28/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2060108						
Iron	ND	0.10	mg/L	SW846 6010B	03/01-03/02/02	EVPMN1AJ
		Dilution Factor: 1				
Manganese	0.57	0.015	mg/L	SW846 6010B	03/01-03/02/02	EVPMN1AK
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-24

General Chemistry

Lot-Sample #...: A2B280125-008 Work Order #...: EVPMN Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 02/28/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	67.2	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060147
Nitrate	1.4	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060159
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060155
Sulfate	17.7	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060150
Total Alkalinity	7.1	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	02/28/02	2059550
Total Organic Carbon	2	1 Dilution Factor: 1	mg/L	MCAWW 415.1	02/28/02	2060315
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	02/28/02	2059540

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-25

GC/MS Volatiles MW-7A

Lot-Sample #...: A2B280125-009 Work Order #...: EVPMP1AA Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 02/28/02
Prep Date.....: 03/07/02 Analysis Date..: 03/07/02
Prep Batch #...: 2066138
Dilution Factor: 2.5 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	2.5	ug/L
Carbon tetrachloride	ND	2.5	ug/L
Chlorobenzene	**0.40 J**	**2.5**	**ug/L**
Acetone	ND	25	ug/L
Benzene	**6.7**	**2.5**	**ug/L**
Bromodichloromethane	ND	2.5	ug/L
Bromoform	ND	2.5	ug/L
Bromomethane	ND	5.0	ug/L
Dibromochloromethane	ND	2.5	ug/L
Chloroethane	**1.9 J**	**5.0**	**ug/L**
1,1-Dichloroethane	**1.0 J**	**2.5**	**ug/L**
1,2-Dichloroethane	ND	2.5	ug/L
1,1-Dichloroethene	ND	2.5	ug/L
Chloroform	ND	2.5	ug/L
Chloromethane	ND	5.0	ug/L
cis-1,2-Dichloroethene	ND	1.2	ug/L
trans-1,2-Dichloroethene	ND	1.2	ug/L
1,2-Dichloropropane	**2.4 J**	**2.5**	**ug/L**
cis-1,3-Dichloropropene	ND	2.5	ug/L
trans-1,3-Dichloropropene	ND	2.5	ug/L
Ethylbenzene	**12**	**2.5**	**ug/L**
2-Hexanone	ND	25	ug/L
Methylene chloride	ND	2.5	ug/L
4-Methyl-2-pentanone	ND	12	ug/L
Styrene	ND	2.5	ug/L
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L
Tetrachloroethene	ND	2.5	ug/L
Toluene	**4.9**	**2.5**	**ug/L**
1,1,1-Trichloroethane	ND	2.5	ug/L
1,1,2-Trichloroethane	ND	2.5	ug/L
Trichloroethene	ND	2.5	ug/L
Vinyl chloride	**61**	**1.2**	**ug/L**
Xylenes (total)	**22**	**2.5**	**ug/L**
Dichlorodifluoromethane	ND	2.5	ug/L
Trichlorofluoromethane	ND	2.5	ug/L

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CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-25

GC/MS Volatiles

Lot-Sample #...: A2B280125-009 Work Order #...: EVPMP1AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-25

GC Volatiles

Lot-Sample #...:	A2B280125-009	Work Order #...:	EVPMP1AD	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	02/28/02		
Prep Date.....:	03/06/02	Analysis Date..:	03/06/02		
Prep Batch #...:	2065253				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	220	0.17	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-25

GC Volatiles

Lot-Sample #...: A2B280125-009 Work Order #...: EVPMP1AE Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 02/28/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2065255
Dilution Factor: 1 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	0.0054	0.0010	mg/L
Methane	7.5	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-25

TOTAL Metals

Lot-Sample #...: A2B280125-009 Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 02/28/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2060108						
Iron	49.4	0.10	mg/L	SW846 6010B	03/01-03/02/02	EVPMP1AJ
		Dilution Factor: 1				
Manganese	0.50	0.015	mg/L	SW846 6010B	03/01-03/02/02	EVPMP1AK
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-25

General Chemistry

Lot-Sample #...: A2B280125-009 Work Order #...: EVPMP Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 02/28/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	72.0	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060147
Nitrate	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060159
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060155
Sulfate	13.6	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	02/28/02	2060150
Total Alkalinity	460	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	02/28/02	2059550
Total Organic Carbon	18	1 Dilution Factor: 1	mg/L	MCAWW 415.1	02/28/02	2060315
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	02/28/02	2059540

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A2B280125-010 **Work Order #...:** EVPMQ1AA **Matrix.....:** WQ
Date Sampled...: 02/27/02 **Date Received..:** 02/28/02
Prep Date.....: 03/07/02 **Analysis Date..:** 03/07/02
Prep Batch #...: 2066138
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

(Continued on next page)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A2B280125-010 Work Order #...: EVPMQ1AA Matrix.....: WQ

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A2B280125 **Work Order #...:** EV2LE1AA **Matrix.....:** WATER
MB Lot-Sample #: A2C070000-138

Prep Date.....: 03/06/02
Analysis Date..: 03/06/02 **Prep Batch #...:** 2066138
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	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	2.0	ug/L	SW846 8260B
2-Butanone	ND	10	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	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	0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	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
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	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
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
Vinyl chloride	ND	0.50	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A2B280125 **Work Order #...:** EV2LE1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Toluene-d8	94	(76 - 110)		
4-Bromofluorobenzene	94	(74 - 116)		

NOTE(S):

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

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A2B280125 **Work Order #...:** EV09E1AA **Matrix.....:** WATER
MB Lot-Sample #: M2C060000-253

Prep Date.....: 03/06/02
Analysis Date..: 03/06/02 **Prep Batch #...:** 2065253
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Carbon dioxide	ND	0.17	mg/L	RSK SOP-175

NOTE(S):

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

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A2B280125 **Work Order #...:** EV09H1AA **Matrix.....:** WATER
MB Lot-Sample #: M2C060000-255

Prep Date.....: 03/06/02
Analysis Date..: 03/06/02 **Prep Batch #...:** 2065255
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	ND	0.0010	mg/L	RSK SOP-175
Ethane	ND	0.0020	mg/L	RSK SOP-175
Ethene	ND	0.0010	mg/L	RSK SOP-175

NOTE(S) :

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

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A2B280125 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A2C010000-108 **Prep Batch #...:** 2060108						
Iron	ND	0.10	mg/L	SW846 6010B	03/01-03/02/02	EVRFH1A4
		Dilution Factor: 1				
Manganese	ND	0.015	mg/L	SW846 6010B	03/01-03/02/02	EVRFH1A5
		Dilution Factor: 1				

NOTE(S):

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

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A2B280125 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		Work Order #: EVRJK1AA		MB Lot-Sample #:	A2C010000-147	
	ND	1.0	mg/L	MCAWW 300.0A	02/28/02	2060147
		Dilution Factor: 1				
Nitrate		Work Order #: EVRK01AA		MB Lot-Sample #:	A2C010000-159	
	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2060159
		Dilution Factor: 1				
Nitrite		Work Order #: EVRJ21AA		MB Lot-Sample #:	A2C010000-155	
	ND	0.10	mg/L	MCAWW 300.0A	02/28/02	2060155
		Dilution Factor: 1				
Sulfate		Work Order #: EVRJR1AA		MB Lot-Sample #:	A2C010000-150	
	ND	1.0	mg/L	MCAWW 300.0A	02/28/02	2060150
		Dilution Factor: 1				
Total Alkalinity		Work Order #: EVREJ1AA		MB Lot-Sample #:	A2B280000-550	
	ND	5.0	mg/L	MCAWW 310.1	02/28/02	2059550
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: EVTA41AA		MB Lot-Sample #:	A2C010000-315	
	ND	1	mg/L	MCAWW 415.1	02/28/02	2060315
		Dilution Factor: 1				
Total Sulfide		Work Order #: EVRD51AA		MB Lot-Sample #:	A2B280000-540	
	ND	1.0	mg/L	MCAWW 376.1	02/28/02	2059540
		Dilution Factor: 1				

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 #...: A2B280125 **Work Order #...:** EV2LE1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A2C070000-138 EV2LE1AD-LCSD
Prep Date.....: 03/06/02 **Analysis Date..:** 03/06/02
Prep Batch #...: 2066138
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	10	9.1	ug/L	91		SW846 8260B
	10	9.9	ug/L	99	8.6	SW846 8260B
Trichloroethene	10	9.7	ug/L	97		SW846 8260B
	10	11	ug/L	108	11	SW846 8260B
Benzene	10	9.3	ug/L	93		SW846 8260B
	10	9.9	ug/L	99	5.4	SW846 8260B
Toluene	10	9.2	ug/L	92		SW846 8260B
	10	9.6	ug/L	96	3.8	SW846 8260B
Chlorobenzene	10	9.4	ug/L	94		SW846 8260B
	10	9.6	ug/L	96	1.4	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	105	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
	102	(61 - 128)
Toluene-d8	95	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)
	95	(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 #...: A2B280125 **Work Order #...:** EV2LE1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A2C070000-138 EV2LE1AD-LCSD
Prep Date.....: 03/06/02 **Analysis Date..:** 03/06/02
Prep Batch #...: 2066138
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	91	(63 - 130)			SW846 8260B
	99	(63 - 130)	8.6	(0-20)	SW846 8260B
Trichloroethene	97	(75 - 122)			SW846 8260B
	108	(75 - 122)	11	(0-20)	SW846 8260B
Benzene	93	(80 - 116)			SW846 8260B
	99	(80 - 116)	5.4	(0-20)	SW846 8260B
Toluene	92	(74 - 119)			SW846 8260B
	96	(74 - 119)	3.8	(0-20)	SW846 8260B
Chlorobenzene	94	(76 - 117)			SW846 8260B
	96	(76 - 117)	1.4	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	105	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
	102	(61 - 128)
Toluene-d8	95	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)
	95	(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 Volatiles

Client Lot #...: A2B280125 **Work Order #...:** EV09E1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C060000-253 EV09E1AD-LCSD
Prep Date.....: 03/06/02 **Analysis Date..:** 03/06/02
Prep Batch #...: 2065253
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Carbon dioxide	**18**	**19**	**mg/L**	**103**		**RSK SOP-175**
	18	**17**	**mg/L**	**94**	**8.8**	**RSK SOP-175**

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 Volatiles

Client Lot #...: A2B280125 Work Order #...: EV09E1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: M2C060000-253 EV09E1AD-LCSD
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2065253
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Carbon dioxide	103	(60 - 125)			RSK SOP-175
	94	(60 - 125)	8.8	(0-20)	RSK SOP-175

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 Volatiles

Client Lot #...: A2B280125 **Work Order #...:** EV09H1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C060000-255 EV09H1AD-LCSD
Prep Date.....: 03/06/02 **Analysis Date..:** 03/06/02
Prep Batch #...: 2065255
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Ethane	0.61	0.63	mg/L	103		RSK SOP-175
	0.61	0.58	mg/L	95	8.2	RSK SOP-175
Ethene	0.57	0.60	mg/L	105		RSK SOP-175
	0.57	0.56	mg/L	98	7.1	RSK SOP-175
Methane	0.33	0.35	mg/L	107		RSK SOP-175
	0.33	0.32	mg/L	99	8.0	RSK SOP-175

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 Volatiles

Client Lot #...: A2B280125 **Work Order #...:** EV09H1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C060000-255 EV09H1AD-LCSD
Prep Date.....: 03/06/02 **Analysis Date..:** 03/06/02
Prep Batch #...: 2065255
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Ethane	**103**	**(65 - 130)**			**RSK SOP-175**
	95	**(65 - 130)**	**8.2**	**(0-20)**	**RSK SOP-175**
Ethene	**105**	**(70 - 130)**			**RSK SOP-175**
	98	**(70 - 130)**	**7.1**	**(0-20)**	**RSK SOP-175**
Methane	**107**	**(60 - 135)**			**RSK SOP-175**
	99	**(60 - 135)**	**8.0**	**(0-30)**	**RSK SOP-175**

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

TOTAL Metals

Client Lot #...: A2B280125 Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A2C010000-108 Prep Batch #...: 2060108							
Iron	1.0	1.1	mg/L	109	SW846 6010B	03/01-03/02/02	EVRFH1CG
			Dilution Factor: 1				
Manganese	0.50	0.51	mg/L	102	SW846 6010B	03/01-03/02/02	EVRFH1CH
			Dilution Factor: 1				

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A2B280125 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A2C010000-108 Prep Batch #...: 2060108					
Iron	109	(77 - 127)	SW846 6010B	03/01-03/02/02	EVRFH1CG
		Dilution Factor: 1			
Manganese	102	(80 - 120)	SW846 6010B	03/01-03/02/02	EVRFH1CH
		Dilution Factor: 1			

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: A2B280125 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			WO#:EVRJK1AC-LCS/EVRJK1AD-LCSD			LCS Lot-Sample#: A2C010000-147		
	50.0	49.1	mg/L	98		MCAWW 300.0A	02/28/02	2060147
	50.0	49.0	mg/L	98	0.16	MCAWW 300.0A	02/28/02	2060147
			Dilution Factor: 1					
Nitrate			WO#:EVRK01AC-LCS/EVRK01AD-LCSD			LCS Lot-Sample#: A2C010000-159		
	2.5	2.5	mg/L	101		MCAWW 300.0A	02/28/02	2060159
	2.5	2.5	mg/L	100	0.79	MCAWW 300.0A	02/28/02	2060159
			Dilution Factor: 1					
Nitrite			WO#:EVRJ21AC-LCS/EVRJ21AD-LCSD			LCS Lot-Sample#: A2C010000-155		
	2.5	2.6	mg/L	103		MCAWW 300.0A	02/28/02	2060155
	2.5	2.6	mg/L	103	0.0	MCAWW 300.0A	02/28/02	2060155
			Dilution Factor: 1					
Sulfate			WO#:EVRJR1AC-LCS/EVRJR1AD-LCSD			LCS Lot-Sample#: A2C010000-150		
	50.0	49.3	mg/L	99		MCAWW 300.0A	02/28/02	2060150
	50.0	49.1	mg/L	98	0.36	MCAWW 300.0A	02/28/02	2060150
			Dilution Factor: 1					
Total Sulfide			WO#:EVRD51AC-LCS/EVRD51AD-LCSD			LCS Lot-Sample#: A2B280000-540		
	20	18	mg/L	92		MCAWW 376.1	02/28/02	2059540
	20	18	mg/L	92	0.0	MCAWW 376.1	02/28/02	2059540
			Dilution Factor: 1					

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: A2B280125 **Matrix.....: WATER**

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		WO#:EVRJK1AC-LCS/EVRJK1AD-LCSD LCS Lot-Sample#: A2C010000-147					
	98	(90 - 110)			MCAWW 300.0A	02/28/02	2060147
	98	(90 - 110)	0.16	(0-20)	MCAWW 300.0A	02/28/02	2060147
		Dilution Factor: 1					
Nitrate		WO#:EVRK01AC-LCS/EVRK01AD-LCSD LCS Lot-Sample#: A2C010000-159					
	101	(90 - 110)			MCAWW 300.0A	02/28/02	2060159
	100	(90 - 110)	0.79	(0-20)	MCAWW 300.0A	02/28/02	2060159
		Dilution Factor: 1					
Nitrite		WO#:EVRJ21AC-LCS/EVRJ21AD-LCSD LCS Lot-Sample#: A2C010000-155					
	103	(88 - 110)			MCAWW 300.0A	02/28/02	2060155
	103	(88 - 110)	0.0	(0-20)	MCAWW 300.0A	02/28/02	2060155
		Dilution Factor: 1					
Sulfate		WO#:EVRJR1AC-LCS/EVRJR1AD-LCSD LCS Lot-Sample#: A2C010000-150					
	99	(90 - 110)			MCAWW 300.0A	02/28/02	2060150
	98	(90 - 110)	0.36	(0-20)	MCAWW 300.0A	02/28/02	2060150
		Dilution Factor: 1					
Total Sulfide		WO#:EVRD51AC-LCS/EVRD51AD-LCSD LCS Lot-Sample#: A2B280000-540					
	92	(79 - 110)			MCAWW 376.1	02/28/02	2059540
	92	(79 - 110)	0.0	(0-20)	MCAWW 376.1	02/28/02	2059540
		Dilution Factor: 1					

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A2B280125 Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity			Work Order #: EVREJ1AC		LCS Lot-Sample#: A2B280000-550		
	45	43	mg/L	94	MCAWW 310.1	02/28/02	2059550
			Dilution Factor: 1				
Total Organic Carbon			Work Order #: EVTA41AC		LCS Lot-Sample#: A2C010000-315		
	38	41	mg/L	106	MCAWW 415.1	02/28/02	2060315
			Dilution Factor: 1				

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A2B280125 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity		Work Order #: EVREJ1AC	LCS Lot-Sample#: A2B280000-550		
	94	(90 - 127)	MCAWW 310.1	02/28/02	2059550
		Dilution Factor: 1			
Total Organic Carbon		Work Order #: EVTA41AC	LCS Lot-Sample#: A2C010000-315		
	106	(88 - 115)	MCAWW 415.1	02/28/02	2060315
		Dilution Factor: 1			

NOTE(S):

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

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A2B280125 **Work Order #...:** EVT961AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A2C020108-001 EVT961AD-MSD
Date Sampled...: 02/27/02 **Date Received..:** 03/02/02
Prep Date.....: 03/06/02 **Analysis Date..:** 03/06/02
Prep Batch #...: 2066138
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,1-Dichloroethene	ND	10	9.5	ug/L	95		SW846 8260B
	ND	10	9.2	ug/L	92	3.4	SW846 8260B
Trichloroethene	ND	10	10	ug/L	102		SW846 8260B
	ND	10	9.8	ug/L	98	4.1	SW846 8260B
Benzene	ND	10	9.5	ug/L	95		SW846 8260B
	ND	10	9.0	ug/L	90	4.7	SW846 8260B
Toluene	ND	10	9.5	ug/L	95		SW846 8260B
	ND	10	9.1	ug/L	91	4.0	SW846 8260B
Chlorobenzene	ND	10	9.3	ug/L	93		SW846 8260B
	ND	10	9.2	ug/L	92	0.69	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
	94	(61 - 128)
Toluene-d8	97	(76 - 110)
	96	(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 EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A2B280125 **Work Order #...:** EVT961AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A2C020108-001 EVT961AD-MSD
Date Sampled...: 02/27/02 **Date Received..:** 03/02/02
Prep Date.....: 03/06/02 **Analysis Date..:** 03/06/02
Prep Batch #...: 2066138
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	95	(62 - 130)			SW846 8260B
	92	(62 - 130)	3.4	(0-20)	SW846 8260B
Trichloroethene	102	(62 - 130)			SW846 8260B
	98	(62 - 130)	4.1	(0-20)	SW846 8260B
Benzene	95	(78 - 118)			SW846 8260B
	90	(78 - 118)	4.7	(0-20)	SW846 8260B
Toluene	95	(70 - 119)			SW846 8260B
	91	(70 - 119)	4.0	(0-20)	SW846 8260B
Chlorobenzene	93	(76 - 117)			SW846 8260B
	92	(76 - 117)	0.69	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
	94	(61 - 128)
Toluene-d8	97	(76 - 110)
	96	(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

TOTAL Metals

Client Lot #...: A2B280125 **Matrix.....:** WATER
Date Sampled...: 02/27/02 10:00 **Date Received..:** 02/28/02

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A2B280135-001 **Prep Batch #...:** 2060108									
Iron									
	0.16	1.0	1.2	mg/L	107		SW846 6010B	03/01-03/02/02	EVPPJ1D
	0.16	1.0	1.2	mg/L	108	0.12	SW846 6010B	03/01-03/02/02	EVPPJ1D
			Dilution Factor: 1						
Manganese									
	0.15	0.50	0.66	mg/L	103		SW846 6010B	03/01-03/02/02	EVPPJ1DE
	0.15	0.50	0.65	mg/L	101	1.3	SW846 6010B	03/01-03/02/02	EVPPJ1DF
			Dilution Factor: 1						

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A2B280125 **Matrix.....:** WATER
Date Sampled...: 02/27/02 10:00 **Date Received..:** 02/28/02

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A2B280135-001 **Prep Batch #...:** 2060108							
Iron	107	(75 - 125)			SW846 6010B	03/01-03/02/02	EVPPJ1DA
	108	(75 - 125)	0.12	(0-20)	SW846 6010B	03/01-03/02/02	EVPPJ1DC
		Dilution Factor: 1					
Manganese	103	(75 - 125)			SW846 6010B	03/01-03/02/02	EVPPJ1DE
	101	(75 - 125)	1.3	(0-20)	SW846 6010B	03/01-03/02/02	EVPPJ1DF
		Dilution Factor: 1					

NOTE(S):

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

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A2B280125 **Matrix.....:** WG
Date Sampled...: 02/26/02 **Date Received..:** 02/28/02

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity			WO#: EVPMA1AP-MS/EVPMA1AQ-MSD				MS Lot-Sample #: A2B280125-001		
	56	500	500	mg/L	89		MCAWW 310.1	02/28/02	205955
	56	500	510	mg/L	90	1.1	MCAWW 310.1	02/28/02	2059550
			Dilution Factor: 1						
Total Organic Carbon			WO#: EVPMA1AR-MS/EVPMA1AT-MSD				MS Lot-Sample #: A2B280125-001		
	5	25	32	mg/L	109		MCAWW 415.1	02/28/02	206031
	5	25	32	mg/L	108	0.81	MCAWW 415.1	02/28/02	206031
			Dilution Factor: 1						

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A2B280125 **Matrix.....:** WG
Date Sampled...: 02/26/02 **Date Received..:** 02/28/02

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity		WO#: EVPMA1AP-MS/EVPMA1AQ-MSD				MS Lot-Sample #: A2B280125-001	
	89	(10 - 160)			MCAWW 310.1	02/28/02	2059550
	90	(10 - 160)	1.1	(0-24)	MCAWW 310.1	02/28/02	2059550
		Dilution Factor: 1					
Total Organic Carbon		WO#: EVPMA1AR-MS/EVPMA1AT-MSD				MS Lot-Sample #: A2B280125-001	
	109	(72 - 136)			MCAWW 415.1	02/28/02	2060315
	108	(72 - 136)	0.81	(0-20)	MCAWW 415.1	02/28/02	2060315
		Dilution Factor: 1					

NOTE(S):

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

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA-ROVERS & ASSOCIATES
1801 OLD HWY. 8, SUITE 114
ST. PAUL, MN 55112 (612)639-0913

SHIPPED TO (Laboratory Name): STL

REFERENCE NUMBER: 12865-90

SAMPLER'S SIGNATURE: Dan Nelson PRINTED NAME: DAN NELSON

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: VOC's, TOC, Sulfide, Ca, Mg, Carbon Dioxide, Ethane, Ethene, Meth., Alk. as CaCO3, Nitrate, Sulfate	REMARKS
	2/26/02		W-020226-PS-17	Water	12	X X X X X X X	
	↓		-18	↓	12	X X X X X X X	
			-19		12	X X X X X X X	
			-20		12	X X X X X X X	
	2/27/02		W-020227-PS-21	Water	12	X X X X X X X	
			-22		12	X X X X X X X	
			-23		12	X X X X X X X	
			-24		12	X X X X X X X	
	↓		-25	↓	12	X X X X X X X	
			Trip Blank		1		
			Temp Blank (1 per cooler)		2		

TOTAL NUMBER OF CONTAINERS: 111 HEALTH/CHEMICAL HAZARDS

RELINQUISHED BY: ① Dan Nelson	DATE: 2/27/02 TIME: 15:00	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed-Ex P.O.N. WAY BILL No.

