

**INTERIM RESPONSE ACTION STATUS REPORT
COMPANY VEHICLE OPERATIONS AREA
FORMER WILLOW RUN ASSEMBLY PLANT**

**GENERAL MOTORS CORPORATION
YPSILANTI, MICHIGAN**

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For - ENCORE**

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EXECUTIVE SUMMARY

Conestoga-Rovers & Associates (CRA) was retained by ENCORE to design and implement a groundwater Interim Response Action (IRA) at the Company Vehicle Operations (CVO) Area at the former Willow Run Assembly Plant located in Ypsilanti, Michigan (Site). The shallow groundwater (determined not to be a drinking water unit) has been impacted by chlorinated and non-chlorinated volatile organic compounds (VOCs). This report summarizes the full-scale implementation and results after four potassium permanganate (KMnO₄) injection events.

The IRA was designed to reduce VOC concentrations in two areas to levels that can achieve compliance with Michigan Department of Environmental Quality (MDEQ) groundwater/surface water interface (GSI) criteria through natural attenuation (NA). In addition to reducing the VOC concentration to levels that will support NA, the IRA will be used to reduce groundwater concentrations to below acute GSI values (final acute values, FAV). The constituents of concern (COC) at the Site are trichloroethylene (TCE), cis-1,2-dichloroethylene (cis-DCE), and vinyl chloride.

Four KMnO₄ injections were completed between December 2001 and June 2002 at 45 injection wells installed in two areas where COC concentrations are the highest (hot spots, Area 1 and Area 2). Groundwater samples were collected prior to the first injection and following each injection to monitor the COC concentrations. An additional sampling event was conducted in November 2002 to evaluate the results of the injections.

The groundwater level varied significantly throughout the year. Levels increased during the early spring months and decreased during the summer months. Significant amounts of light non-aqueous phase liquid (LNAPL) was observed at two injection wells in injection Area 1.

The groundwater IRA was designed to reduce the COC concentrations within the hot spots to levels that would facilitate NA. Therefore, the criteria used to evaluate the effectiveness of the chemical oxidation remediation is not the Part 201 criteria, but merely a reduction in COC concentrations to a level below the baseline concentrations. In addition to the reduction in COC concentrations, the groundwater IRA is used to reduce the COCs to comply with the FAV.

Overall results of the injections relative to the baseline data in Area 1 are mixed. All three regularly sampled wells have one or two COC concentrations greater than the

baseline data. Each well also shows additional Site-specific VOC concentrations that have increased to levels above the baseline values.

The results for Area 2 generally showed decreases in concentrations. Both regularly monitored Area 2 wells showed significant decreases in most chemicals. The concentration of one COC (vinyl chloride) in IW-46 exceeded the baseline groundwater concentrations recorded.

The decrease and rebound in VOC concentrations following KMnO_4 injection is not an uncommon occurrence with this technology. When this phenomena occurs, its an indication that residual product may be present within the soil formation. Rising groundwater (due to natural precipitation or short-term rises due to the injections) displaces residual LNAPL and releases it into the groundwater (Area 1). When LNAPL is not present (Area 2), increases in groundwater concentrations can occur from desorbition from contaminated soil to groundwater.

The effectiveness of chemical oxidation in Area 1 was significantly inhibited due to the presence of diesel range organics (DRO), gasoline range organics (GRO) and LNAPL in the area around IW-16 and IW-26. The DRO, GRO and LNAPL have high COD demands and consume KMnO_4 before it reaches and reacts with the VOC-impacted groundwater.

In Area 2, beneficial results were observed in response to KMnO_4 injection, but the effectiveness was inhibited by desorbition of VOCs from contaminated soil to groundwater that occurred due to fluctuating water levels. Results indicate that Area 2 conditions support additional KMnO_4 injections.

Additional investigation and remedial activities are planned to be completed at the Site, including:

- The installation of additional groundwater monitoring points closer to Tyler Pond for the evaluation of GSI criteria and FAV;
- Implementation of a Soil IRA in Area 1 to remove the LNAPL followed by additional chemical oxidation injections;
- Continuation of additional KMnO_4 injections in Area 2;
- Investigation of underground utilities that may act as potential pathways for contaminants to travel off-Site and to evaluate conditions of historical utilities (former diesel fuel line) at the Site; and
- Continuation of the groundwater monitoring program, on a semi-annual basis.

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COC	CONSTITUENTS OF CONCERN
COD	CHEMICAL OXYGEN DEMAND
CRA	CONESTOGA-ROVERS & ASSOCIATES
CVO	COMPANY VEHICLE OPERATIONS
DCE	1,2-DICHLOROETHENE
DRO	DIESEL RANGE ORGANICS
FAV	FINAL ACUTE VALUES
gpm	GALLONS PER MINUTE
GPR	GROUND PENETRATING RADAR
GRO	GASOLINE RANGE ORGANICS
GSI	GROUNDWATER/SURFACE WATER INTERFACE
IRA	INTERIM RESPONSE ACTION
KMnO ₄	POTASSIUM PERMANGANATE
LNAPL	LIGHT NON-AQUEOUS PHASE LIQUID
MDEQ	MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
NA	NATURAL ATTENUATION
TCE	TRICHLOROETHENE
VOC	VOLATILE ORGANIC COMPOUND

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) was retained by ENCORE¹ to design and implement a groundwater Interim Response Action (IRA) at the Company Vehicle Operations (CVO) Area at the former Willow Run Assembly Plant located in Ypsilanti, Michigan (Site). Figure 1.1 presents the Site location. The eastern part of the Site has undergone a considerable amount of investigation. These investigations indicate that the shallow groundwater (determined not to be a drinking water unit) has been impacted by chlorinated and non-chlorinated volatile organic compounds (VOCs).

Although the shallow groundwater is not used for drinking water, the Site is bordered to the north by Tyler Pond and as such an IRA is required to address the exceedance of the Michigan Department of Environmental Quality (MDEQ) groundwater/surface water interface (GSI) criteria pursuant to Michigan Act 451, Part 201. The IRA was designed to reduce VOC concentrations in two areas with higher concentrations at the Site to levels that will allow natural attenuation (NA) to achieve compliance with criteria listed in Part 201 of Public Act 451 (GSI criteria being the driving concern at the Site). In addition to reducing the VOC concentrations to levels that will support NA, the IRA will be used to reduce groundwater concentrations so that they are below acute GSI values, in accordance with the recently revised MDEQ Part 201 rules (December 21, 2002).

¹ ENCORE is a wholly owned subsidiary of General Motors.

2.0 BACKGROUND

A feasibility study was completed to evaluate groundwater remediation options for the Site in January 2000. A number of remedial technologies were evaluated to address the VOC groundwater plume, which covered a fairly large area and included two areas of higher concentrations (hot spots), Area 1 and Area 2, as shown in Figure 2.1. The constituents of concern (COC) at the Site are trichloroethene (TCE), cis-1,2-dichloroethene (cis-DCE) and vinyl chloride. Based on the COC distribution and the likely effectiveness of applicable technologies, the assessment concluded chemical oxidation by injection in the hot spots (Area 1 and Area 2) would provide the best opportunity to reduce COC concentrations in the groundwater to the point where they could naturally attenuate and applicable Part 201 criteria would be achieved throughout the plume (the feasibility of natural attenuation will need to