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

SAMPLE TEAM: Shelie, P., Arnott, R., Nelson, D.

RECEIVED FOR LABORATORY BY: DATE 2-28-02 TIME: 935

№ 03800

1001 JULY 19/93 REV.0 (F-42)

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STL North Canton

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA–ROVERS & ASSOCIATES
1801 OLD HWY. 8, SUITE 114
ST. PAUL, MN 55112 (612)639–0913

SHIPPED TO (Laboratory Name): STL

REFERENCE NUMBER: 12865-90

SAMPLER'S SIGNATURE: Dan Nelson PRINTED NAME: DAN NELSON

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: VOCs / TOC / Sulfide / Fe ++ / MA / Carbon Dioxide / Ethane Ethene Meth. / Alk. as CaCO3 / Nitrate, Sulfate	REMARKS
	2/26/02		W-020226-PS-17	Water	12	X X X X X X X	
			-18		12	X X X X X X X	
			-19		12	X X X X X X X	
			-20		12	X X X X X X X	
	2/27/02		W-020227-PS-21	Water	12	X X X X X X X	
			-22		12	X X X X X X X	
			-23		12	X X X X X X X	
			-24		12	X X X X X X X	
			-25		12	X X X X X X X	
			trip blank		1		
			temp blank (1 per cooler)		2		

TOTAL NUMBER OF CONTAINERS: 111 HEALTH/CHEMICAL HAZARDS:

RELINQUISHED BY: ① Dan Nelson	DATE: 2/27/02 TIME: 15:00	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed-Ex P.O.N. WAY BILL No.

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

SAMPLE TEAM: Starlie, P., Arnott, R., Nelson, D.

RECEIVED FOR LABORATORY BY: Anne Sanders
DATE: 2-28-02 TIME: 935

№ 03800

1001 JULY 19/93 REV.0 (F–42)

CHAIN OF CUSTODY RECORD

CRA CONESTOGA-ROVERS & ASSOCIATES 1801 OLD HWY. 8, SUITE 114 ST. PAUL, MN 55112 (612)639-0913	SHIPPED TO (Laboratory Name): STL	REFERENCE NUMBER: 12865-90

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Dan Nelson

SEQ. No.	DATE	TIME	SAMPLE No.		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: VOCs	TCL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				REMARKS
	2/26/02		W-020226-[illegible]-17	MW-5A	Water	12	X	X	X	X	X	X	X				
	↓		↓ ↓ ↓ -18	MW-4B	↓	12	X	X	X	X	X	X	X				
	↓		↓ ↓ ↓ -19	MW-1B	↓	12	X	X	X	X	X	X	X				
	↓		↓ ↓ ↓ -20	MW-1A	↓	12	X	X	X	X	X	X	X				
	2/27/02		W-020227-[illegible]-21	MW-2A	Water	12	X	X	X	X	X	X	X				
			-22	MW-2B		12	X	X	X	X	X	X	X				
			-23	MW-8A		12	X	X	X	X	X	X	X				
			-24	MW-8A (Dup)		12	X	X	X	X	X	X	X				
	↓		↓ ↓ ↓ -25	MW-7A	↓	12	X	X	X	X	X	X	X				
			Trip Blank			1											
			[illegible] ([illegible])			2											
TOTAL NUMBER OF CONTAINERS						111	HEALTH/CHEMICAL HAZARDS										

RELINQUISHED BY: ① [signature]	DATE: 2/27/02 TIME: 14:30	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed-Ex P.O.N. WAY BILL No.

White —Fully Executed Copy Yellow —Receiving Laboratory Copy Pink —Shipper Copy Goldenrod —Sampler Copy	SAMPLE TEAM: [illegible] P., [illegible] P. Nelson D.	RECEIVED FOR LABORATORY BY: DATE: TIME: № 03800

1001 JULY 19/93 REV.0 (F-42)

12065-10

MN FILE COPY

ANALYTICAL REPORT

SEVERN TRENT SERVICES

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720-6961

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

Grant Anderson
Conestoga-Rovers & Assoc., Inc.
PROJECT NO. 12865-90
TOMAH LANDFILL - WISCONSIN

SAMPLE SUMMARY

WO #	LABORATORY ID	SAMPLE IDENTIFICATION
EVT96	A2C020108-001	W-020227-PS-26
EVVAD	A2C020108-002	W-020227-PS-27
EVVAJ	A2C020108-003	W-020227-PS-28
EVVAK	A2C020108-004	W-020227-PS-29
EVVAL	A2C020108-005	TRIP BLANK

SEVERN TRENT LABORATORIES, INC.

Amy McCormick

Amy L. McCormick
Project Manager

March 28, 2002

CASE NARRATIVE

A2C020108

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 Tomah Landfill-Wisconsin Site, project number 12865-90. The samples were received March 2, 2002, according to documented sample acceptance procedures.

Dissolved Gases and Carbon Dioxide were analyzed at STL's Los Angeles, California Air Toxics Laboratory.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. Preliminary results were provided to Grant Anderson on March 13, 2002. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

GC/MS VOLATILES

Sample(s) which contain results between the MDL and the RL have been flagged with J. There is the possibility of false positive or misidentification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation will be performed only down to the standard reporting limit (SRL). The acceptance criteria for quality control criteria may not be met at these quantitation levels.

GENERAL CHEMISTRY

Nitrate and Nitrite for samples PS-26, PS-27, PS-28, and PS-29 were received after the recommended sample holding times had expired.

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*

- 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.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- 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, PAH, and Herbicide methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#2157), Connecticut (#PH-0590), Florida (#E87225),
Illinois (#100439), Kansas (#E10336), Kentucky (#90021), Massachusetts (#M-OH048),
Maryland (#272), Minnesota (#39-999-348), Missouri (#6090), New Jersey (#74001),
New York (#10975), North Dakota (#R-156), Ohio (#6090), OhioVAP (#CL0024),
Pennsylvania (#68-340), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003),
Tennessee (#02903), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY,
USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

ANALYTICAL METHODS SUMMARY

A2C020108

PARAMETER	ANALYTICAL METHOD
Alkalinity	MCAWW 310.1
Chloride	MCAWW 300.0A
Dissolved Gases in Water	RSK SOP-175
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Nitrate as N	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A
Sulfate	MCAWW 300.0A
Sulfide	MCAWW 376.1
Total Organic Carbon	MCAWW 415.1
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.

RSK Sample Prep and Calculations for Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibration Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

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

SAMPLE SUMMARY

A2C020108

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EVT96	001	W-020227-PS-26	02/27/02	
EVVAD	002	W-020227-PS-27	02/27/02	
EVVAJ	003	W-020227-PS-28	02/27/02	
EVVAK	004	W-020227-PS-29	02/27/02	
EVVAL	005	TRIP BLANK	02/27/02	

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.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-26

MW-6A

GC/MS Volatiles

Lot-Sample #...: A2C020108-001 Work Order #...: EVT961AA Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 03/02/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2066138
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-26

GC/MS Volatiles

Lot-Sample #...: A2C020108-001 Work Order #...: EVT961AA Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-26

GC Volatiles

Lot-Sample #...:	A2C020108-001	**Work Order #...:**	EVT961AH	**Matrix.....:**	WG
Date Sampled...:	02/27/02	**Date Received..:**	03/02/02		
Prep Date.....:	03/11/02	**Analysis Date..:**	03/11/02		
Prep Batch #...:	2071383				
Dilution Factor:	1	**Method.....:**	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	**18**	**0.17**	**mg/L**

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-26 DUP

GC Volatiles

Lot-Sample #...:	A2C020108-001	Work Order #...:	EVT961CF	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	03/02/02		
Prep Date.....:	03/11/02	Analysis Date..:	03/11/02		
Prep Batch #...:	2071383				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	13	0.17	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-26

GC Volatiles

Lot-Sample #...:	A2C020108-001	**Work Order #...:**	EVT961AL	**Matrix.....:**	WG
Date Sampled...:	02/27/02	**Date Received..:**	03/02/02		
Prep Date.....:	03/11/02	**Analysis Date..:**	03/11/02		
Prep Batch #...:	2071450				
Dilution Factor:	1	**Method.....:**	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	ND	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-26 DUP

GC Volatiles

Lot-Sample #...:	A2C020108-001	Work Order #...:	EVT961CG	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	03/02/02		
Prep Date.....:	03/11/02	Analysis Date..:	03/11/02		
Prep Batch #...:	2071450				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methane	ND	0.0010	mg/L
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-26

TOTAL Metals

Lot-Sample #...: A2C020108-001 Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 03/02/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2063116						
Iron	0.19	0.10	mg/L	SW846 6010B	03/04-03/05/02	EVT961AX
		Dilution Factor: 1				
Manganese	ND	0.015	mg/L	SW846 6010B	03/04-03/05/02	EVT961A2
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-26

General Chemistry

Lot-Sample #...: A2C020108-001 Work Order #...: EVT96 Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 03/02/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	4.4	1.0	mg/L	MCAWW 300.0A	03/02/02	2063143
		Dilution Factor: 1				
Nitrate	1.2	0.10	mg/L	MCAWW 300.0A	03/02/02	2063145
		Dilution Factor: 1				
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	03/02/02	2063144
		Dilution Factor: 1				
Sulfate	2.9	1.0	mg/L	MCAWW 300.0A	03/02/02	2063146
		Dilution Factor: 1				
Total Alkalinity	26	5.0	mg/L	MCAWW 310.1	03/04/02	2063487
		Dilution Factor: 1				
Total Organic Carbon	ND	1	mg/L	MCAWW 415.1	03/05/02	2065183
		Dilution Factor: 1				
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	03/04/02	2063486
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-27

GC/MS Volatiles MW-3D

Lot-Sample #...: A2C020108-002 Work Order #...: EVVAD1AE Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 03/02/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2066138
Dilution Factor: 2.86 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	29	ug/L
Benzene	**28**	**2.9**	**ug/L**
Bromodichloromethane	ND	2.9	ug/L
Bromoform	ND	2.9	ug/L
Bromomethane	ND	5.7	ug/L
2-Butanone	ND	29	ug/L
Carbon disulfide	ND	2.9	ug/L
Carbon tetrachloride	ND	2.9	ug/L
Chlorobenzene	**5.2**	**2.9**	**ug/L**
Dibromochloromethane	ND	2.9	ug/L
Chloroethane	**2.1 J**	**5.7**	**ug/L**
Chloroform	ND	2.9	ug/L
Chloromethane	ND	5.7	ug/L
1,1-Dichloroethane	**0.50 J**	**2.9**	**ug/L**
1,2-Dichloroethane	ND	2.9	ug/L
1,1-Dichloroethene	ND	2.9	ug/L
cis-1,2-Dichloroethene	ND	1.4	ug/L
trans-1,2-Dichloroethene	ND	1.4	ug/L
1,2-Dichloropropane	**2.5 J**	**2.9**	**ug/L**
cis-1,3-Dichloropropene	ND	2.9	ug/L
trans-1,3-Dichloropropene	ND	2.9	ug/L
Ethylbenzene	**33**	**2.9**	**ug/L**
2-Hexanone	ND	29	ug/L
Methylene chloride	ND	2.9	ug/L
4-Methyl-2-pentanone	ND	14	ug/L
Styrene	ND	2.9	ug/L
1,1,2,2-Tetrachloroethane	ND	2.9	ug/L
Tetrachloroethene	ND	2.9	ug/L
Toluene	**12**	**2.9**	**ug/L**
1,1,1-Trichloroethane	ND	2.9	ug/L
1,1,2-Trichloroethane	ND	2.9	ug/L
Trichloroethene	ND	2.9	ug/L
Vinyl chloride	**99**	**1.4**	**ug/L**
Xylenes (total)	**86**	**2.9**	**ug/L**
Dichlorodifluoromethane	ND	2.9	ug/L
Trichlorofluoromethane	ND	2.9	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-27

GC/MS Volatiles

Lot-Sample #...: A2C020108-002 Work Order #...: EVVAD1AE Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-27

GC Volatiles

Lot-Sample #...:	A2C020108-002	Work Order #...:	EVVAD1AG	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	03/02/02		
Prep Date.....:	03/11/02	Analysis Date..:	03/11/02		
Prep Batch #...:	2071383				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	340	0.17	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-27

GC Volatiles

Lot-Sample #...:	A2C020108-002	Work Order #...:	EVVAD1AH	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	03/02/02		
Prep Date.....:	03/11/02	Analysis Date..:	03/11/02		
Prep Batch #...:	2071450				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	0.0038	0.0010	mg/L
Methane	11	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-27

TOTAL Metals

Lot-Sample #...: A2C020108-002 Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 03/02/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2063116						
Iron	42.9	0.10	mg/L	SW846 6010B	03/04-03/05/02	KVVAD1AM
		Dilution Factor: 1				
Manganese	0.058	0.015	mg/L	SW846 6010B	03/04-03/05/02	KVVAD1AA
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-27

General Chemistry

Lot-Sample #...: A2C020108-002 Work Order #...: EVVAD Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 03/02/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	193	5.0 Dilution Factor: 5	mg/L	MCAWW 300.0A	03/02/02	2063143
Nitrate	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	03/02/02	2063145
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	03/02/02	2063144
Sulfate	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	03/02/02	2063146
Total Alkalinity	1100	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	03/04/02	2063487
Total Organic Carbon	53	4 Dilution Factor: 4	mg/L	MCAWW 415.1	03/05/02	2065183
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	03/04/02	2063486

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-28

GC/MS Volatiles MW-3A

Lot-Sample #...: A2C020108-003 **Work Order #...:** EVVAJ1AE **Matrix.....:** WG
Date Sampled...: 02/27/02 **Date Received..:** 03/02/02
Prep Date.....: 03/07/02 **Analysis Date..:** 03/07/02
Prep Batch #...: 2066364
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-28

GC/MS Volatiles

Lot-Sample #...: A2C020108-003 Work Order #...: EVVAJ1AE Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-28

GC Volatiles

Lot-Sample #...:	A2C020108-003	Work Order #...:	EVVAJ1AG	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	03/02/02		
Prep Date.....:	03/11/02	Analysis Date..:	03/11/02		
Prep Batch #...:	2071383				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	24	0.17	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-28

GC Volatiles

Lot-Sample #...:	A2C020108-003	Work Order #...:	EVVAJ1AH	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	03/02/02		
Prep Date.....:	03/12/02	Analysis Date..:	03/12/02		
Prep Batch #...:	2071322				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	ND	0.0010	mg/L
Methane	0.0014	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-28

TOTAL Metals

Lot-Sample #...: A2C020108-003 Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 03/02/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2063116						
Iron	ND	0.10	mg/L	SW846 6010B	03/04-03/05/02	EVVAJ1AM
		Dilution Factor: 1				
Manganese	1.2	0.015	mg/L	SW846 6010B	03/04-03/05/02	EVVAJ1AA
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-28

General Chemistry

Lot-Sample #...: A2C020108-003 Work Order #...: EVVAJ Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 03/02/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	1.5	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	03/02/02	2063143
Nitrate	31.3	0.50 Dilution Factor: 5	mg/L	MCAWW 300.0A	03/05/02	2064359
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	03/02/02	2063144
Sulfate	6.2	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	03/02/02	2063146
Total Alkalinity	6.9	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	03/04/02	2063487
Total Organic Carbon	2	1 Dilution Factor: 1	mg/L	MCAWW 415.1	03/05/02	2065183
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	03/04/02	2063486

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-29

GC/MS Volatiles MW-3C

Lot-Sample #...: A2C020108-004 Work Order #...: EVVAK1AE Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 03/02/02
Prep Date.....: 03/07/02 Analysis Date..: 03/07/02
Prep Batch #...: 2066364
Dilution Factor: 5 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	50	ug/L
Benzene	**32**	**5.0**	**ug/L**
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
2-Butanone	ND	50	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	**2.6 J**	**5.0**	**ug/L**
Dibromochloromethane	ND	5.0	ug/L
Chloroethane	**2.6 J**	**10**	**ug/L**
Chloroform	ND	5.0	ug/L
Chloromethane	ND	10	ug/L
1,1-Dichloroethane	**1.7 J**	**5.0**	**ug/L**
1,2-Dichloroethane	ND	5.0	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
cis-1,2-Dichloroethene	ND	2.5	ug/L
trans-1,2-Dichloroethene	ND	2.5	ug/L
1,2-Dichloropropane	**3.9 J**	**5.0**	**ug/L**
cis-1,3-Dichloropropene	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	5.0	ug/L
Ethylbenzene	**18**	**5.0**	**ug/L**
2-Hexanone	ND	50	ug/L
Methylene chloride	ND	5.0	ug/L
4-Methyl-2-pentanone	ND	25	ug/L
Styrene	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Toluene	**10**	**5.0**	**ug/L**
1,1,1-Trichloroethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	ND	5.0	ug/L
Vinyl chloride	**140**	**2.5**	**ug/L**
Xylenes (total)	**35**	**5.0**	**ug/L**
Dichlorodifluoromethane	ND	5.0	ug/L
Trichlorofluoromethane	ND	5.0	ug/L

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-29

GC/MS Volatiles

Lot-Sample #...: A2C020108-004 Work Order #...: EVVAK1AE Matrix.....: WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-29

GC Volatiles

Lot-Sample #...:	A2C020108-004	Work Order #...:	EVVAK1AG	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	03/02/02		
Prep Date.....:	03/11/02	Analysis Date..:	03/11/02		
Prep Batch #...:	2071383				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	320	0.17	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-29

GC Volatiles

Lot-Sample #...:	A2C020108-004	Work Order #...:	EVVAK1AH	Matrix.....:	WG
Date Sampled...:	02/27/02	Date Received..:	03/02/02		
Prep Date.....:	03/11/02	Analysis Date..:	03/11/02		
Prep Batch #...:	2071450				
Dilution Factor:	1	Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.0020	mg/L
Ethene	0.0031	0.0010	mg/L
Methane	8.7	0.0010	mg/L

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: W-020227-PS-29

TOTAL Metals

Lot-Sample #...: A2C020108-004 Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 03/02/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2063116						
Iron	29.4	0.10	mg/L	SW846 6010B	03/04-03/05/02	EVVAK1AM
		Dilution Factor: 1				
Manganese	0.030	0.015	mg/L	SW846 6010B	03/04-03/05/02	EVVAK1AA
		Dilution Factor: 1				

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: W-020227-PS-29

General Chemistry

Lot-Sample #...: A2C020108-004 Work Order #...: EVVAK Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 03/02/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	186	5.0 Dilution Factor: 5	mg/L	MCAWW 300.0A	03/02/02	2063143
Nitrate	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	03/02/02	2063145
Nitrite	ND	0.10 Dilution Factor: 1	mg/L	MCAWW 300.0A	03/02/02	2063144
Sulfate	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 300.0A	03/02/02	2063146
Total Alkalinity	1100	5.0 Dilution Factor: 1	mg/L	MCAWW 310.1	03/04/02	2063487
Total Organic Carbon	66	4 Dilution Factor: 4	mg/L	MCAWW 415.1	03/05/02	2065183
Total Sulfide	ND	1.0 Dilution Factor: 1	mg/L	MCAWW 376.1	03/04/02	2063486

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A2C020108-005 Work Order #...: EVVAL1AA Matrix.....: WQ
Date Sampled...: 02/27/02 Date Received..: 03/02/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2066138
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	1.9	1.0	ug/L
cis-1,2-Dichloroethene	ND	0.50	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	0.39 J	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	0.50	ug/L
Xylenes (total)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L

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CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A2C020108-005 Work Order #...: EVVAL1AA Matrix.....: WQ

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A2C020108
MB Lot-Sample #: A2C070000-138

Work Order #...: EV2LE1AA

Matrix.....: WATER

Prep Date.....: 03/06/02
Prep Batch #...: 2066138

Analysis Date..: 03/06/02
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	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	2.0	ug/L	SW846 8260B
2-Butanone	ND	10	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	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	0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	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
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	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
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
Vinyl chloride	ND	0.50	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A2C020108 **Work Order #...:** EV2LE1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Toluene-d8	94	(76 - 110)		
4-Bromofluorobenzene	94	(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 #...: A2C020108
MB Lot-Sample #: A2C070000-364

Work Order #...: EV3WE1AA
Prep Date.....: 03/07/02
Prep Batch #...: 2066364

Matrix.....: WATER

Analysis Date..: 03/07/02
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Acetone	ND	10	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	2.0	ug/L	SW846 8260B
2-Butanone	ND	10	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	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
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	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
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
Vinyl chloride	ND	0.50	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A2C020108 Work Order #...: EV3WE1AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Toluene-d8	96	(76 - 110)		
4-Bromofluorobenzene	93	(74 - 116)		

NOTE(S):

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

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A2C020108 **Work Order #...:** EV9QF1AA **Matrix.....:** WATER
MB Lot-Sample #: M2C120000-383

Prep Date.....: 03/11/02
Analysis Date..: 03/11/02 **Prep Batch #...:** 2071383
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Carbon dioxide	ND	0.17	mg/L	RSK SOP-175

NOTE(S):

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

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A2C020108 **Work Order #...:** EV94N1AA **Matrix.....:** WATER
MB Lot-Sample #: M2C120000-450

Prep Date.....: 03/11/02
Analysis Date..: 03/11/02 **Prep Batch #...:** 2071450
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	ND	0.0010	mg/L	RSK SOP-175
Ethane	ND	0.0020	mg/L	RSK SOP-175
Ethene	ND	0.0010	mg/L	RSK SOP-175

NOTE(S):

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

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A2C020108 **Work Order #...:** EV9GQ1AA **Matrix.....:** WATER
MB Lot-Sample #: M2C120000-322

Prep Date.....: 03/12/02
Analysis Date..: 03/12/02 **Prep Batch #...:** 2071322
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	ND	0.0010	mg/L	RSK SOP-175
Ethane	ND	0.0020	mg/L	RSK SOP-175
Ethene	ND	0.0010	mg/L	RSK SOP-175

NOTE(S):

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

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A2C020108 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A2C040000-116 **Prep Batch #...:** 2063116						
Iron	ND	0.10	mg/L	SW846 6010B	03/04-03/05/02	EVVPX1AH
		Dilution Factor: 1				
Manganese	ND	0.015	mg/L	SW846 6010B	03/04-03/05/02	EVVPX1AK
		Dilution Factor: 1				

NOTE(S):

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

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A2C020108 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		Work Order #: EVVQ11AA		MB Lot-Sample #:	A2C040000-143	
	ND	1.0	mg/L	MCAWW 300.0A	03/02/02	2063143
		Dilution Factor: 1				
Nitrate		Work Order #: EVVRF1AA		MB Lot-Sample #:	A2C040000-145	
	ND	0.10	mg/L	MCAWW 300.0A	03/02/02	2063145
		Dilution Factor: 1				
Nitrate		Work Order #: EVX2H1AA		MB Lot-Sample #:	A2C050000-359	
	ND	0.10	mg/L	MCAWW 300.0A	03/05/02	2064359
		Dilution Factor: 1				
Nitrite		Work Order #: EVVRD1AA		MB Lot-Sample #:	A2C040000-144	
	ND	0.10	mg/L	MCAWW 300.0A	03/02/02	2063144
		Dilution Factor: 1				
Sulfate		Work Order #: EVVRK1AA		MB Lot-Sample #:	A2C040000-146	
	ND	1.0	mg/L	MCAWW 300.0A	03/02/02	2063146
		Dilution Factor: 1				
Total Alkalinity		Work Order #: EVWQJ1AA		MB Lot-Sample #:	A2C040000-487	
	ND	5.0	mg/L	MCAWW 310.1	03/04/02	2063487
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: EV0P91AA		MB Lot-Sample #:	A2C060000-183	
	ND	1	mg/L	MCAWW 415.1	03/05/02	2065183
		Dilution Factor: 1				
Total Sulfide		Work Order #: EVWQK1AA		MB Lot-Sample #:	A2C040000-486	
	ND	1.0	mg/L	MCAWW 376.1	03/04/02	206348
		Dilution Factor: 1				

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 #...: A2C020108 **Work Order #...:** EV2LE1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A2C070000-138 EV2LE1AD-LCSD
Prep Date.....: 03/06/02 **Analysis Date..:** 03/06/02
Prep Batch #...: 2066138
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	10	9.1	ug/L	91		SW846 8260B
	10	9.9	ug/L	99	8.6	SW846 8260B
Trichloroethene	10	9.7	ug/L	97		SW846 8260B
	10	11	ug/L	108	11	SW846 8260B
Benzene	10	9.3	ug/L	93		SW846 8260B
	10	9.9	ug/L	99	5.4	SW846 8260B
Toluene	10	9.2	ug/L	92		SW846 8260B
	10	9.6	ug/L	96	3.8	SW846 8260B
Chlorobenzene	10	9.4	ug/L	94		SW846 8260B
	10	9.6	ug/L	96	1.4	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	105	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
	102	(61 - 128)
Toluene-d8	95	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)
	95	(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 #...: A2C020108 **Work Order #...:** EV2LE1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A2C070000-138 EV2LE1AD-LCSD
Prep Date.....: 03/06/02 **Analysis Date..:** 03/06/02
Prep Batch #...: 2066138
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	91	(63 - 130)			SW846 8260B
	99	(63 - 130)	8.6	(0-20)	SW846 8260B
Trichloroethene	97	(75 - 122)			SW846 8260B
	108	(75 - 122)	11	(0-20)	SW846 8260B
Benzene	93	(80 - 116)			SW846 8260B
	99	(80 - 116)	5.4	(0-20)	SW846 8260B
Toluene	92	(74 - 119)			SW846 8260B
	96	(74 - 119)	3.8	(0-20)	SW846 8260B
Chlorobenzene	94	(76 - 117)			SW846 8260B
	96	(76 - 117)	1.4	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	105	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
	102	(61 - 128)
Toluene-d8	95	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)
	95	(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 #...: A2C020108 **Work Order #...:** EV3WE1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A2C070000-364 EV3WE1AD-LCSD
Prep Date.....: 03/07/02 **Analysis Date..:** 03/07/02
Prep Batch #...: 2066364
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	**10**	**9.9**	**ug/L**	**99**		**SW846 8260B**
	10	**9.7**	**ug/L**	**97**	**1.2**	**SW846 8260B**
Trichloroethene	**10**	**10**	**ug/L**	**104**		**SW846 8260B**
	10	**10**	**ug/L**	**101**	**2.5**	**SW846 8260B**
Benzene	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	10	**10**	**ug/L**	**100**	**2.1**	**SW846 8260B**
Toluene	**10**	**9.7**	**ug/L**	**97**		**SW846 8260B**
	10	**10**	**ug/L**	**102**	**4.8**	**SW846 8260B**
Chlorobenzene	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	10	**10**	**ug/L**	**102**	**3.5**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
	102	(61 - 128)
Toluene-d8	96	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	94	(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 #...: A2C020108 **Work Order #...:** EV3WE1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A2C070000-364 EV3WE1AD-LCSD
Prep Date.....: 03/07/02 **Analysis Date..:** 03/07/02
Prep Batch #...: 2066364
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**99**	**(63 - 130)**			**SW846 8260B**
	97	**(63 - 130)**	**1.2**	**(0-20)**	**SW846 8260B**
Trichloroethene	**104**	**(75 - 122)**			**SW846 8260B**
	101	**(75 - 122)**	**2.5**	**(0-20)**	**SW846 8260B**
Benzene	**98**	**(80 - 116)**			**SW846 8260B**
	100	**(80 - 116)**	**2.1**	**(0-20)**	**SW846 8260B**
Toluene	**97**	**(74 - 119)**			**SW846 8260B**
	102	**(74 - 119)**	**4.8**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**98**	**(76 - 117)**			**SW846 8260B**
	102	**(76 - 117)**	**3.5**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
	102	(61 - 128)
Toluene-d8	96	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	94	(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 DATA REPORT

GC Volatiles

Client Lot #...: A2C020108 **Work Order #...:** EV9QF1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C120000-383 EV9QF1AD-LCSD
Prep Date.....: 03/11/02 **Analysis Date..:** 03/11/02
Prep Batch #...: 2071383
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Carbon dioxide	**18**	**18**	**mg/L**	**98**		**RSK SOP-175**
	18	**19**	**mg/L**	**107**	**9.0**	**RSK SOP-175**

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 Volatiles

Client Lot #...: A2C020108 **Work Order #...:** EV9QF1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C120000-383 EV9QF1AD-LCSD
Prep Date.....: 03/11/02 **Analysis Date..:** 03/11/02
Prep Batch #...: 2071383
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Carbon dioxide	98	(60 - 125)			RSK SOP-175
	107	(60 - 125)	9.0	(0-20)	RSK SOP-175

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 Volatiles

Client Lot #...: A2C020108 **Work Order #...:** EV94N1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C120000-450 EV94N1AD-LCSD
Prep Date.....: 03/11/02 **Analysis Date..:** 03/11/02
Prep Batch #...: 2071450
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Ethane	**0.61**	**0.60**	**mg/L**	**97**		**RSK SOP-175**
	0.61	**0.64**	**mg/L**	**105**	**7.4**	**RSK SOP-175**
Ethene	**0.57**	**0.56**	**mg/L**	**99**		**RSK SOP-175**
	0.57	**0.62**	**mg/L**	**108**	**8.8**	**RSK SOP-175**
Methane	**0.33**	**0.33**	**mg/L**	**100**		**RSK SOP-175**
	0.33	**0.41**	**mg/L**	**125**	**22**	**RSK SOP-175**

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 Volatiles

Client Lot #...: A2C020108 **Work Order #...:** EV94N1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C120000-450 EV94N1AD-LCSD
Prep Date.....: 03/11/02 **Analysis Date..:** 03/11/02
Prep Batch #...: 2071450
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Ethane	97	(65 - 130)			RSK SOP-175
	105	(65 - 130)	7.4	(0-20)	RSK SOP-175
Ethene	99	(70 - 130)			RSK SOP-175
	108	(70 - 130)	8.8	(0-20)	RSK SOP-175
Methane	100	(60 - 135)			RSK SOP-175
	125	(60 - 135)	22	(0-30)	RSK SOP-175

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 Volatiles

Client Lot #...: A2C020108 **Work Order #...:** EV9GQ1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C120000-322 EV9GQ1AD-LCSD
Prep Date.....: 03/12/02 **Analysis Date..:** 03/12/02
Prep Batch #...: 2071322
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Ethane	**0.61**	**0.57**	**mg/L**	**94**		**RSK SOP-175**
	0.61	**0.65**	**mg/L**	**106**	**12**	**RSK SOP-175**
Ethene	**0.57**	**0.55**	**mg/L**	**96**		**RSK SOP-175**
	0.57	**0.62**	**mg/L**	**108**	**12**	**RSK SOP-175**
Methane	**0.33**	**0.31**	**mg/L**	**96**		**RSK SOP-175**
	0.33	**0.35**	**mg/L**	**106**	**10**	**RSK SOP-175**

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 Volatiles

Client Lot #...: A2C020108 **Work Order #...:** EV9GQ1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: M2C120000-322 EV9GQ1AD-LCSD
Prep Date.....: 03/12/02 **Analysis Date..:** 03/12/02
Prep Batch #...: 2071322
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Ethane	**94**	**(65 - 130)**			**RSK SOP-175**
	106	**(65 - 130)**	**12**	**(0-20)**	**RSK SOP-175**
Ethene	**96**	**(70 - 130)**			**RSK SOP-175**
	108	**(70 - 130)**	**12**	**(0-20)**	**RSK SOP-175**
Methane	**96**	**(60 - 135)**			**RSK SOP-175**
	106	**(60 - 135)**	**10**	**(0-30)**	**RSK SOP-175**

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

TOTAL Metals

Client Lot #...: A2C020108 Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A2C040000-116 Prep Batch #...: 2063116							
Iron	1.0	1.0	mg/L	105	SW846 6010B	03/04-03/05/02	EVVPX1A8
			Dilution Factor: 1				
Manganese	0.50	0.49	mg/L	97	SW846 6010B	03/04-03/05/02	EVVPX1CA
			Dilution Factor: 1				

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A2C020108 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A2C040000-116 **Prep Batch #...:** 2063116					
Iron	105	(77 - 127)	SW846 6010B	03/04-03/05/02	EVVPX1A8
		Dilution Factor: 1			
Manganese	97	(80 - 120)	SW846 6010B	03/04-03/05/02	EVVPX1CA
		Dilution Factor: 1			

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: A2C020108 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate		WO#:EVX2H1AC-LCS/EVX2H1AD-LCSD				LCS Lot-Sample#: A2C050000-359		
	2.5	2.6	mg/L	103		MCAWW 300.0A	03/05/02	2064359
	2.5	2.6	mg/L	103	0.38	MCAWW 300.0A	03/05/02	2064359

Dilution Factor: 1

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: A2C020108 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate		WO#:EVX2H1AC-LCS/EVX2H1AD-LCSD			LCS Lot-Sample#: A2C050000-359		
	103	(90 - 110)			MCAWW 300.0A	03/05/02	2064359
	103	(90 - 110)	0.38	(0-20)	MCAWW 300.0A	03/05/02	2064359

Dilution Factor: 1

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A2C020108 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			Work Order #: EVVQ11AC	LCS Lot-Sample#:		A2C040000-143	
	50.0	50.8	mg/L	102	MCAWW 300.0A	03/02/02	2063143
			Dilution Factor: 1				
Nitrate			Work Order #: EVVRF1AC	LCS Lot-Sample#:		A2C040000-145	
	2.5	2.6	mg/L	104	MCAWW 300.0A	03/02/02	2063145
			Dilution Factor: 1				
Nitrite			Work Order #: EVVRD1AC	LCS Lot-Sample#:		A2C040000-144	
	2.5	2.6	mg/L	105	MCAWW 300.0A	03/02/02	2063144
			Dilution Factor: 1				
Sulfate			Work Order #: EVVRK1AC	LCS Lot-Sample#:		A2C040000-146	
	50.0	50.2	mg/L	100	MCAWW 300.0A	03/02/02	2063146
			Dilution Factor: 1				
Total Alkalinity			Work Order #: EVWQJ1AC	LCS Lot-Sample#:		A2C040000-487	
	45	46	mg/L	101	MCAWW 310.1	03/04/02	2063487
			Dilution Factor: 1				
Total Organic Carbon			Work Order #: EV0P91AC	LCS Lot-Sample#:		A2C060000-183	
	38	40	mg/L	103	MCAWW 415.1	03/05/02	2065183
			Dilution Factor: 1				
Total Sulfide			Work Order #: EVWQK1AC	LCS Lot-Sample#:		A2C040000-486	
	20	17	mg/L	87	MCAWW 376.1	03/04/02	2063486
			Dilution Factor: 1				

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A2C020108 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		Work Order #: EVVQ11AC LCS Lot-Sample#: A2C040000-143			
	102	(90 - 110)	MCAWW 300.0A	03/02/02	2063143
		Dilution Factor: 1			
Nitrate		Work Order #: EVVRF1AC LCS Lot-Sample#: A2C040000-145			
	104	(90 - 110)	MCAWW 300.0A	03/02/02	2063145
		Dilution Factor: 1			
Nitrite		Work Order #: EVVRD1AC LCS Lot-Sample#: A2C040000-144			
	105	(88 - 110)	MCAWW 300.0A	03/02/02	2063144
		Dilution Factor: 1			
Sulfate		Work Order #: EVVRK1AC LCS Lot-Sample#: A2C040000-146			
	100	(90 - 110)	MCAWW 300.0A	03/02/02	2063146
		Dilution Factor: 1			
Total Alkalinity		Work Order #: EVWQJ1AC LCS Lot-Sample#: A2C040000-487			
	101	(90 - 127)	MCAWW 310.1	03/04/02	2063487
		Dilution Factor: 1			
Total Organic Carbon		Work Order #: EV0P91AC LCS Lot-Sample#: A2C060000-183			
	103	(88 - 115)	MCAWW 415.1	03/05/02	2065183
		Dilution Factor: 1			
Total Sulfide		Work Order #: EVWQK1AC LCS Lot-Sample#: A2C040000-486			
	87	(79 - 110)	MCAWW 376.1	03/04/02	2063486
		Dilution Factor: 1			

NOTE(S):

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

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A2C020108 **Work Order #...:** EVT961AC-MS **Matrix.....:** WG
MS Lot-Sample #: A2C020108-001 EVT961AD-MSD
Date Sampled...: 02/27/02 **Date Received..:** 03/02/02
Prep Date.....: 03/06/02 **Analysis Date..:** 03/06/02
Prep Batch #...: 2066138
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,1-Dichloroethene	ND	10	9.5	ug/L	95		SW846 8260B
	ND	10	9.2	ug/L	92	3.4	SW846 8260B
Trichloroethene	ND	10	10	ug/L	102		SW846 8260B
	ND	10	9.8	ug/L	98	4.1	SW846 8260B
Benzene	ND	10	9.5	ug/L	95		SW846 8260B
	ND	10	9.0	ug/L	90	4.7	SW846 8260B
Toluene	ND	10	9.5	ug/L	95		SW846 8260B
	ND	10	9.1	ug/L	91	4.0	SW846 8260B
Chlorobenzene	ND	10	9.3	ug/L	93		SW846 8260B
	ND	10	9.2	ug/L	92	0.69	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
	94	(61 - 128)
Toluene-d8	97	(76 - 110)
	96	(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 EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A2C020108 **Work Order #...:** EVT961AC-MS **Matrix.....:** WG
MS Lot-Sample #: A2C020108-001 EVT961AD-MSD
Date Sampled...: 02/27/02 **Date Received..:** 03/02/02
Prep Date.....: 03/06/02 **Analysis Date..:** 03/06/02
Prep Batch #...: 2066138
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**95**	**(62 - 130)**			**SW846 8260B**
	92	**(62 - 130)**	**3.4**	**(0-20)**	**SW846 8260B**
Trichloroethene	**102**	**(62 - 130)**			**SW846 8260B**
	98	**(62 - 130)**	**4.1**	**(0-20)**	**SW846 8260B**
Benzene	**95**	**(78 - 118)**			**SW846 8260B**
	90	**(78 - 118)**	**4.7**	**(0-20)**	**SW846 8260B**
Toluene	**95**	**(70 - 119)**			**SW846 8260B**
	91	**(70 - 119)**	**4.0**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**93**	**(76 - 117)**			**SW846 8260B**
	92	**(76 - 117)**	**0.69**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
	94	(61 - 128)
Toluene-d8	97	(76 - 110)
	96	(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 #...: A2C020108 Work Order #...: EVV221AC-MS Matrix.....: WATER
MS Lot-Sample #: A2C040124-001 EVV221AD-MSD
Date Sampled...: 03/04/02 12:20 Date Received..: 03/04/02
Prep Date.....: 03/07/02 Analysis Date..: 03/07/02
Prep Batch #...: 2066364
Dilution Factor: 5

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,1-Dichloroethene	2.6	50	49	ug/L	94		SW846 8260B
	2.6	50	52	ug/L	99	5.5	SW846 8260B
Trichloroethene	130	50	170	ug/L	94		SW846 8260B
	130	50	170	ug/L	86	2.6	SW846 8260B
Benzene	ND	50	48	ug/L	96		SW846 8260B
	ND	50	50	ug/L	101	4.5	SW846 8260B
Toluene	ND	50	47	ug/L	94		SW846 8260B
	ND	50	49	ug/L	98	4.8	SW846 8260B
Chlorobenzene	ND	50	47	ug/L	93		SW846 8260B
	ND	50	49	ug/L	98	5.4	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	99	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	99	(61 - 128)
Toluene-d8	95	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)
	95	(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 #...: A2C020108 Work Order #...: EVV221AC-MS Matrix.....: WATER
MS Lot-Sample #: A2C040124-001 EVV221AD-MSD
Date Sampled...: 03/04/02 12:20 Date Received..: 03/04/02
Prep Date.....: 03/07/02 Analysis Date..: 03/07/02
Prep Batch #...: 2066364
Dilution Factor: 5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	94	(62 - 130)			SW846 8260B
	99	(62 - 130)	5.5	(0-20)	SW846 8260B
Trichloroethene	94	(62 - 130)			SW846 8260B
	86	(62 - 130)	2.6	(0-20)	SW846 8260B
Benzene	96	(78 - 118)			SW846 8260B
	101	(78 - 118)	4.5	(0-20)	SW846 8260B
Toluene	94	(70 - 119)			SW846 8260B
	98	(70 - 119)	4.8	(0-20)	SW846 8260B
Chlorobenzene	93	(76 - 117)			SW846 8260B
	98	(76 - 117)	5.4	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	99	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	99	(61 - 128)
Toluene-d8	95	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)
	95	(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

TOTAL Metals

Client Lot #...: A2C020108 **Matrix.....:** WATER
Date Sampled...: 02/28/02 09:30 **Date Received..:** 03/01/02

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A2C010206-001 **Prep Batch #...:** 2063116									
Iron									
	0.24	1.0	1.3	mg/L	104		SW846 6010B	03/04-03/05/02	EVTGG1CQ
	0.24	1.0	1.3	mg/L	101	2.3	SW846 6010B	03/04-03/05/02	EVTGG1CR
			Dilution Factor: 1						
Manganese									
	0.070	0.50	0.57	mg/L	100		SW846 6010B	03/04-03/05/02	EVTGG1CV
	0.070	0.50	0.55	mg/L	97	3.2	SW846 6010B	03/04-03/05/02	EVTGG1CW
			Dilution Factor: 1						

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A2C020108 **Matrix.....:** WATER
Date Sampled...: 02/28/02 09:30 **Date Received..:** 03/01/02

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A2C010206-001 **Prep Batch #...:** 2063116							
Iron	104	(75 - 125)			SW846 6010B	03/04-03/05/02	EVTGG1CQ
	101	(75 - 125)	2.3	(0-20)	SW846 6010B	03/04-03/05/02	EVTGG1CR
		Dilution Factor: 1					
Manganese	100	(75 - 125)			SW846 6010B	03/04-03/05/02	EVTGG1CV
	97	(75 - 125)	3.2	(0-20)	SW846 6010B	03/04-03/05/02	EVTGG1CW
		Dilution Factor: 1					

NOTE(S):

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

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A2C020108 **Matrix.....:** WG
Date Sampled...: 02/27/02 **Date Received..:** 03/02/02

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A2C020108-001 **Prep Batch #...:** 2063116									
Iron									
	0.19	1.0	1.1	mg/L	96		SW846 6010B	03/04-03/05/02	EVT961A0
	0.19	1.0	1.1	mg/L	91	4.0	SW846 6010B	03/04-03/05/02	EVT961A1
			Dilution Factor: 1						
Manganese									
	ND	0.50	0.49	mg/L	98		SW846 6010B	03/04-03/05/02	EVT961A3
	ND	0.50	0.49	mg/L	98	0.89	SW846 6010B	03/04-03/05/02	EVT961A4
			Dilution Factor: 1						

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A2C020108 **Matrix.....:** WG
Date Sampled...: 02/27/02 **Date Received..:** 03/02/02

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A2C020108-001 **Prep Batch #...:** 2063116							
Iron	96	(75 - 125)			SW846 6010B	03/04-03/05/02	EVT961A0
	91	(75 - 125)	4.0	(0-20)	SW846 6010B	03/04-03/05/02	EVT961A1
		Dilution Factor: 1					
Manganese	98	(75 - 125)			SW846 6010B	03/04-03/05/02	EVT961A3
	98	(75 - 125)	0.89	(0-20)	SW846 6010B	03/04-03/05/02	EVT961A4
		Dilution Factor: 1					

NOTE(S):

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

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A2C020108 **Matrix.....:** WG
Date Sampled...: 02/27/02 **Date Received..:** 03/02/02

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			WO#: EVT961AF-MS/EVT961AG-MSD		MS Lot-Sample #: A2C020108-001				
	4.4	50.0	62.4	mg/L	116		MCAWW 300.0A	03/02/02	2063143
	4.4	50.0	62.6	mg/L	116	0.28	MCAWW 300.0A	03/02/02	2063143
			Dilution Factor: 1						
Nitrate			WO#: EVT961A9-MS/EVT961CA-MSD		MS Lot-Sample #: A2C020108-001				
	1.2	2.5	4.2	mg/L	118		MCAWW 300.0A	03/02/02	2063145
	1.2	2.5	4.2	mg/L	117	0.24	MCAWW 300.0A	03/02/02	2063145
			Dilution Factor: 1						
Nitrite			WO#: EVT961AN-MS/EVT961AP-MSD		MS Lot-Sample #: A2C020108-001				
	ND	2.5	2.6	mg/L	105		MCAWW 300.0A	03/02/02	2063144
	ND	2.5	2.6	mg/L	102	3.1	MCAWW 300.0A	03/02/02	2063144
			Dilution Factor: 1						
Sulfate			WO#: EVT961AR-MS/EVT961AT-MSD		MS Lot-Sample #: A2C020108-001				
	2.9	50.0	59.4	mg/L	113		MCAWW 300.0A	03/02/02	2063146
	2.9	50.0	59.6	mg/L	113	0.33	MCAWW 300.0A	03/02/02	2063146
			Dilution Factor: 1						
Total Alkalinity			WO#: EVT961AV-MS/EVT961AW-MSD		MS Lot-Sample #: A2C020108-001				
	26	500	470	mg/L	89		MCAWW 310.1	03/04/02	2063487
	26	500	460	mg/L	87	2.1	MCAWW 310.1	03/04/02	2063487
			Dilution Factor: 1						
Total Organic Carbon			WO#: EVT961A6-MS/EVT961A7-MSD		MS Lot-Sample #: A2C020108-001				
	ND	25	28	mg/L	113		MCAWW 415.1	03/05/02	2065183
	ND	25	28	mg/L	112	0.26	MCAWW 415.1	03/05/02	2065183
			Dilution Factor: 1						
Total Sulfide			WO#: EVT961CD-MS/EVT961CE-MSD		MS Lot-Sample #: A2C020108-001				
	ND	20	18	mg/L	88		MCAWW 376.1	03/04/02	206348E
	ND	20	18	mg/L	89	1.4	MCAWW 376.1	03/04/02	206348E
			Dilution Factor: 1						

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A2C020108 Matrix.....: WG
Date Sampled...: 02/27/02 Date Received..: 03/02/02

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		WO#: EVT961AF-MS/EVT961AG-MSD				MS Lot-Sample #: A2C020108-001	
	116	(56 - 137)			MCAWW 300.0A	03/02/02	2063143
	116	(56 - 137)	0.28	(0-20)	MCAWW 300.0A	03/02/02	2063143
		Dilution Factor: 1					
Nitrate		WO#: EVT961A9-MS/EVT961CA-MSD				MS Lot-Sample #: A2C020108-001	
	118	(47 - 154)			MCAWW 300.0A	03/02/02	2063145
	117	(47 - 154)	0.24	(0-30)	MCAWW 300.0A	03/02/02	2063145
		Dilution Factor: 1					
Nitrite		WO#: EVT961AN-MS/EVT961AP-MSD				MS Lot-Sample #: A2C020108-001	
	105	(45 - 156)			MCAWW 300.0A	03/02/02	2063144
	102	(45 - 156)	3.1	(0-62)	MCAWW 300.0A	03/02/02	2063144
		Dilution Factor: 1					
Sulfate		WO#: EVT961AR-MS/EVT961AT-MSD				MS Lot-Sample #: A2C020108-001	
	113	(38 - 155)			MCAWW 300.0A	03/02/02	2063146
	113	(38 - 155)	0.33	(0-20)	MCAWW 300.0A	03/02/02	2063146
		Dilution Factor: 1					
Total Alkalinity		WO#: EVT961AV-MS/EVT961AW-MSD				MS Lot-Sample #: A2C020108-001	
	89	(10 - 160)			MCAWW 310.1	03/04/02	2063487
	87	(10 - 160)	2.1	(0-24)	MCAWW 310.1	03/04/02	2063487
		Dilution Factor: 1					
Total Organic Carbon		WO#: EVT961A6-MS/EVT961A7-MSD				MS Lot-Sample #: A2C020108-001	
	113	(72 - 136)			MCAWW 415.1	03/05/02	2065183
	112	(72 - 136)	0.26	(0-20)	MCAWW 415.1	03/05/02	2065183
		Dilution Factor: 1					
Total Sulfide		WO#: EVT961CD-MS/EVT961CE-MSD				MS Lot-Sample #: A2C020108-001	
	88	(72 - 110)			MCAWW 376.1	03/04/02	2063486
	89	(72 - 110)	1.4	(0-20)	MCAWW 376.1	03/04/02	2063486
		Dilution Factor: 1					

NOTE(S):

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

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A2C020108 **Matrix.....:** WATER
Date Sampled...: 02/27/02 12:00 **Date Received..:** 03/04/02

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Sulfide			WO#: EVV151A5-MS/EVV151A6-MSD				MS Lot-Sample #: A2C040120-001		
	ND	20	18	mg/L	90		MCAWW 376.1	03/04/02	2063486
	ND	20	18	mg/L	89	0.89	MCAWW 376.1	03/04/02	2063486

Dilution Factor: 1

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A2C020108 Matrix.....: WATER
Date Sampled...: 02/27/02 12:00 Date Received..: 03/04/02

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Sulfide		WO#: EVV151A5-MS/EVV151A6-MSD				MS Lot-Sample #: A2C040120-001	
	90	(72 - 110)			MCAWW 376.1	03/04/02	2063486
	89	(72 - 110)	0.89	(0-20)	MCAWW 376.1	03/04/02	2063486

Dilution Factor: 1

NOTE(S):

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

SAMPLE DUPLICATE EVALUATION REPORT

GC Volatiles

Client Lot #...: A2C020108 **Work Order #...:** EVT961AH -SMP **Matrix.....:** WG
SD Lot-Sample #: A2C020108-001 EVT961CF -DUP
Date Sampled...: 02/27/02 **Date Received..:** 03/02/02
Prep Date.....: 03/11/02 **Analysis Date..:** 03/11/02
Prep Batch #...: 2071383
Dilution Factor: 1

PARAMETER	SAMPLE RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD
Carbon dioxide	18	13	mg/L	37	(0-20)	RSK SOP-175

SAMPLE DUPLICATE EVALUATION REPORT

GC Volatiles

Client Lot #...: A2C020108 **Work Order #...:** EVT961AL -SMP **Matrix.....:** WG
SD Lot-Sample #: A2C020108-001 EVT961CG -DUP
Date Sampled...: 02/27/02 **Date Received..:** 03/02/02
Prep Date.....: 03/11/02 **Analysis Date..:** 03/11/02
Prep Batch #...: 2071450
Dilution Factor: 1

PARAMETER	SAMPLE RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD
Methane	ND	ND	mg/L	4.7	(0-30)	RSK SOP-175
Ethane	ND	ND	mg/L	0	(0-20)	RSK SOP-175
Ethene	ND	ND	mg/L	0	(0-20)	RSK SOP-175

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA-ROVERS & ASSOCIATES
1801 OLD HWY. 8, SUITE 114
ST. PAUL, MN 55112 (612)639-0913

SHIPPED TO (Laboratory Name): STL

REFERENCE NUMBER: #12865-90

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: DAN NELSON

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	VOCs	TOC	Sulfide	SO4+NO3	Carbon Dioxide	Ethane Ethene Methane	Alk Cl Nitrate	Nitrite Sulfate			REMARKS
	2/27/02		W-020227-PS-26 (MS/MSD)	Water	36	X	X	X	X	X	X	X				
	↓		-27	↓	12	X	X	X	X	X	X	X				
	↓		-28	↓	12	X	X	X	X	X	X	X				
	↓		-29	↓	12	X	X	X	X	X	X	X				
			Trip Blank		1	X										
			Temp Blank (1 per cooler)		2											
			End of Samples													

TOTAL NUMBER OF CONTAINERS: 75 HEALTH/CHEMICAL HAZARDS:

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
① [signature]	DATE: 3/1/02 TIME: 8:00	②	DATE: TIME:
②	DATE: TIME:	③	DATE: TIME:
③	DATE: TIME:	④	DATE: TIME:

METHOD OF SHIPMENT: Fed-Ex P.O.N WAY BILL No.

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

SAMPLE TEAM: Statie, P., R. Aamot; Nelson, D.

RECEIVED FOR LABORATORY BY: [signature]
DATE: 3/2/02 TIME: 9:25/AM

№ 03892

1001 JULY 19/93 REV.0 (F-42)

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA-ROVERS & ASSOCIATES
1801 OLD HWY. 8, SUITE 114
ST. PAUL, MN 55112 (612)639-0913

SHIPPED TO (Laboratory Name): STL

REFERENCE NUMBER: #12865-90

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Dan Nelson

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	VOCs	TCE	Sulfide	Fe & Mn	Carbon Dioxide	Chloride	Alkalinity				REMARKS
	2/27/03		W-030227-PS-31 (w/MS/MSD) MW-6A	Water	36	X	X	X	X	X	X	X				
	↓		↓ ↓ ↓ -27 MW-3B	↓	12	X	X	X	X	X	X	X				
	↓		↓ ↓ ↓ -32 MW-3A	↓	12	X	X	X	X	X	X	X				
	↓		↓ ↓ ↓ -33 MW-3C	↓	12	X	X	X	X	X	X	X				
			Trip Blank		1	X										
			Temp Blank (1 per cooler)		2											
			End of Samples													
TOTAL NUMBER OF CONTAINERS					75	HEALTH/CHEMICAL HAZARDS										

RELINQUISHED BY: ① [signature]	DATE: 3/1/03 TIME: 9:00	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed-Ex A.M. WAY BILL No.

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

SAMPLE TEAM: Stake, P. P. Arndt; Nelson, D.

RECEIVED FOR LABORATORY BY:
DATE: TIME:

№ 03692

C

APPENDIX C

GROUNDWATER DATA VALIDATION MEMO

CONESTOGA-ROVERS & ASSOCIATES

1801 Old Highway 8 NW, Suite #114
St. Paul, Minnesota 55112
Telephone: (651) 639-0913 Fax: (651) 639-0923
www.CRAworld.com

MEMORANDUM

TO: Katie Kamm

REF. NO.: 12865-80/-90

FROM: Grant Anderson

MN FILE COPY

DATE: April 16, 2002

C.C.: Analytical Data File
Brian Sandberg

RE: **Data Quality Assessment and Validation**
February 2002 Sampling Event
Tomah Landfill Site – Tomah, Wisconsin (COC 3799, 3800, and 3892)

The following details a data quality assessment and validation for water samples collected February 25-27, 2002, at the Tomah Landfill Site in Tomah, Wisconsin. The samples identified in Table 1 were analyzed for one or more of the parameters listed in Table 2. The analyses were performed by Severn Trent Laboratories (STL) in North Canton, Ohio and STL in Los Angeles, California. The quality assurance criteria were defined by the quality assurance project plan (QAPP)[1].

HOLDING TIME PERIODS

The holding time periods for the analyses are presented in Table 2. On the basis of sample collection and analysis dates on the chain-of-custody forms and the analytical reports provided by STL, the majority of analyses were completed within the specified holding time periods. Table 3 lists holding time violations. Associated sample data should be qualified as noted in the table.

METHOD BLANK SAMPLES

Contamination of the samples contributed by laboratory conditions or procedures was monitored by the concurrent preparation and analysis of method blank samples. The method blank samples were reported to be free from detectable concentrations of target analytes, indicating that laboratory contamination was unlikely.

1 Application of quality assurance criteria was consistent with "National Functional Guidelines for Organic Data Review", October 1999 and "National Functional Guidelines for Inorganic Data Review", February 1994.

SURROGATE COMPOUND PERCENT RECOVERIES (SURROGATE RECOVERIES)

Individual sample performance for VOC analyses was monitored using surrogate recoveries. The surrogate recoveries for the analyses were within acceptance criteria, indicating that individual sample performance was adequate.

LABORATORY CONTROL SAMPLE (LCS) RECOVERIES

Overall performance of the analyses was monitored by means of LCS. The LCS percent recoveries were within acceptance criteria, indicating that overall performance was adequate.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) RESULTS

To assess the long-term accuracy and precision of the analytical method on various matrices, MS/MSD - percent recoveries and relative percent difference (RPD) of the recoveries were determined for the analyses. The MS/MSD results for project-related samples were within acceptance criteria.

FIELD QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) SAMPLES

The field QA/QC samples associated with the February sampling event consisted of three trip blank samples and three field duplicate sample sets.

To evaluate the possibility of contamination arising from sample transport, the environment, and/or shipping, three trip blank samples were submitted to the laboratory for VOC analysis. One trip blank yielded detections for 1,1-dichloroethene (1.9 µg/L) and toluene (0.39 µg/L). However, associated samples were reported to be non-detect or detections in the associated samples were high enough such that qualification of data was not necessary. The remaining trip blanks were reported to be free from detectable concentrations of target analytes, indicting that cross-contamination was unlikely.

Overall precision for the sampling event was monitored using field duplicate sample sets: W-020225-PS-03/W-020225-PS-04, W-020226-PS-13/W-020226-PS-14, and W-020227-PS-23/W-020227-PS-24. RPD values were calculated for positive results from the field duplicate samples. The RPD values for the field duplicate sample sets were within acceptance criteria, indicating that overall precision was adequate.

OVERALL ASSESSMENT

The data were found to exhibit acceptable levels of accuracy and precision and may be used with the qualifications noted above.

GDA/jla/20
Enc.

TABLE 1

SAMPLE IDENTIFICATION NUMBERS
TOMAH LANDFILL SITE
FEBRUARY 2002 SAMPLING EVENT

Sample ID	*Sample Location*
W-020225-PS-01	MW-15B
W-020225-PS-02	MW-15C
W-020225-PS-03	MW-15A
W-020225-PS-04	MW-15A (dup)
W-020225-PS-05	MW-12A
W-020225-PS-06	MW-12B
W-020225-PS-07	MW-12C
W-020226-PS-08	MW-9A
W-020226-PS-09	MW-9B 42 min
W-020226-PS-100	MW-9B 52 min
W-020226-PS-10	MW-9C
W-020226-PS-11	MW-13A
W-020226-PS-12	MW-13B
W-020226-PS-13	MW-14A
W-020226-PS-14	MW-14A (dup)
W-020226-PS-15	MW-14B
W-020226-PS-16	MW-14C
W-020226-PS-17	MW-5A
W-020226-PS-18	MW-4B
W-020226-PS-19	MW-1B
W-020226-PS-20	MW-1A
W-020227-PS-21	MW-2A
W-020227-PS-22	MW-2B
W-020227-PS-23	MW-8A
W-020227-PS-24	MW-8A (dup)
W-020227-PS-25	MW-7A
W-020227-PS-26	MW-6A
W-020227-PS-27	MW-3B
W-020227-PS-28	MW-3A
W-020227-PS-29	MW-3C

TABLE 2

SUMMARY OF ANALYTICAL PARAMETERS
AND HOLDING TIME PERIODS
TOMAH LANDFILL SITE
FEBRUARY 2002 SAMPLING EVENT

Analysis - Method[1]	*Holding Time*[2]
VOC - SW 8260B	14 days
Chloride - EPA 300.0A	28 days
Total Organic Carbon (TOC) - EPA 415.1	28 days
Dissolved Gases - RSK SOP-175	14 days
Metals - SW 6010B	6 months
Alkalinity - EPA 310.1	14 days
Nitrate - EPA 300.0A	48 hours
Nitrite - EPA 300.0A	48 hours
Sulfate - EPA 300.0A	28 days
Sulfide - EPA 376.1	7 days

Notes:

1 Methods were derived from:

SW - "Test Methods for Evaluating Solid Waste", SW-846, 3rd Edition, November 1986 with updates and revisions.

EPA - "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-20, March 1983 with revisions.

RSK - Sample Prep and Calculations for Dissolved Gas Analysis in Water Samples using a GC Headspace Equilibration Technique, RSKSOP-175, REV 0, 8/11/94, USEPA Research Lab.

2 Holding time periods are based from sample collection date to sample analysis date.

TABLE 3

SAMPLE HOLDING TIME VIOLATIONS
TOMAH LANDFILL SITE
FEBRUARY 2002 SAMPLING EVENT

Analysis	*Sample ID*	*Method Required Holding Time*	*Actual Holding Time*	*Qualifier1*
Nitrate	W-020225-PS-01	48 hours to analysis	3 days to analysis	J/UJ
	W-020225-PS-02	48 hours to analysis	3 days to analysis	J/UJ
	W-020225-PS-03	48 hours to analysis	3 days to analysis	J/UJ
	W-020225-PS-04	48 hours to analysis	3 days to analysis	J/UJ
	W-020225-PS-05	48 hours to analysis	3 days to analysis	J/UJ
	W-020225-PS-06	48 hours to analysis	3 days to analysis	J/UJ
	W-020225-PS-07	48 hours to analysis	3 days to analysis	J/UJ
	W-020227-PS-26	48 hours to analysis	3 days to analysis	J/UJ
	W-020227-PS-27	48 hours to analysis	3 days to analysis	J/UJ
	W-020227-PS-28	48 hours to analysis	6 days to analysis	J/UJ
	W-020227-PS-29	48 hours to analysis	3 days to analysis	J/UJ
Nitrite	W-020225-PS-01	48 hours to analysis	3 days to analysis	J/UJ
	W-020225-PS-02	48 hours to analysis	3 days to analysis	J/UJ
	W-020225-PS-03	48 hours to analysis	3 days to analysis	J/UJ
	W-020225-PS-04	48 hours to analysis	3 days to analysis	J/UJ
	W-020225-PS-05	48 hours to analysis	3 days to analysis	J/UJ
	W-020225-PS-06	48 hours to analysis	3 days to analysis	J/UJ
	W-020225-PS-07	48 hours to analysis	3 days to analysis	J/UJ
	W-020227-PS-26	48 hours to analysis	3 days to analysis	J/UJ
	W-020227-PS-27	48 hours to analysis	3 days to analysis	J/UJ
	W-020227-PS-28	48 hours to analysis	3 days to analysis	J/UJ
	W-020227-PS-29	48 hours to analysis	3 days to analysis	J/UJ

Notes:

[1] Sample results should be qualified as:

J - The associated value is an estimated quantity for detected analytes.

UJ - The analyte was checked for, but not detected.

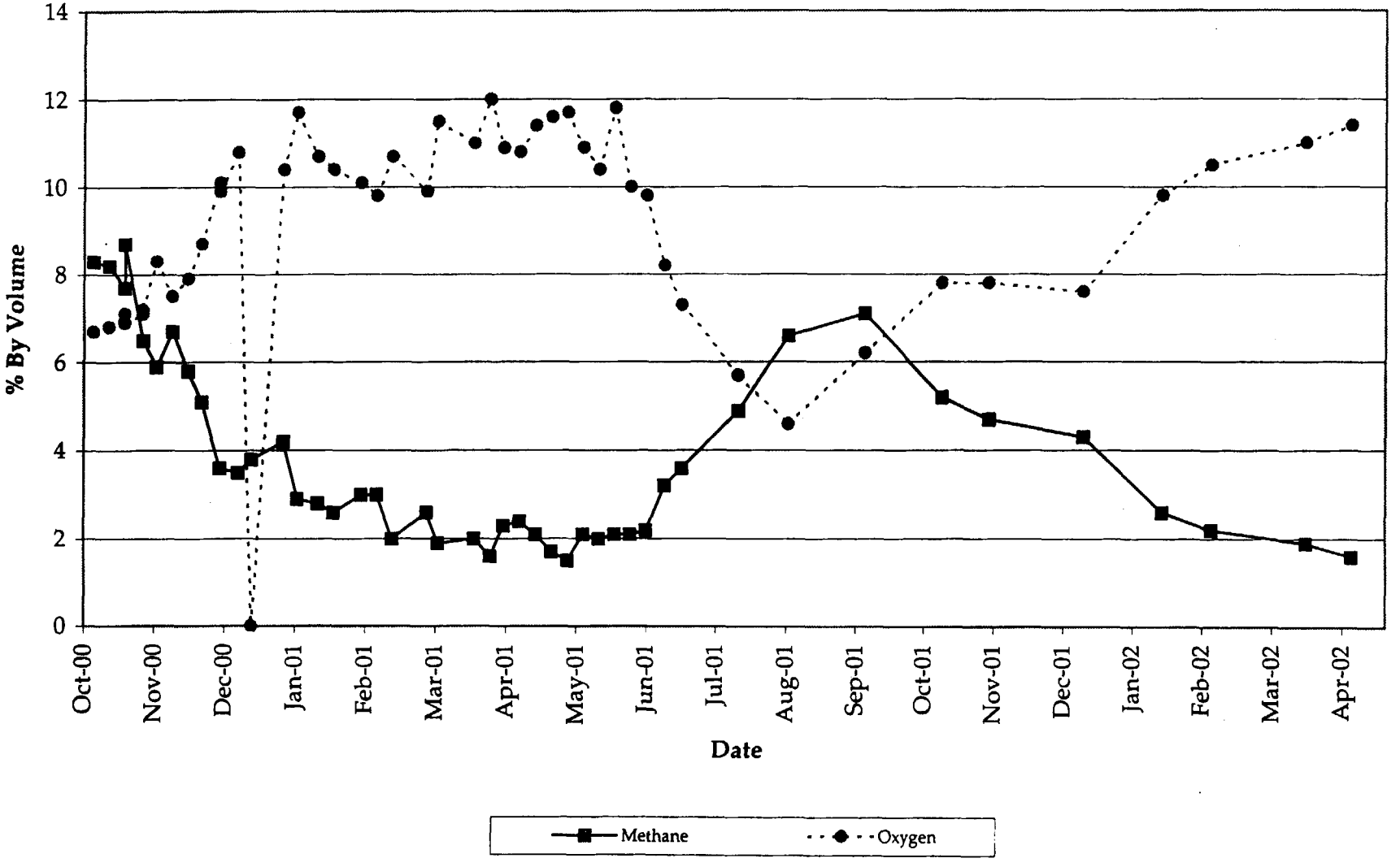
The associated value is an estimated quantitation limit.

D

APPENDIX D

METHAN CONCENTRATIONS IN GAS EXTRACTION WELLS

BLOWER OUTLET



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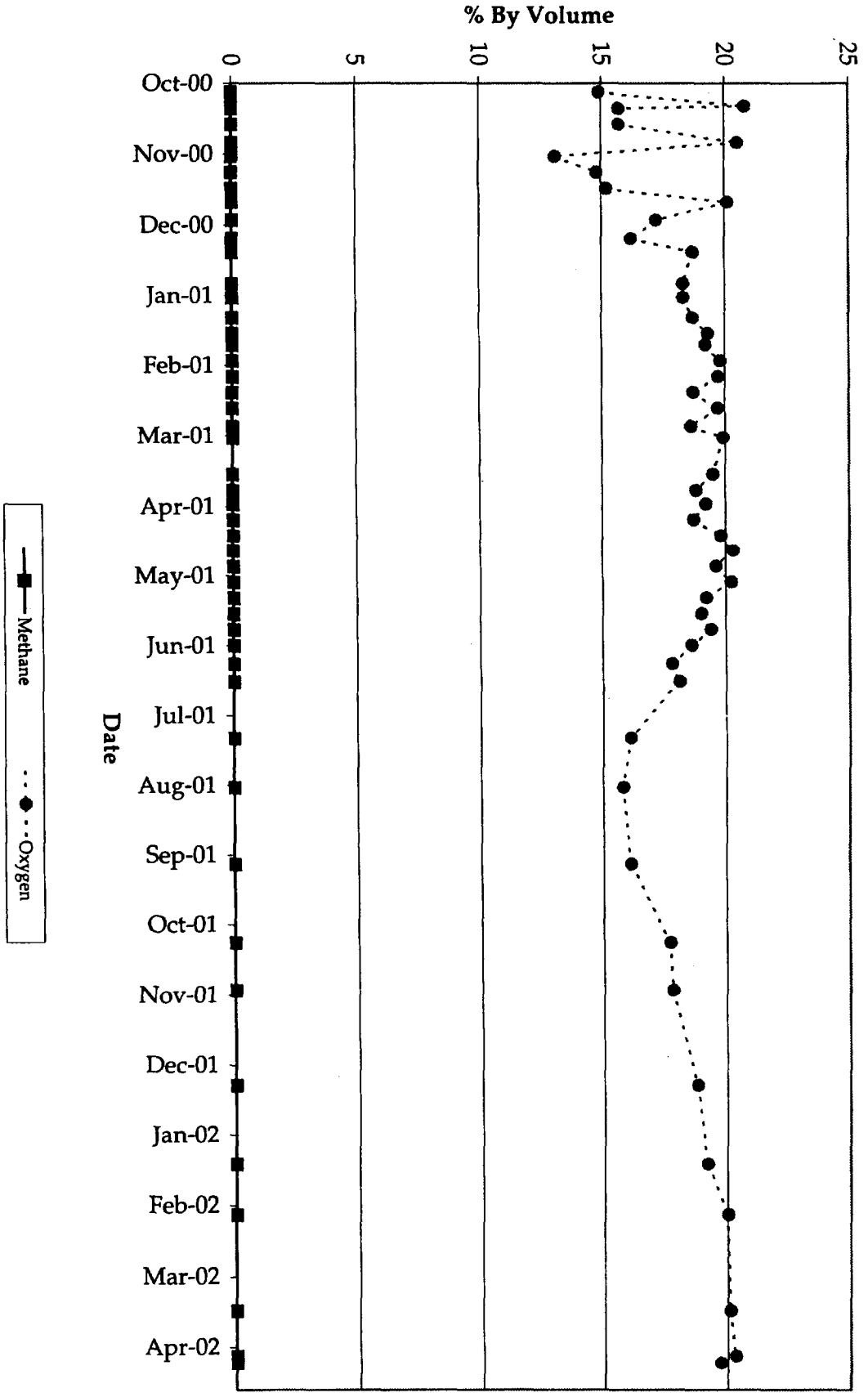

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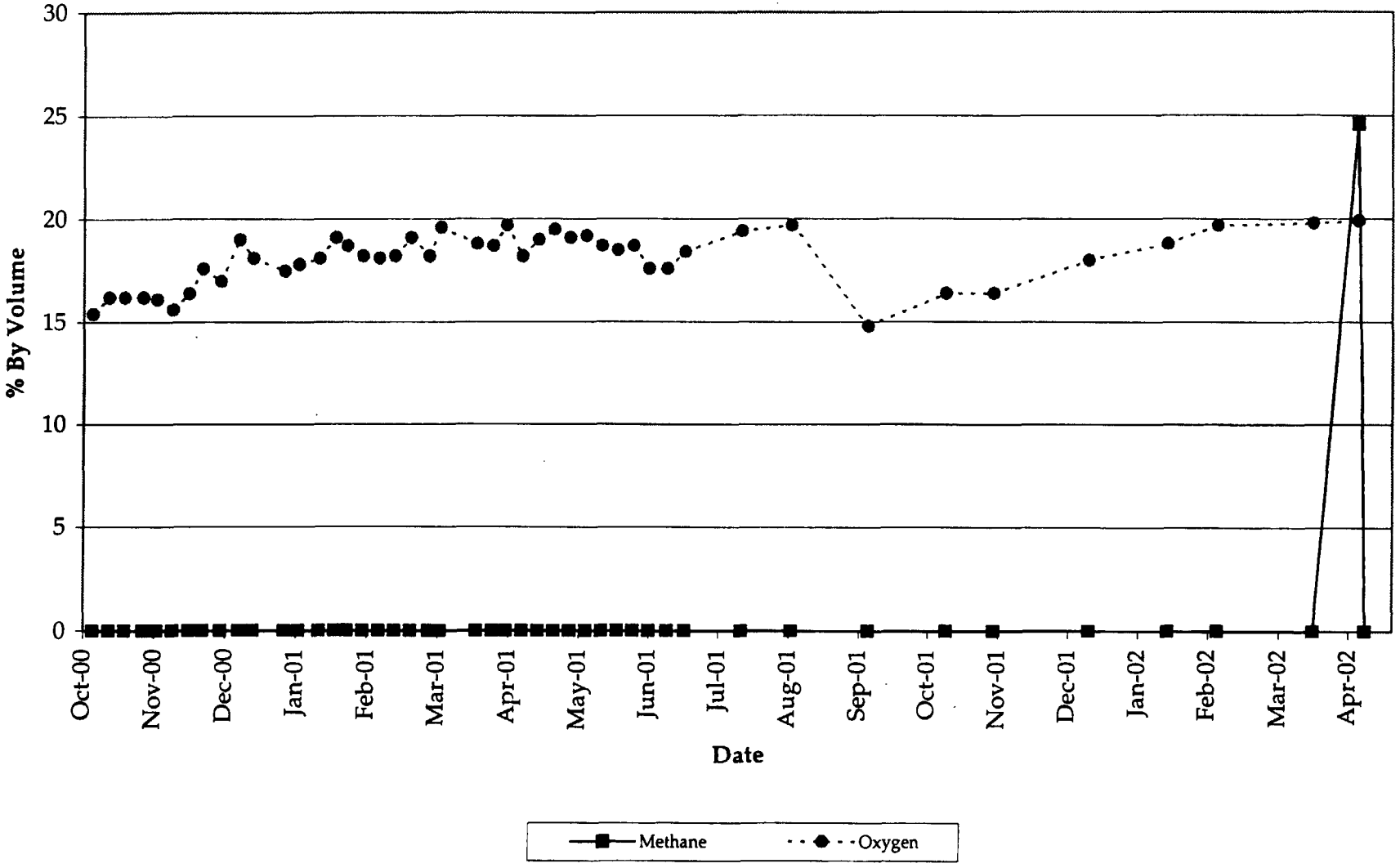
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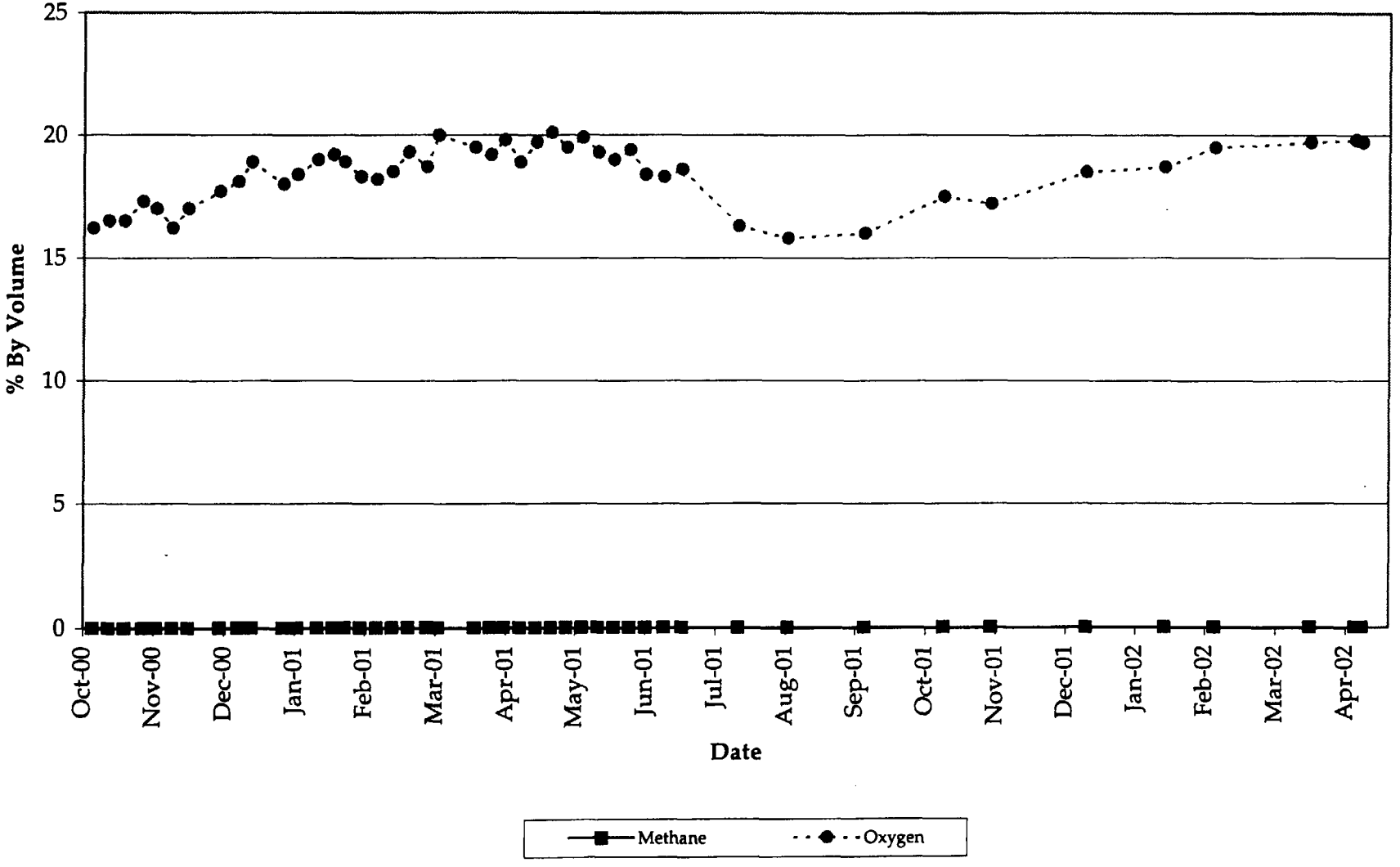
Methane
Oxygen

EW-03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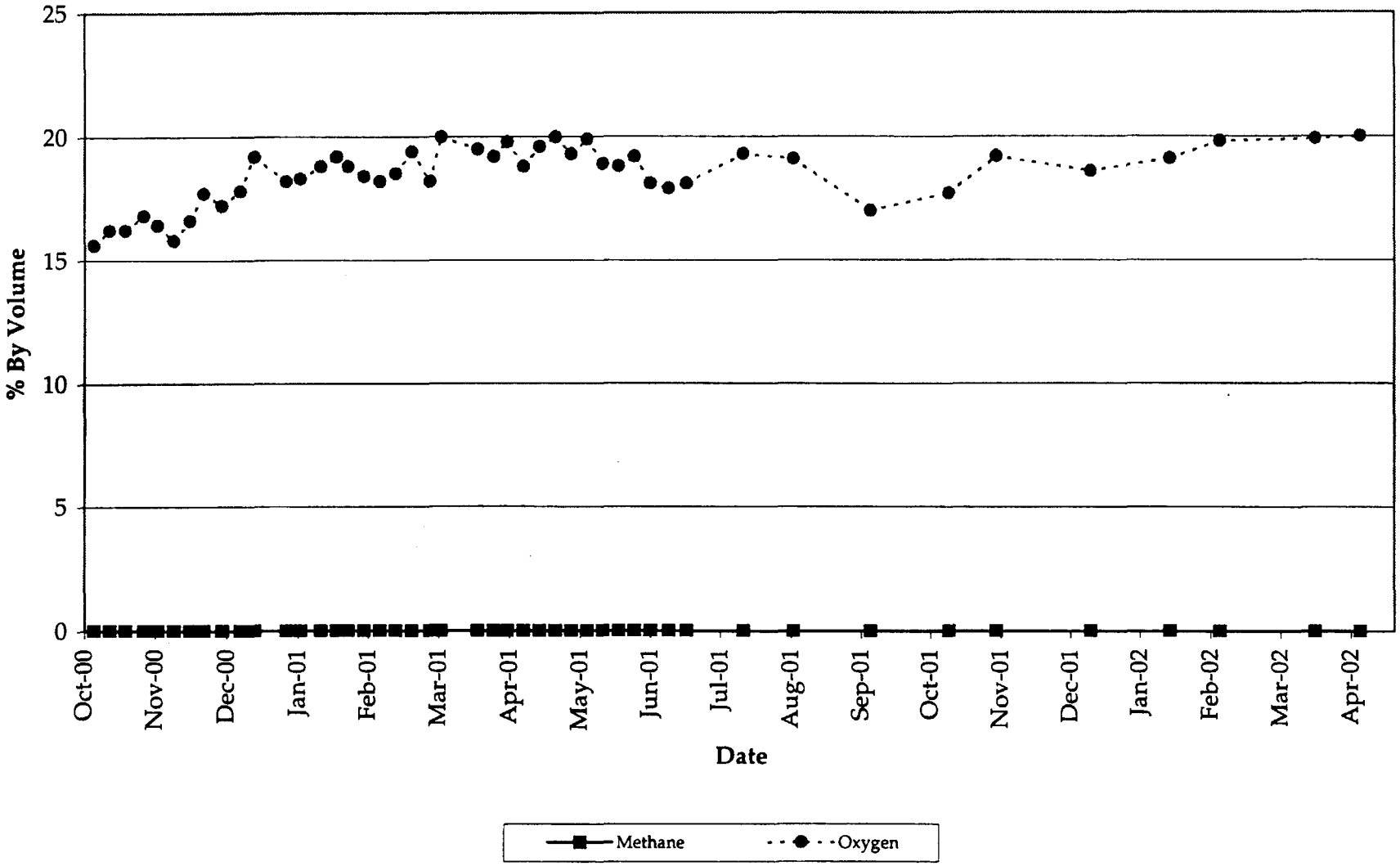
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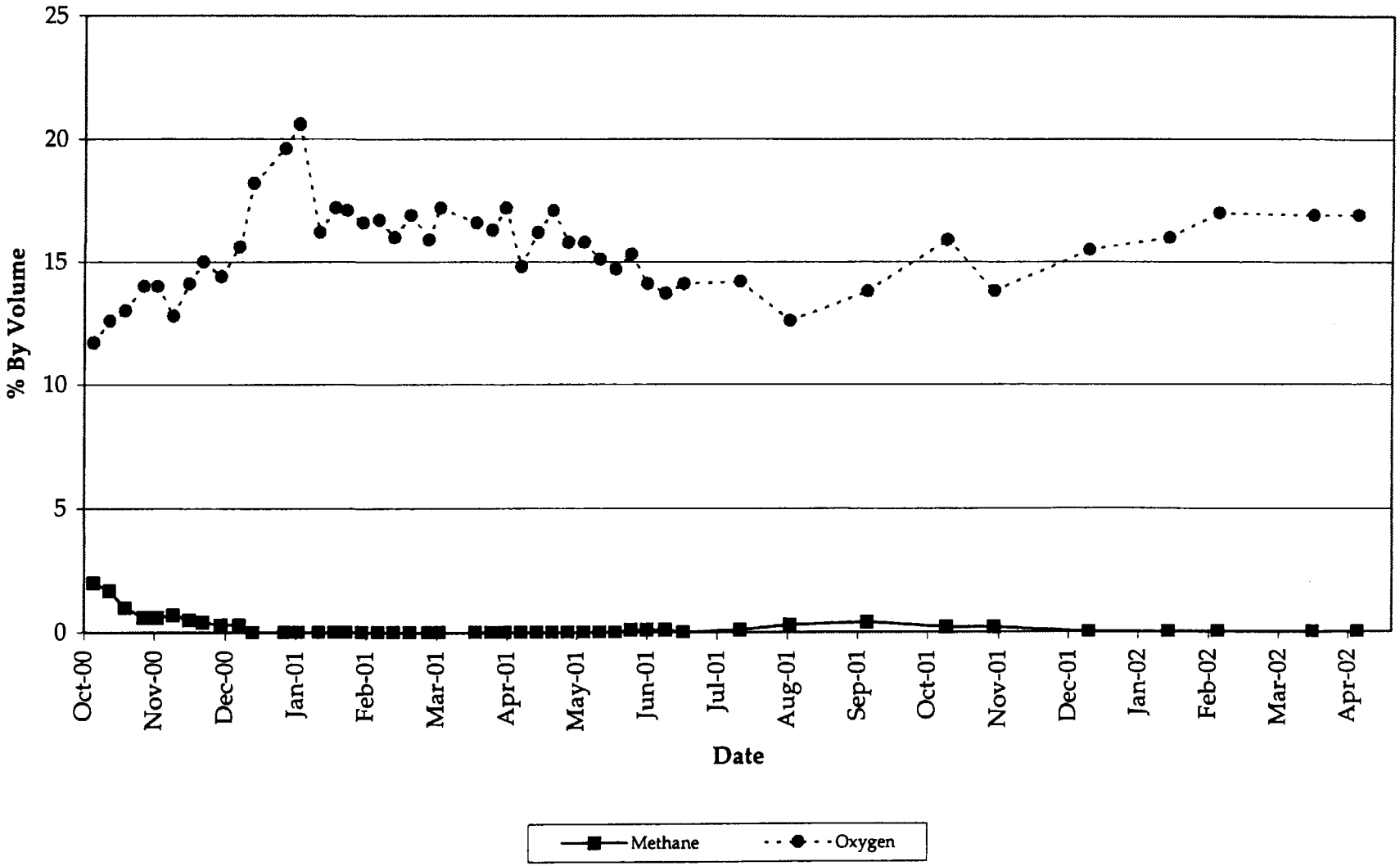
EW-05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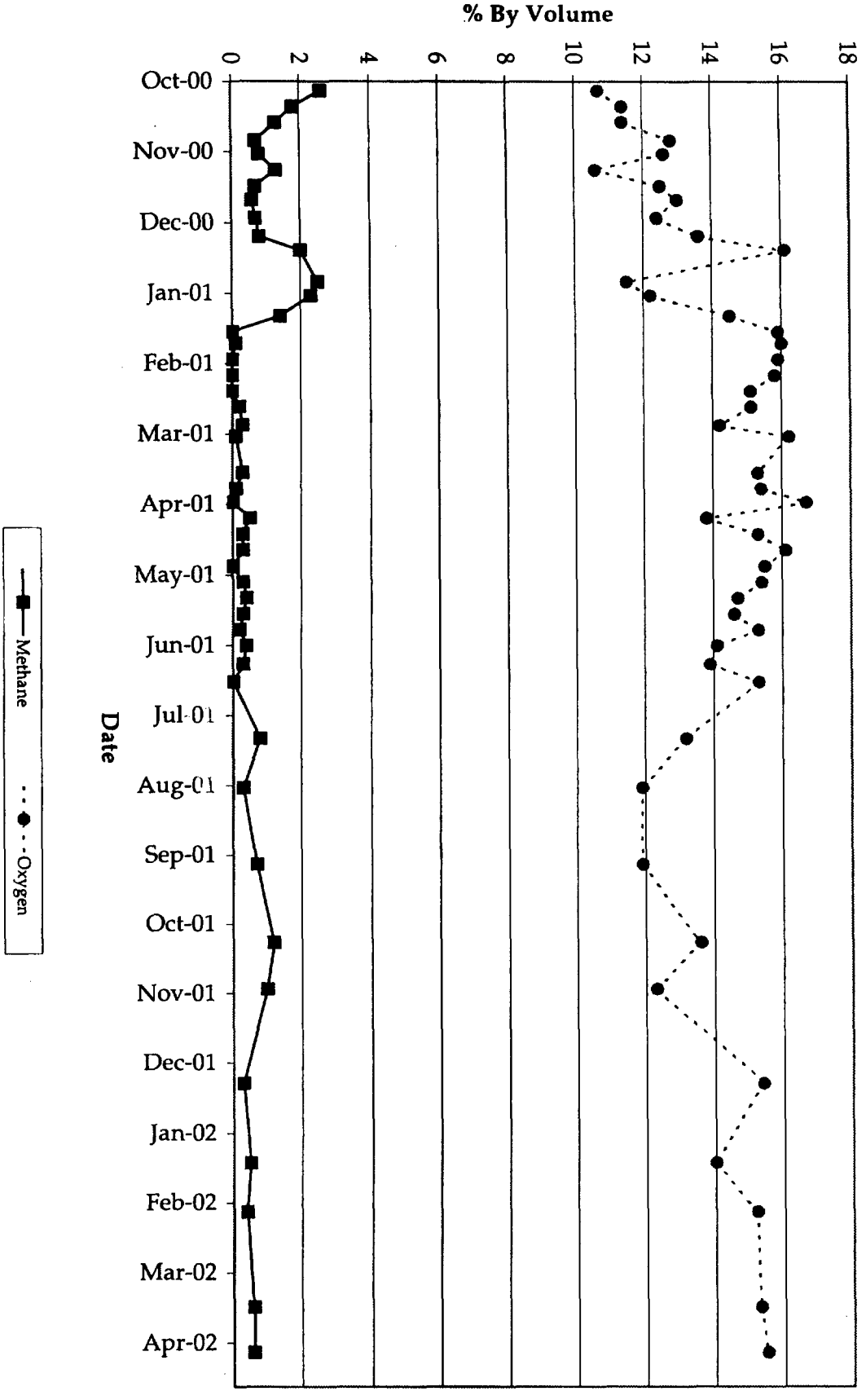
Oxygen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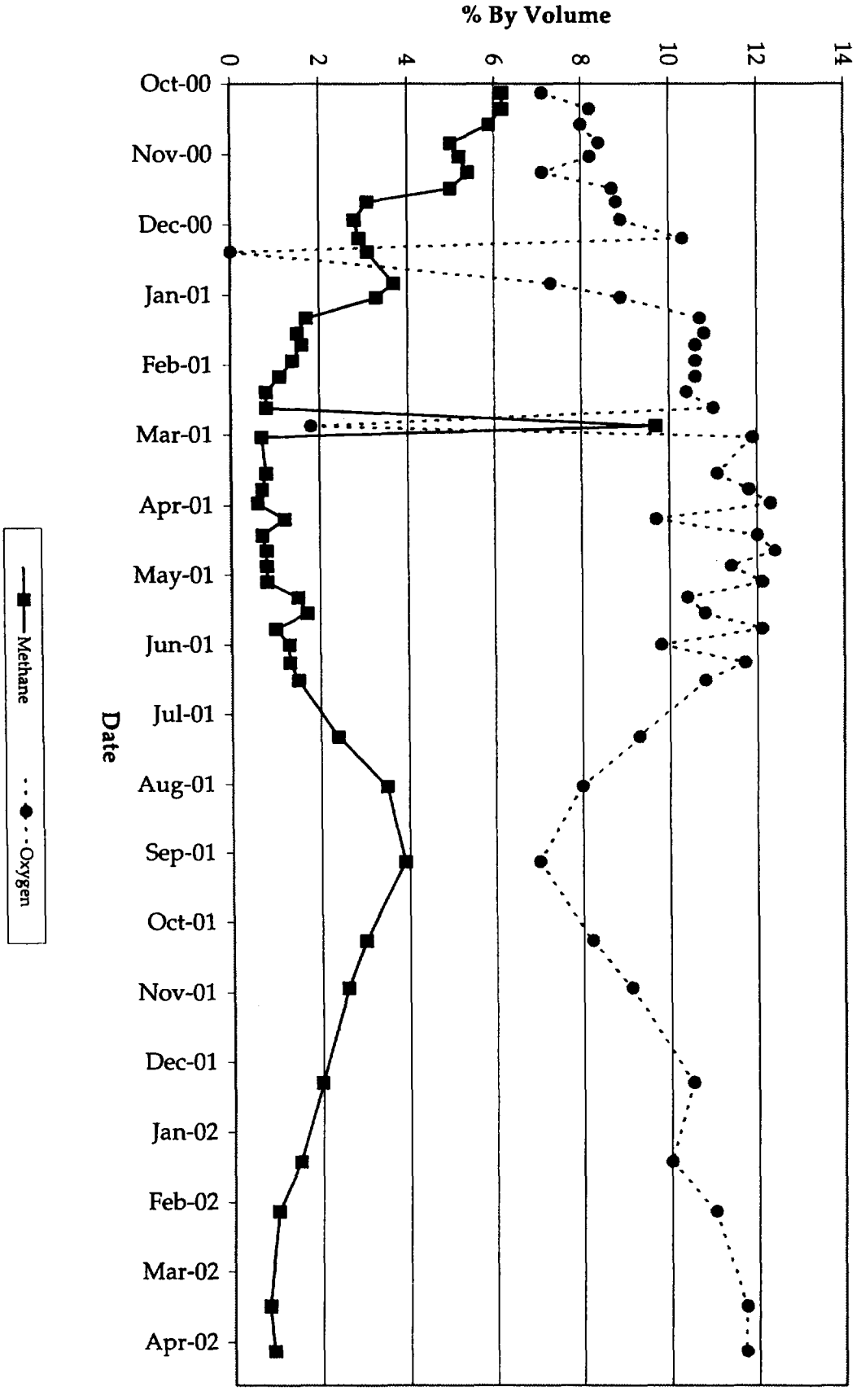
EW-06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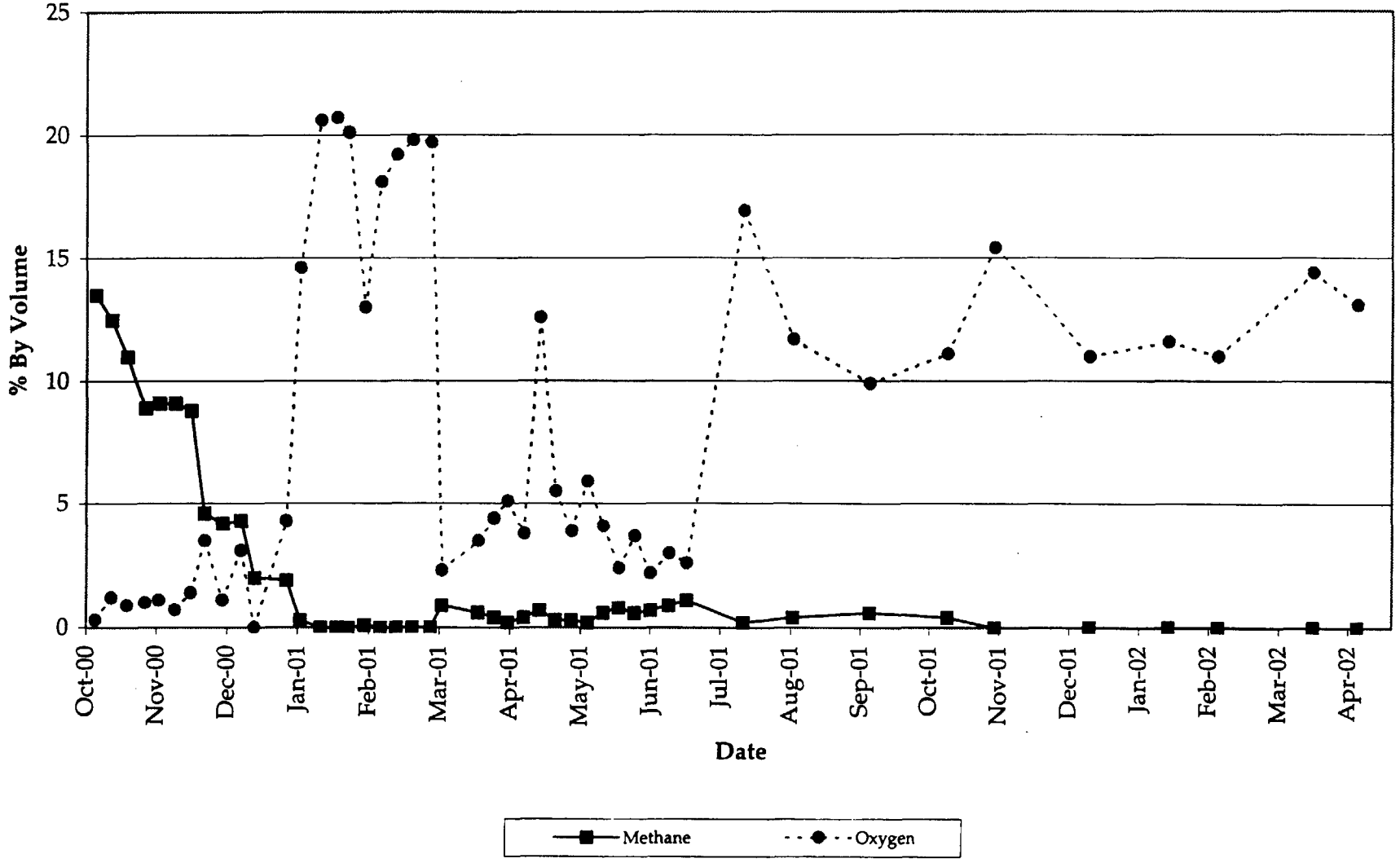
EW-07

EW-08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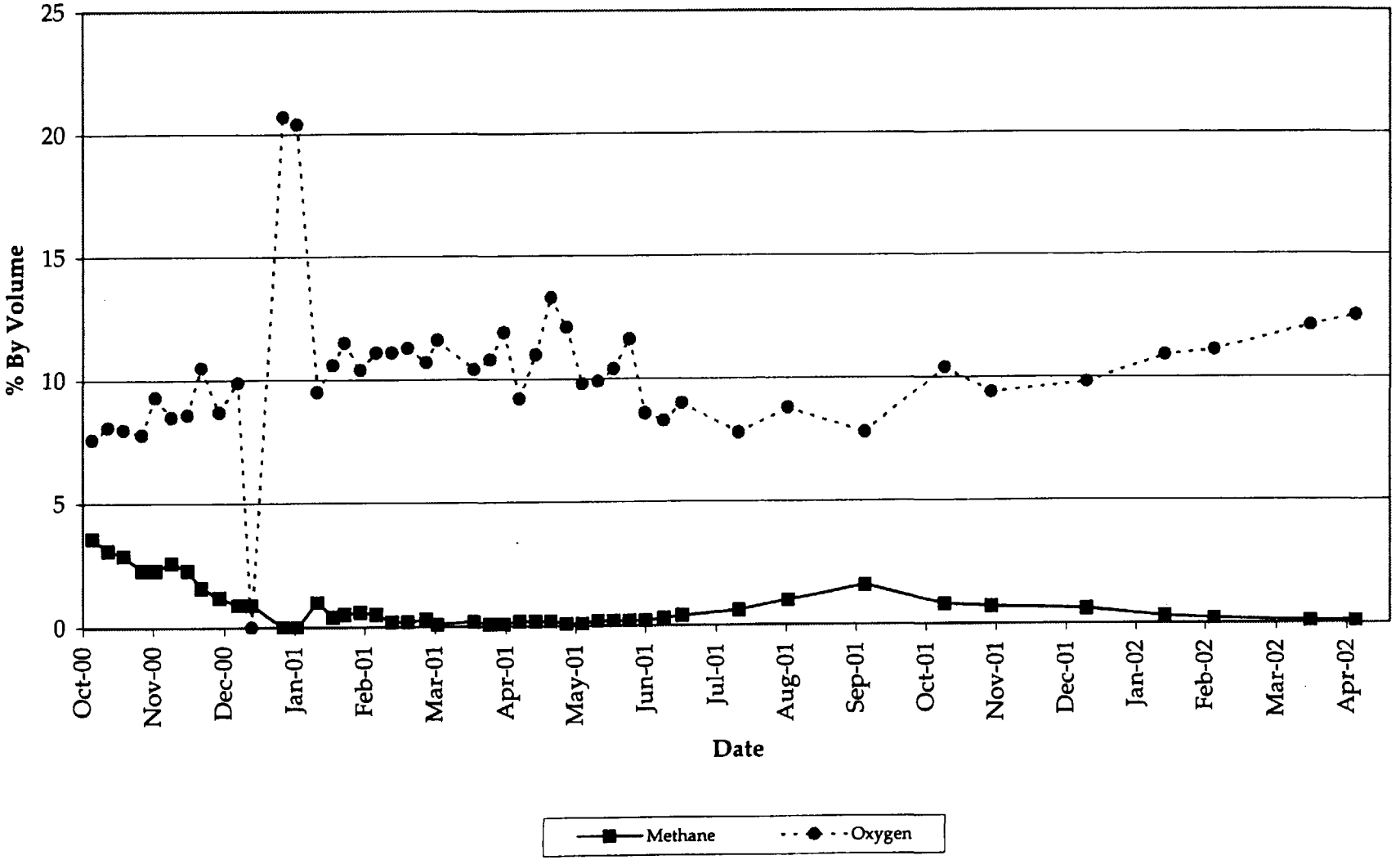
Oxygen

EW-09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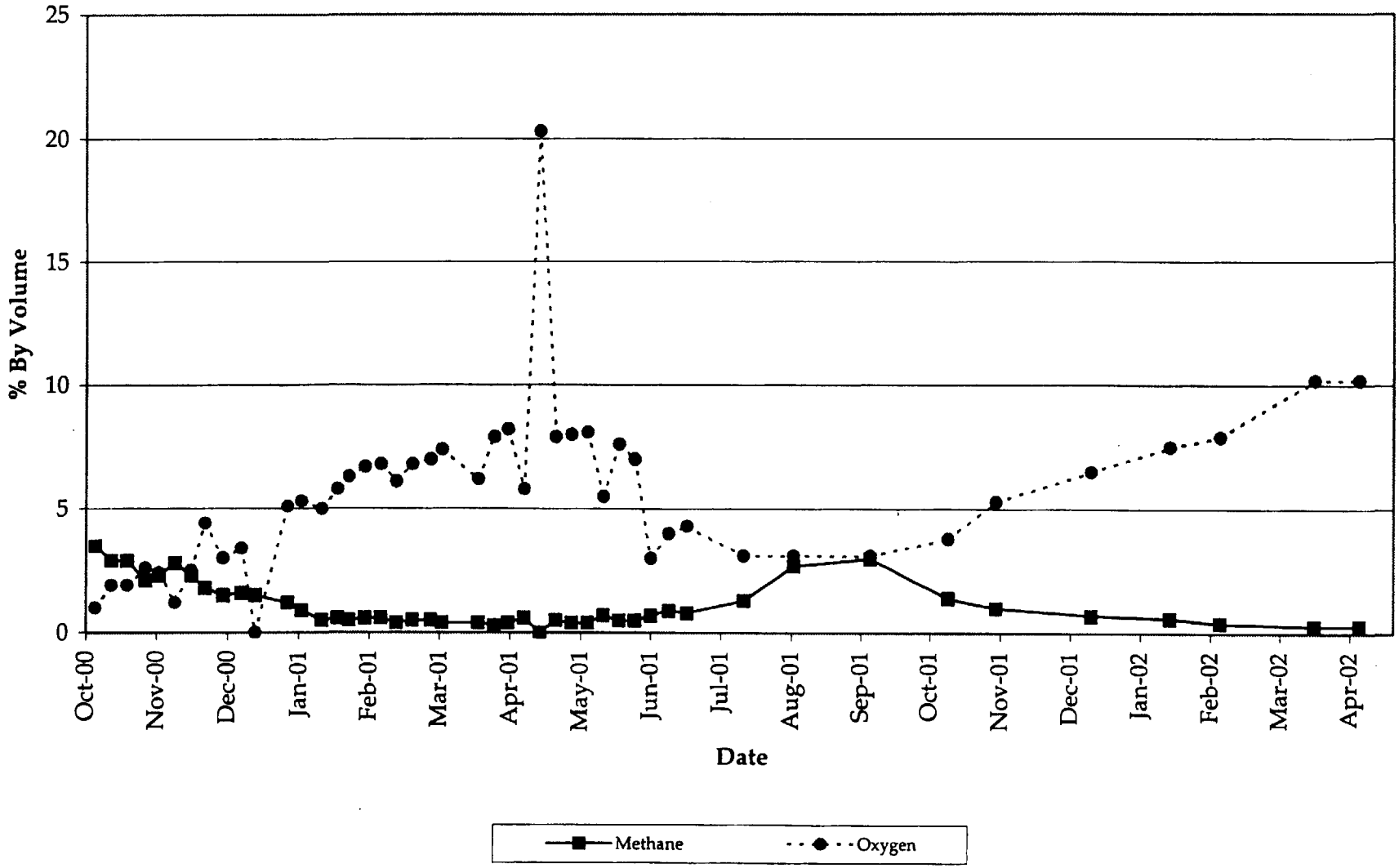
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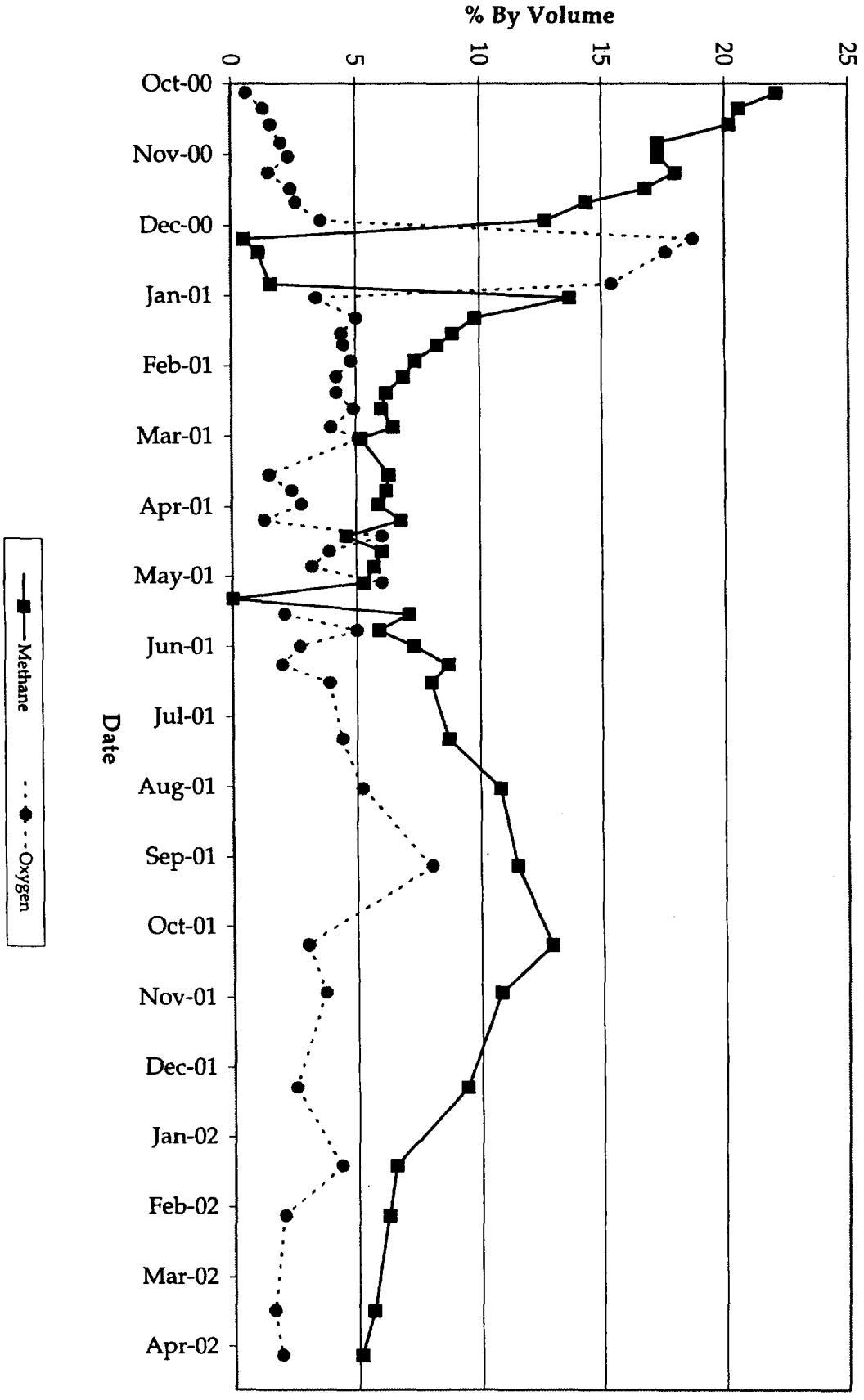
Date
Methane
Oxygen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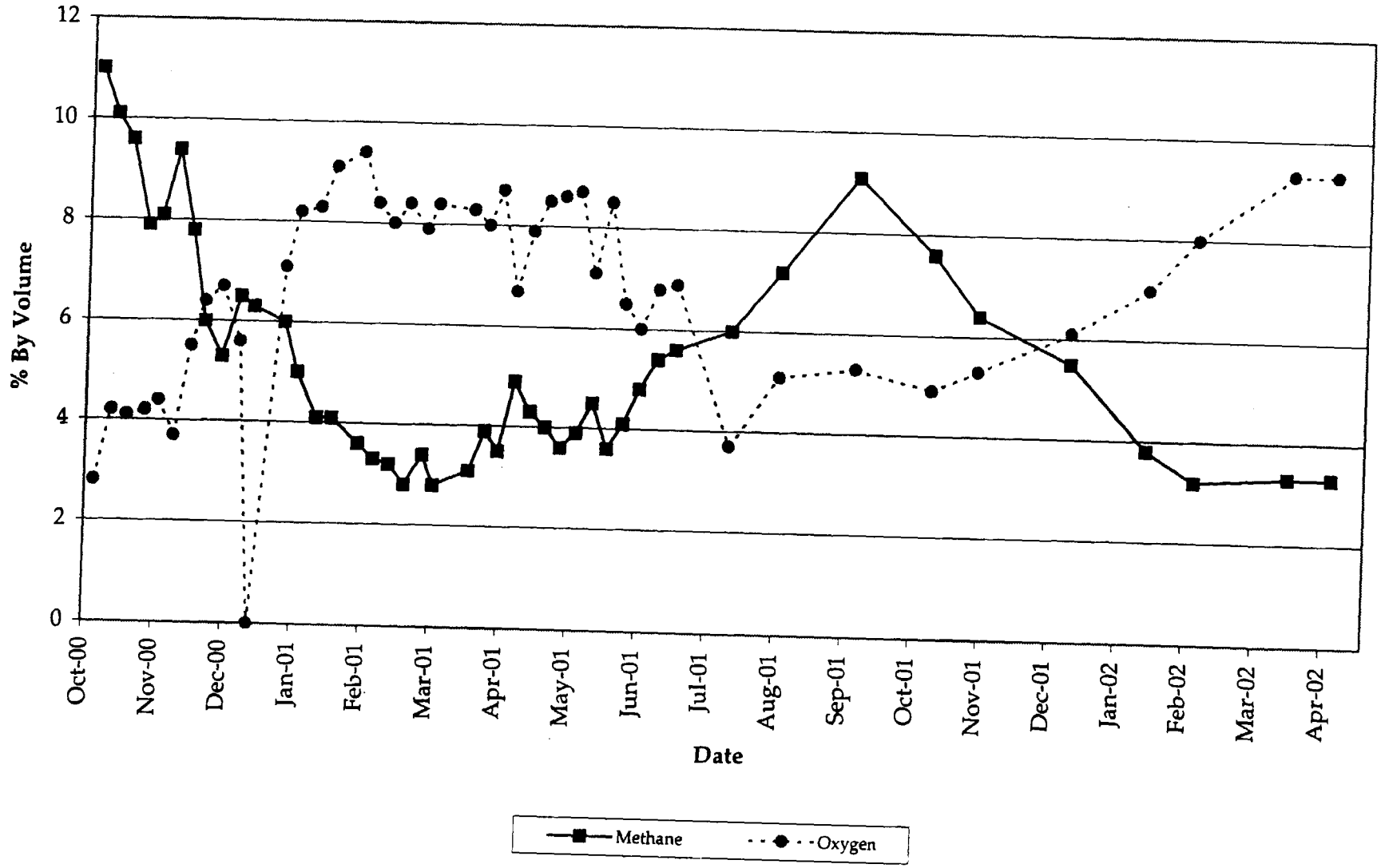
Mar-01
Apr-01
May-01
Jun-01
Jul-01
Aug-01
Sep-01
Oct-01
Nov-01
Dec-01
Jan-02
Feb-02
Mar-02
Apr-02
Date
Methane
Oxygen

EW-11

EW-12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10
8
6
4
2
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% By Volume
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Nov-00
Dec-00
Jan-01
Feb-01
Mar-01
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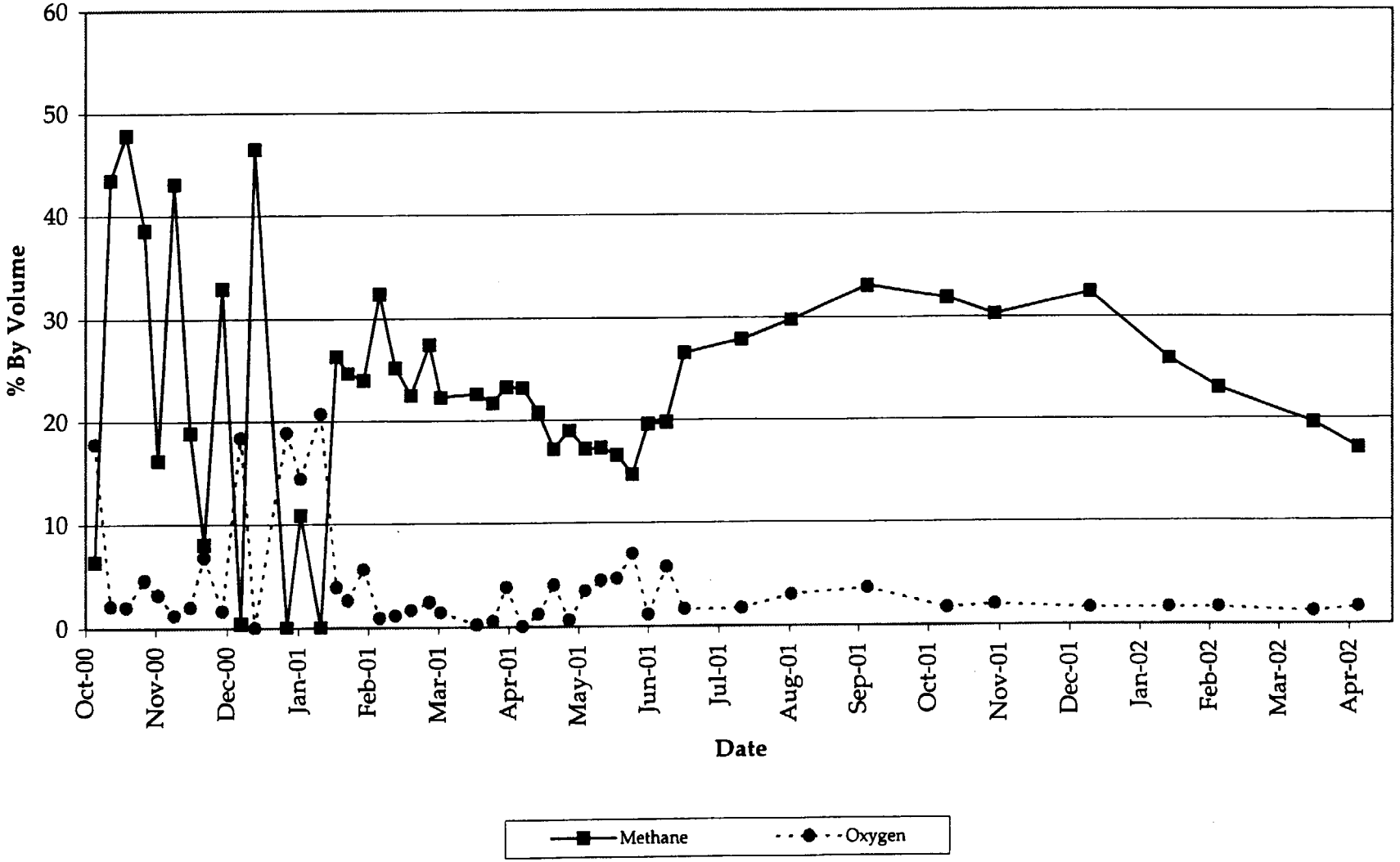
May-01
Jun-01
Jul-01
Aug-01
Sep-01
Oct-01
Nov-01
Dec-01
Jan-02
Feb-02
Mar-02
Apr-02
Date
Methane
Oxygen

EW-13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20
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% By Volume
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Nov-00
Dec-00
Jan-01
Feb-01
Mar-01
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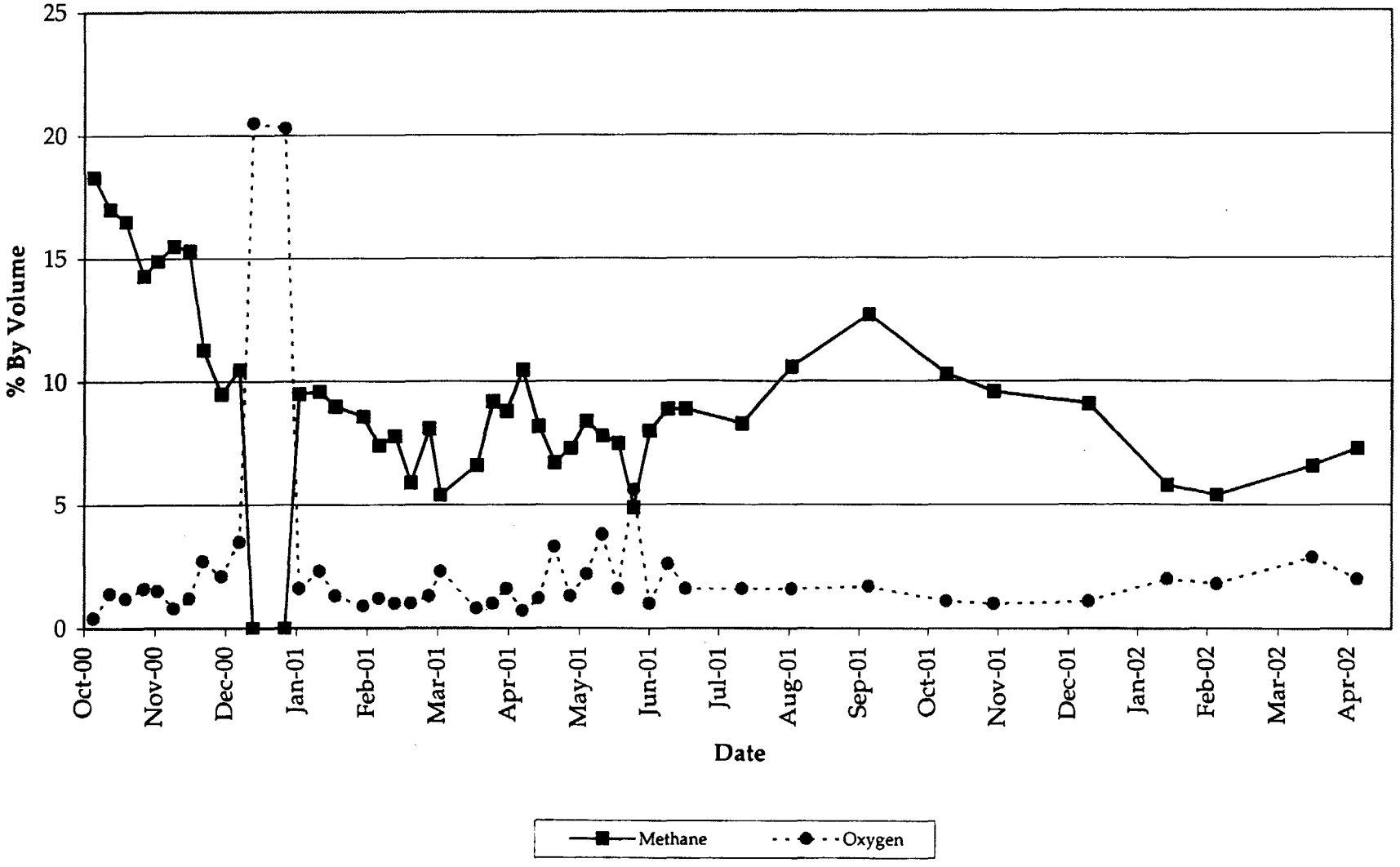
Jun-01
Jul-01
Aug-01
Sep-01
Oct-01
Nov-01
Dec-01
Jan-02
Feb-02
Mar-02
Apr-02
Date
Methane
Oxygen

EW-14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Nov-00
Dec-00
Jan-01
Feb-01
Mar-01
Apr-01
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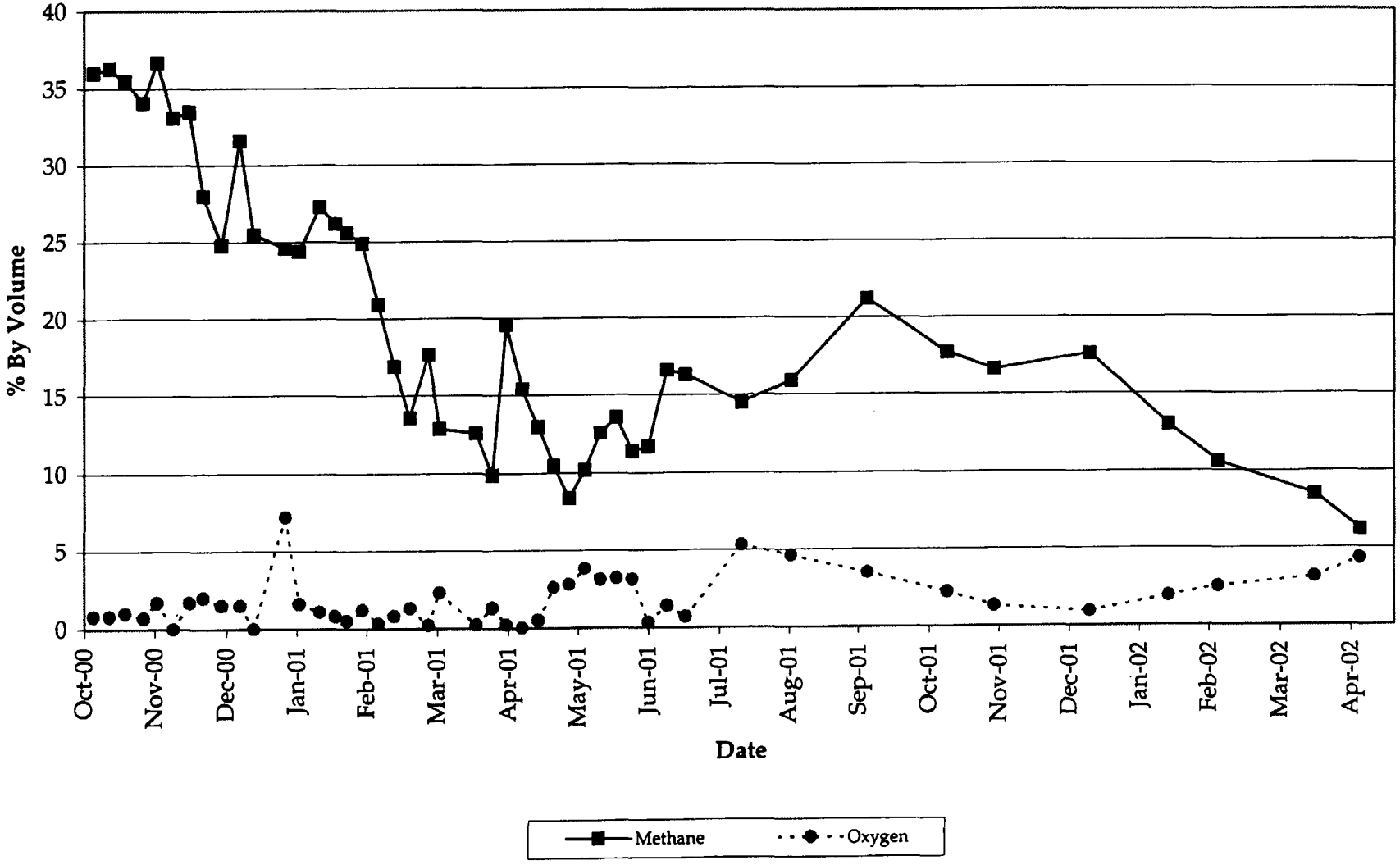
Jun-01
Jul-01
Aug-01
Sep-01
Oct-01
Nov-01
Dec-01
Jan-02
Feb-02
Mar-02
Apr-02
Date
Methane
Oxygen

EW-15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30
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20
15
10
5
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% By Volume
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Nov-00
Dec-00
Jan-01
Feb-01
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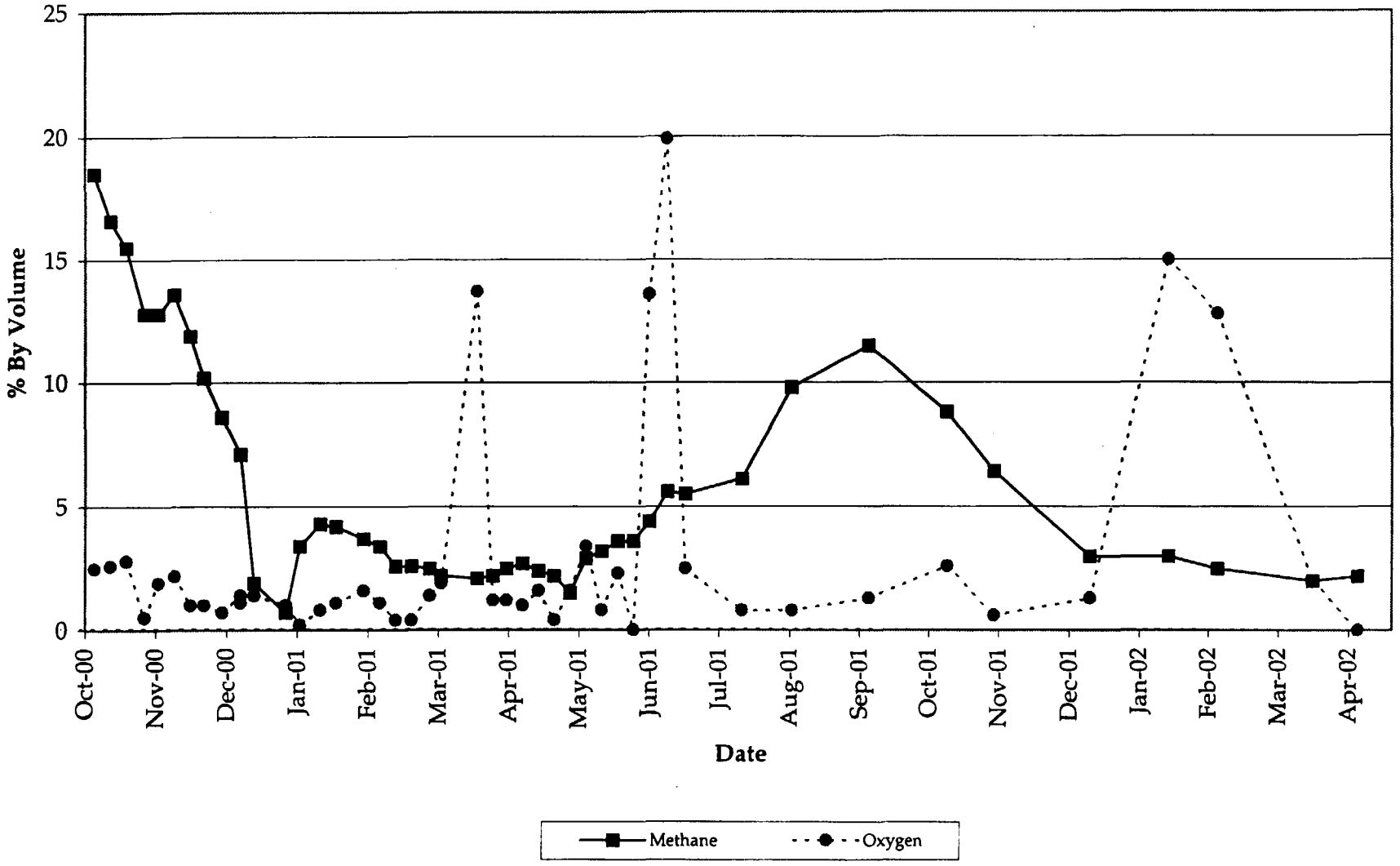
May-01
Jun-01
Jul-01
Aug-01
Sep-01
Oct-01
Nov-01
Dec-01
Jan-02
Feb-02
Mar-02
Apr-02
Date
Methane
Oxygen

EW-16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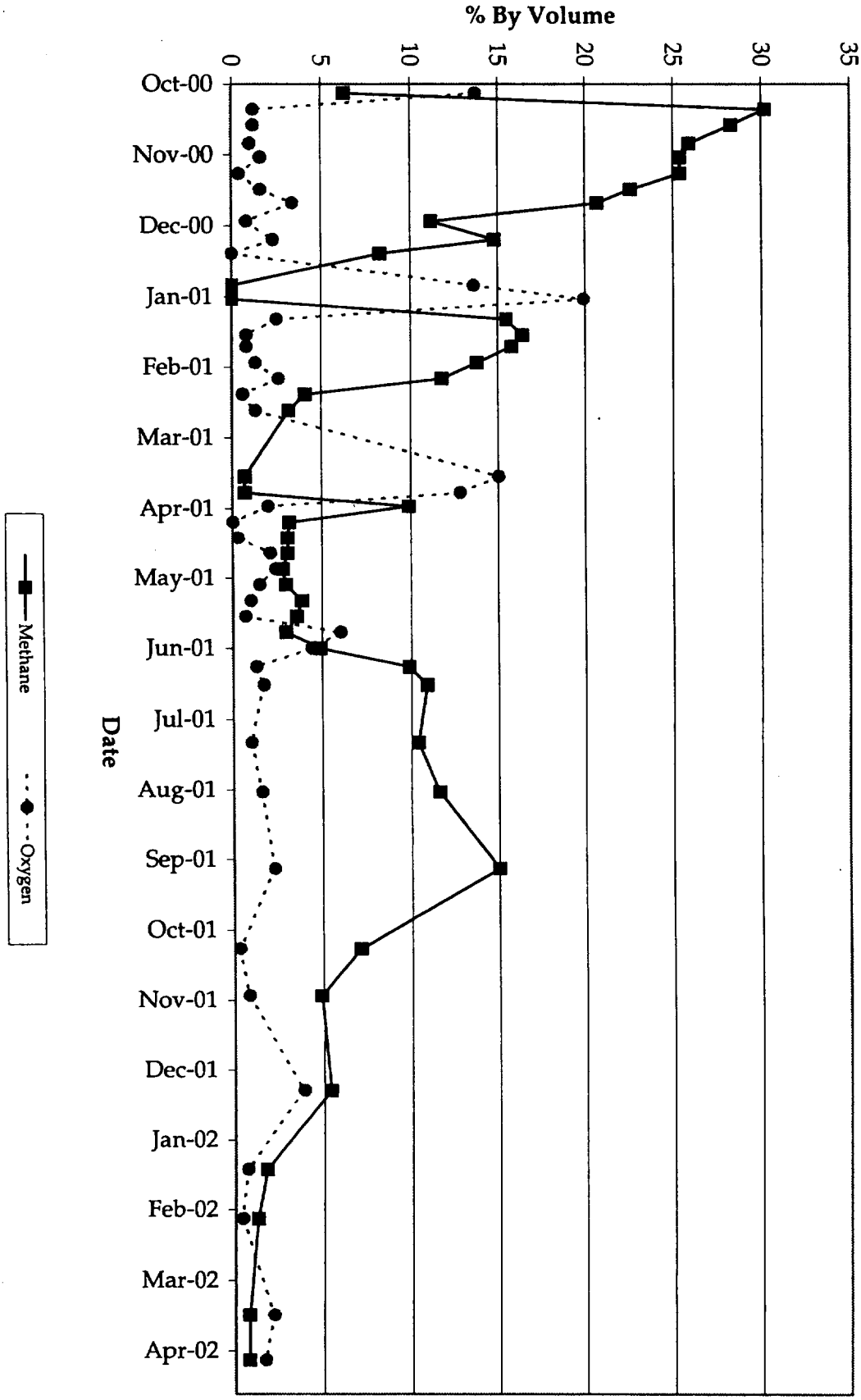
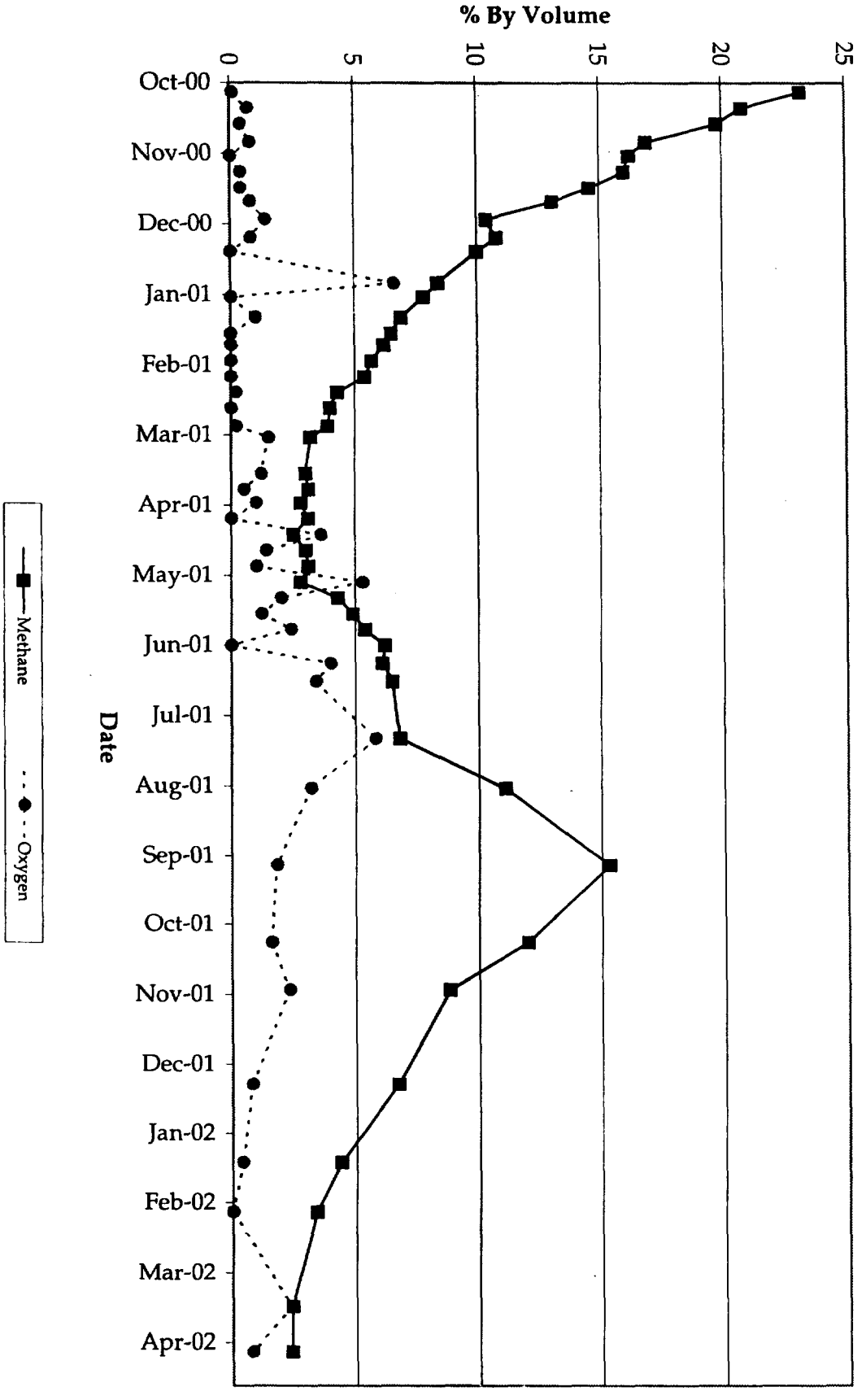
20
15
10
5
0
% By Volume
Oct-00
Nov-00
Dec-00
Jan-01
Feb-01
Mar-01
Apr-01
May-01
Jun-01
Jul-01
Aug-01
Sep-01
Oct-01
Nov-01
Dec-01
Jan-02
Feb-02
Mar-02
Apr-02
Date
Methane
Oxygen

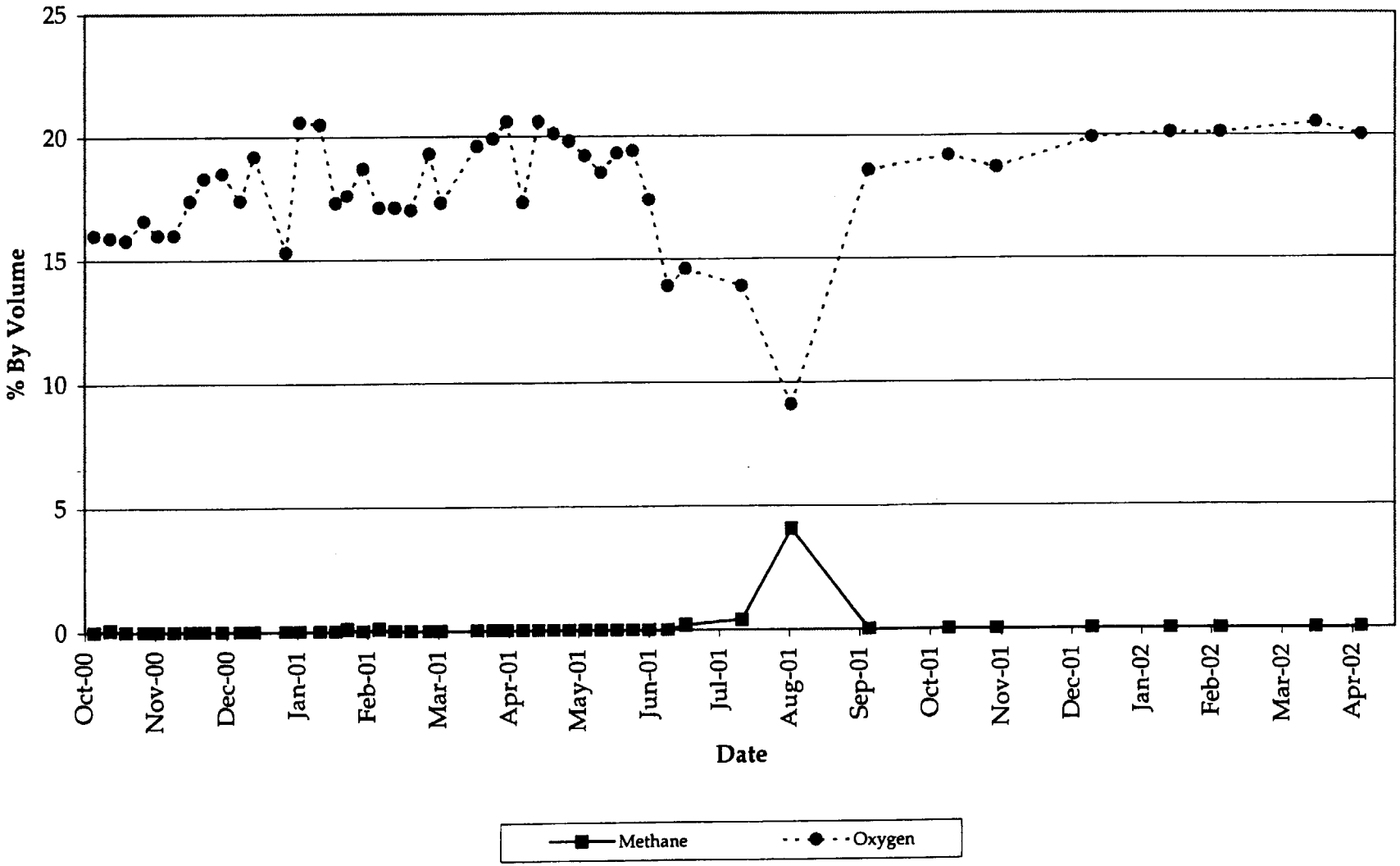

% By Volume
0
5
10
15
20
25
30
35
Oct-00
Nov-00
Dec-00
Jan-01
Feb-01
Mar-01
Apr-01
May-01
Jun-01
Jul-01
Aug-01
Sep-01
Oct-01
Nov-01
Dec-01
Jan-02
Feb-02
Mar-02
Apr-02
Date
Methane
Oxygen

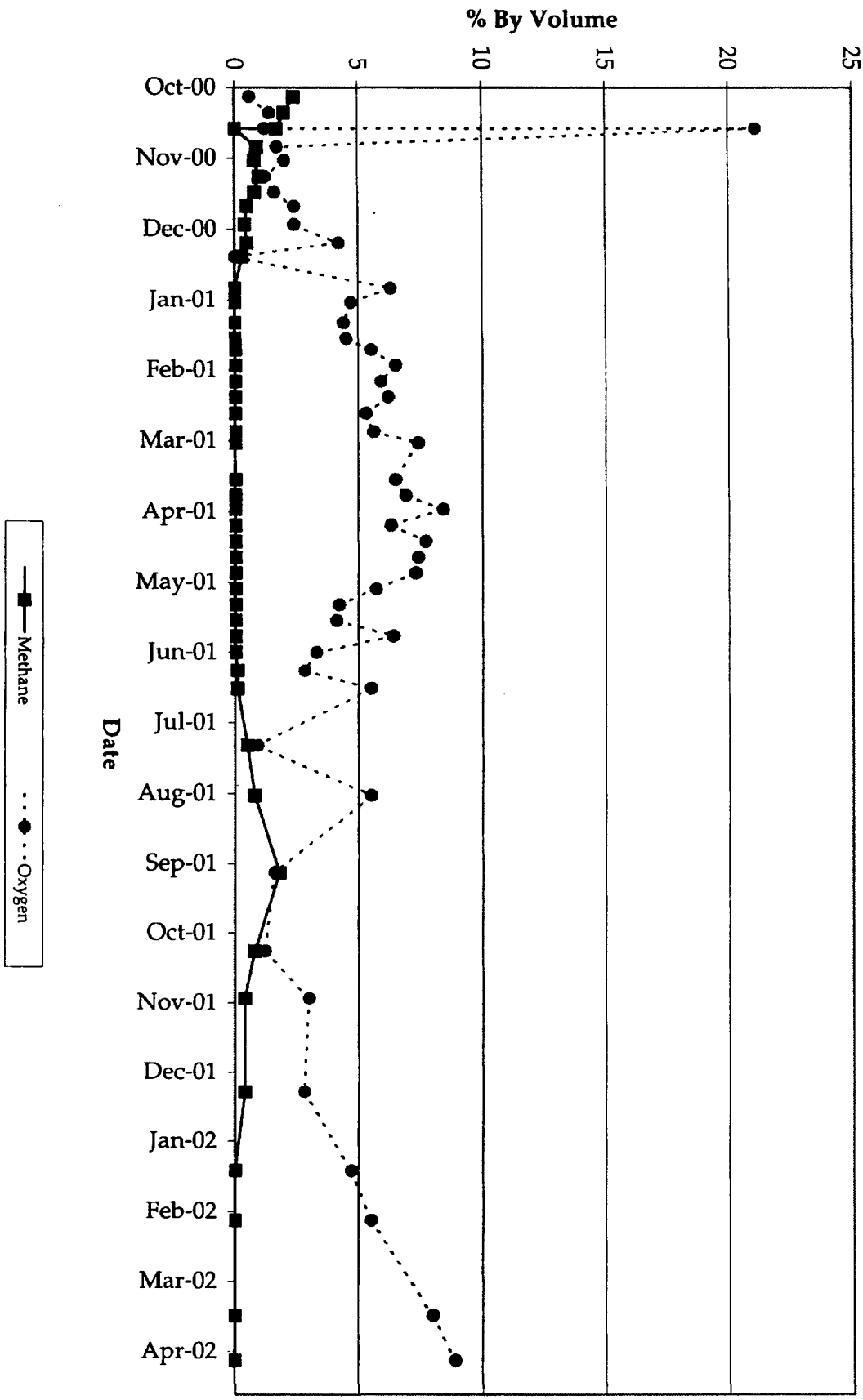
EW-17


% By Volume
0
5
10
15
20
25
Oct-00
Nov-00
Dec-00
Jan-01
Feb-01
Mar-01
Apr-01
May-01
Jun-01
Jul-01
Aug-01
Sep-01
Oct-01
Nov-01
Dec-01
Jan-02
Feb-02
Mar-02
Apr-02
Date
Methane
Oxygen

EW-18

EW-19


25
20
15
10
5
0
% By Volume
Oct-00
Nov-00
Dec-00
Jan-01
Feb-01
Mar-01
Apr-01
May-01
Jun-01
Jul-01
Aug-01
Sep-01
Oct-01
Nov-01
Dec-01
Jan-02
Feb-02
Mar-02
Apr-02
Date
Methane
Oxygen


% By Volume
0
5
10
15
20
25
Oct-00
Nov-00
Dec-00
Jan-01
Feb-01
Mar-01
Apr-01
May-01
Jun-01
Jul-01
Aug-01
Sep-01
Oct-01
Nov-01
Dec-01
Jan-02
Feb-02
Mar-02
Apr-02
Date
Methane
Oxygen

EW-20


E

APPENDIX E

BLOWER DISCHARGE LABORATORY DATA

12865-90

MN FILE COPY

RECEIVED
FEB 26 2002
CRA, INC.

SEVERN TRENT SERVICES

STL Los Angeles
1721 South Grand Avenue
Santa Ana, CA 92705-4808

Tel: 714 258 8610
Fax: 714 258 0921
www.stl-inc.com

February 21, 2002

STL LOT NUMBER: **M2B150328**

Grant Anderson
Conestoga-Rovers & Assoc.,Inc.
1801 Old Highway 8
Suite 114
St. Paul, MN 55112

Dear Mr. Anderson,

This report contains the analytical results for the sample received under chain of custody by STL Los Angeles on February 15, 2002. This sample is associated with your TOMAH project.

The preliminary results were sent via facsimile on February 21, 2002.

STL Los Angeles certifies that the test results provided in this report meet all the requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of the report. NELAP Certification Number for STL Los Angeles is 01118CA.

This report contains 000017 pages.

SEVERN TRENT SERVICES

CASE NARRATIVE

All applicable quality control procedures met method-specified acceptance criteria. Any matrix related anomalies are footnoted within the report.

If you have any questions, please feel free to call me at (714) 258-8610.

Sincerely,

Jesse Bacwaden
Project Manager

CC: Project File

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA–ROVERS & ASSOCIATES
1801 OLD HWY. 8, SUITE 114
ST. PAUL, MN 55112 (612)639–0913

SHIPPED TO (Laboratory Name): STL - Santa Ana

REFERENCE NUMBER: 12865-90

SAMPLER'S SIGNATURE: Lisa LeMoine PRINTED NAME: Lisa LeMoine

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS TO-14	REMARKS
	7/13/02		G-020213-LL-01	GAS	1	X	M2B150328
							Please call Grant with any questions
			INITIAL FIELD VAC 30"				
			FINAL FIELD VAC 4"				
			FIELD READINGS				
			% BY VOLUME				
			CH_4 2.2%				
			CO_2 9.4%				
			O_2 10.5%				
			TOTAL NUMBER OF CONTAINERS		1	HEALTH/CHEMICAL HAZARDS	

000003

RELINQUISHED BY: ① Lisa LeMoine	DATE: 2/14/02 TIME: 1400	RECEIVED BY: ②	DATE: 2-15-02 TIME: 1000
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex Overnight WAY BILL No.

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

SAMPLE TEAM: L. LeMoine

RECEIVED FOR LABORATORY BY:
DATE: 2-15-02 TIME: 1000

№ 03887

1001 JULY 19/93 REV.0 (F-42)

SEVERN TRENT SERVICES

CANISTER FIELD DATA RECORD

CLIENT: CRA - TOMAH

CANISTER SERIAL #: 12407

DATE CLEANED: 1-16-02 D

CLIENT SAMPLE #: G-020213-LL-01

SITE LOCATION: Tomah Landfill

VFR ID: _____

Duration of comp. : _____ hrs. / mins.

Flow setting: _____ ml/min

Initials: _____

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	1/21/02	KH
INITIAL FIELD VACUUM	10:36	30"	2/13/02	LL
FINAL FIELD READING	10:40	4"	2/13/02	LL
GAUGE READING UPON RECEIPT				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (inches Hg and PSIA)	14.02	2-18-2	[illegible]
FINAL PRESSURE (PSIA)	24.21	2-18-02	[illegible]

Pressurization Gas: N_2

COMMENTS: CONDITION UPON SAMPLE COLLECTION: CH_4 2.2%
CO_2 9.4%
O_2 10.5%
balance 77.9%
(in % by VOLUME)

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

SEVERN
TRENT
SERVICES

Analytical Report

ANALYTICAL REPORT

PROJECT NO. 12865-90

TOMAH

Lot #: M2B150328

Grant Anderson

Conestoga-Rovers & Assoc.,Inc.

SEVERN TRENT LABORATORIES, INC.

Jesse Bacwaden
Project Manager

February 21, 2002

EXECUTIVE SUMMARY - Detection Highlights

M2B150328

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
G-020213-LL-01 02/13/02 001				
Dichlorodifluoromethane	370	5.8	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	36	5.8	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	1200	5.8	ppb(v/v)	EPA-21 TO-14A
Chloroethane	31	12	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	47	5.8	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	6.2	5.8	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	50	5.8	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	6.5	5.8	ppb(v/v)	EPA-21 TO-14A
Benzene	69	5.8	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	11	5.8	ppb(v/v)	EPA-21 TO-14A
Toluene	220	5.8	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	28	5.8	ppb(v/v)	EPA-21 TO-14A
Chlorobenzene	19	5.8	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	260	5.8	ppb(v/v)	EPA-21 TO-14A
Xylenes (total)	710	5.8	ppb(v/v)	EPA-21 TO-14A
4-Ethyltoluene	140	5.8	ppb(v/v)	EPA-21 TO-14A
1,3,5-Trimethylbenzene	80	5.8	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trimethylbenzene	190	5.8	ppb(v/v)	EPA-21 TO-14A
1,4-Dichlorobenzene	51	5.8	ppb(v/v)	EPA-21 TO-14A

ANALYTICAL METHODS SUMMARY

M2B150328

PARAMETER	ANALYTICAL METHOD
Volatile Organics by TO-14A	EPA-21 TO-14A

References:

EPA-21 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", Second Edition, EPA/625/R-96/010b, January 1999

SAMPLE SUMMARY

M2B150328

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
ET8FN	001	G-020213-LL-01	02/13/02	

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.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: G-020213-LL-01 Blower outlet

GC/MS Volatiles

Lot-Sample #...: M2B150328-001 Work Order #...: ET8FN1AD Matrix.....: AIR
Date Sampled...: 02/13/02 Date Received..: 02/15/02
Prep Date.....: 02/19/02 Analysis Date..: 02/19/02
Prep Batch #...: 2051273
Dilution Factor: 2.88
Analyst ID.....: 117751 Instrument ID..: MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Dichlorodifluoromethane	**370**	**5.8**	**ppb(v/v)**
Chloromethane	ND	12	ppb(v/v)
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**36**	**5.8**	**ppb(v/v)**
Vinyl chloride	**1200**	**5.8**	**ppb(v/v)**
Bromomethane	ND	5.8	ppb(v/v)
Chloroethane	**31**	**12**	**ppb(v/v)**
Trichlorofluoromethane	**47**	**5.8**	**ppb(v/v)**
1,1-Dichloroethene	ND	5.8	ppb(v/v)
Carbon disulfide	ND	29	ppb(v/v)
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.8	ppb(v/v)
Acetone	ND	29	ppb(v/v)
Methylene chloride	ND	5.8	ppb(v/v)
trans-1,2-Dichloroethene	ND	5.8	ppb(v/v)
1,1-Dichloroethane	**6.2**	**5.8**	**ppb(v/v)**
Vinyl acetate	ND	29	ppb(v/v)
cis-1,2-Dichloroethene	**50**	**5.8**	**ppb(v/v)**
2-Butanone (MEK)	ND	29	ppb(v/v)
Chloroform	ND	5.8	ppb(v/v)
1,1,1-Trichloroethane	**6.5**	**5.8**	**ppb(v/v)**
Carbon tetrachloride	ND	5.8	ppb(v/v)
Benzene	**69**	**5.8**	**ppb(v/v)**
1,2-Dichloroethane	ND	5.8	ppb(v/v)
Trichloroethene	**11**	**5.8**	**ppb(v/v)**
1,2-Dichloropropane	ND	5.8	ppb(v/v)
Bromodichloromethane	ND	5.8	ppb(v/v)
cis-1,3-Dichloropropene	ND	5.8	ppb(v/v)
4-Methyl-2-pentanone (MIBK)	ND	29	ppb(v/v)
Toluene	**220**	**5.8**	**ppb(v/v)**
trans-1,3-Dichloropropene	ND	5.8	ppb(v/v)
1,1,2-Trichloroethane	ND	5.8	ppb(v/v)
Tetrachloroethene	**28**	**5.8**	**ppb(v/v)**
2-Hexanone	ND	86	ppb(v/v)
Dibromochloromethane	ND	5.8	ppb(v/v)
1,2-Dibromoethane (EDB)	ND	5.8	ppb(v/v)

(Continued on next page)

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: G-020213-LL-01

GC/MS Volatiles

Lot-Sample #...: M2B150328-001 Work Order #...: ET8FN1AD Matrix.....: AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chlorobenzene	19	5.8	ppb(v/v)
Ethylbenzene	260	5.8	ppb(v/v)
Xylenes (total)	710	5.8	ppb(v/v)
Styrene	ND	5.8	ppb(v/v)
Bromoform	ND	5.8	ppb(v/v)
1,1,2,2-Tetrachloroethane	ND	5.8	ppb(v/v)
Benzyl chloride	ND	29	ppb(v/v)
4-Ethyltoluene	140	5.8	ppb(v/v)
1,3,5-Trimethylbenzene	80	5.8	ppb(v/v)
1,2,4-Trimethylbenzene	190	5.8	ppb(v/v)
1,3-Dichlorobenzene	ND	5.8	ppb(v/v)
1,4-Dichlorobenzene	51	5.8	ppb(v/v)
1,2-Dichlorobenzene	ND	5.8	ppb(v/v)
1,2,4-Trichloro-benzene	ND	58	ppb(v/v)
Hexachlorobutadiene	ND	12	ppb(v/v)

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QA/QC

QC DATA ASSOCIATION SUMMARY

M2B150328

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	AIR	EPA-21 TO-14A		2051273	

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: M2B150328
MB Lot-Sample #: E2B200000-273

Work Order #...: EVC8K1AA
Prep Date.....: 02/19/02
Prep Batch #...: 2051273
Analyst ID.....: 117751

Matrix.....: AIR
Instrument ID..: MSB

Analysis Date..: 02/19/02
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloromethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromomethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon disulfide	ND	10	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	ND	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
trans-1,2-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl acetate	ND	10	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Chloroform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon tetrachloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromodichloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Toluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Hexanone	ND	30	ppb(v/v)	EPA-21 TO-14A
Dibromochloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Xylenes (total)	ND	2.0	ppb(v/v)	EPA-21 TO-14A

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: M2B150328 **Work Order #...:** EVC8K1AA **Matrix.....:** AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Styrene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromoform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzyl chloride	ND	10	ppb(v/v)	EPA-21 TO-14A
4-Ethyltoluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
,2-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
,2,4-Trichloro-benzene	ND	20	ppb(v/v)	EPA-21 TO-14A
Hexachlorobutadiene	ND	4.0	ppb(v/v)	EPA-21 TO-14A

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 #...: M2B150328 Work Order #...: EVC8K1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: E2B200000-273 EVC8K1AD-LCSD
Prep Date.....: 02/19/02 Analysis Date..: 02/19/02
Prep Batch #...: 2051273
Dilution Factor: 1 Instrument ID..: MSB
Analyst ID.....: 117751

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	59.2	50.1	ppb(v/v)	85		EPA-21 TO-14A
	59.2	53.2	ppb(v/v)	90	6.1	EPA-21 TO-14A
Methylene chloride	58.7	48.1	ppb(v/v)	82		EPA-21 TO-14A
	58.7	50.7	ppb(v/v)	86	5.3	EPA-21 TO-14A
Trichloroethene	59.4	47.8	ppb(v/v)	80		EPA-21 TO-14A
	59.4	48.3	ppb(v/v)	81	0.89	EPA-21 TO-14A
Toluene	55.7	53.4	ppb(v/v)	96		EPA-21 TO-14A
	55.7	52.9	ppb(v/v)	95	0.99	EPA-21 TO-14A
1,1,2,2-Tetrachloroethane	55.4	47.4	ppb(v/v)	86		EPA-21 TO-14A
	55.4	57.5	ppb(v/v)	104	19	EPA-21 TO-14A

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 #...: M2B150328 Work Order #...: EVC8K1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: E2B200000-273 EVC8K1AD-LCSD
Prep Date.....: 02/19/02 Analysis Date..: 02/19/02
Prep Batch #...: 2051273
Dilution Factor: 1 Instrument ID..: MSB
Analyst ID.....: 117751

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	85	(70 - 125)			EPA-21 TO-14A
	90	(70 - 125)	6.1	(0-20)	EPA-21 TO-14A
Methylene chloride	82	(75 - 120)			EPA-21 TO-14A
	86	(75 - 120)	5.3	(0-20)	EPA-21 TO-14A
Trichloroethene	80	(80 - 125)			EPA-21 TO-14A
	81	(80 - 125)	0.89	(0-20)	EPA-21 TO-14A
Toluene	96	(70 - 120)			EPA-21 TO-14A
	95	(70 - 120)	0.99	(0-20)	EPA-21 TO-14A
1,1,2,2-Tetrachloroethane	86	(70 - 130)			EPA-21 TO-14A
	104	(70 - 130)	19	(0-20)	EPA-21 TO-14A

NOTE(S):

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

Bold print denotes control parameters

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA-ROVERS & ASSOCIATES
1801 OLD HWY. 8, SUITE 114
ST. PAUL, MN 55112 (612)639-0913

SHIPPED TO (Laboratory Name): STL - Santa Ana

REFERENCE NUMBER: 12865-90

SAMPLER'S SIGNATURE: Lisa LeMoine PRINTED NAME: Lisa LeMoine

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS TO-14	REMARKS
	2/13/02		S-020213-LL-01	GAS	1	X	Blower Outlet
							Please call
							Email with
			INITIAL FIELD VAC 30"				any questions
			FINAL FIELD VAC 4"				
			FIELD READINGS				
			% BY VOLUME				
			CH_4 2.2%				
			CO_2 9.4%				
			O_2 10.3%				

TOTAL NUMBER OF CONTAINERS: 1 HEALTH/CHEMICAL HAZARDS:

RELINQUISHED BY: ① Lisa LeMoine	DATE: 2/14/02 TIME: 1400	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex Overnight WAY BILL No.

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

SAMPLE TEAM: L LeMoine

RECEIVED FOR LABORATORY BY:

DATE: TIME:

№ 03887

1001 JULY 19/93 REV.0 (F-42)

F

APPENDIX F

BLOWER DISCHARGE DATA VALIDATION MEMO

CONESTOGA-ROVERS & ASSOCIATES

1801 Old Highway 8 NW, Suite #114
St. Paul, Minnesota 55112
Telephone: (651) 639-0913 Fax: (651) 639-0923
www.CRAworld.com

MEMORANDUM

TO: Katie Kamm

REF. NO.: 12865-90

FROM: Grant Anderson

DATE: March 6, 2002

C.C.: Analytical Data File

RE: **Data Quality Assessment and Validation**
February 2002 Sampling Event
Tomah Municipal Landfill Site - Tomah, Wisconsin (COC 3887)

The following details a data quality assessment and validation for one air sample collected on February 13, 2002, at the Tomah Municipal Landfill Site in Tomah, Wisconsin. The sample was identified as G-020213-LL-01 (blower discharge) and was analyzed for volatile organic compounds (VOCs)[1]. The analyses were performed by Severn Trent Laboratories (STL) in Santa Ana, California. The quality assurance criteria were established in the associated Quality Assurance Project Plan (QAPP)[2].

HOLDING TIME PERIODS

The holding time period for VOC analysis in air using a SUMMA canister is 30 days from sample collection to completion of analysis. On the basis of sample collection dates on the chain-of-custody form and the analytical report provided by STL, the analysis was completed within the specified holding time period.

METHOD BLANK SAMPLES

Contamination of the sample contributed by laboratory conditions or procedures was monitored by the concurrent preparation and analysis of a method blank sample. The method blank sample was reported to be free from detectable concentrations of target analytes, indicating that no significant laboratory contamination occurred.

1 VOC Method was derived from "Compendium Method TO-14: The Determination of Volatile Organic Compounds (VOCs) in Ambient Air Using Summa Passivated Canister Sampling and Gas Chromatographic Analysis", USEPA, May 1988 and it's updates.

2 Application of relevant quality assurance criteria was consistent with "National Functional Guidelines for Organic Data Review", October 1999.

LABORATORY CONTROL SAMPLE/ LABORATORY CONTROL SAMPLE DUPLICATE (LCS/LCSD)

Overall performance of VOC analyses was monitored by means of LCS/LCSD. The LCS/LCSD recoveries and relative percent difference (RPD) values of the recoveries were within acceptance criteria, indicating that overall performance was adequate.

FIELD QUALITY ASSURANCE/ QUALITY CONTROL (QA/QC) SAMPLES

There were no field QA/QC samples associated with this sampling event.

OVERALL ASSESSMENT

The data were found to exhibit acceptable levels of accuracy and precision pertaining to the above criteria, and may be used without qualification.

GDA/jla/19

G

APPENDIX G

CONDENSATE GENERATION

MONTHLY CONDENSATE TANK VOLUME CALCULATION

update the colored cell to calculate new volume

	water level reading	13.13	feet
d	water depth	3.295	feet
	tank length	14	feet
D	tank diameter	8	feet
A_c	(cross section of condensate)	19.52208	feet ^{2}
A_t	(cross section of entire tank)	50.26548	feet ^{2}
theta		0.17625	degrees
acos(theta)		1.393621	radians
Volume of condensate in tank		2044.494	gallons
High (tank needs empting) float		10.33	feet
	or	4303	gallons
High high (tank full) float		9.33	feet
	or	4936	gallons

APPENDIX G

CONDENSATE WATER GENERATION DATA
TOMAH LANDFILL GAS EXTRACTION SYSTEM

Date	*Water level (feet BTOC)*	*Condensate Volume (gallons)*	*Generation Rate (gallons/day)*
11/12/99	14.25	1157.91	
11/24/99	14.33	1098.61	-4.94
12/1/99	14.36	1076.56	-3.15
12/8/99	14.28	1135.59	8.43
12/15/99	14.26	1150.46	2.12
12/22/99	14.33	1098.61	-7.41
12/29/99	13.96	1378.33	39.96
1/5/00	13.97	1370.60	-1.10
1/12/00	14.19	1202.83	-23.97
1/19/00	14.16	1225.43	3.23
1/26/00	14.23	1172.84	-7.51
2/2/00	14.01	1339.76	23.85
2/9/00	14.26	1150.46	-27.04
2/16/00	14.27	1143.02	-1.06
3/1/00	14.13	1248.12	7.51
3/8/00	14.15	1232.98	-2.16
3/15/00	14.36	1076.56	-22.35
4/6/00	14.19	1202.83	5.74
4/12/00	14.1	1270.9	11.35
4/19/00	14.12	1255.71	-2.17
4/26/00	14.04	1316.72	8.72
5/3/00	14.15	1232.98	-11.96
5/10/00	14.2	1195.32	-5.38
5/16/00	14.23	1172.84	-3.75
9/29/00	13.96	1378.33	1.51
10/27/00	13.96	1378.33	0.00
11/2/00	13.8	1503.19	20.81
11/22/00	13.76	1534.72	1.58
12/8/00	13.3	1904.88	23.14
12/28/00	13.34	1872.22	-1.63
1/3/01	13.12	2052.74	30.09
1/24/01	13.08	2085.77	1.57
1/31/01	13.15	2028.01	-8.25
2/7/01	13.15	2028.01	0.00
2/14/01	12.72	2385.15	51.02
2/21/01	12.74	2368.44	-2.39
3/1/01	12.67	2426.95	7.31
4/4/01	12.01	2979.15	16.24
5/2/01	11.54	3367.46	13.87
6/6/01	13.4	1823.37	-44.12
7/17/01	11.21	3634.15	44.17
8/8/01	11.18	3658.07	1.09
9/11/01	10.91	3870.34	6.24
10/16/01	10.31	4317.64	12.78
10/22/01	City of Tomah removed approximately 3,600 gallons		
11/6/01	15.53	322.95	21.53
12/18/01	14.97	654.02	7.88
1/22/02	14.42	1032.78	10.82
2/13/02	14.27	1143.02	5.01
3/27/02	13.45	1782.81	15.23
4/16/02	13.13	2044.49	13.08

Condensate Water Generation
Tomah Landfill Gas Extraction System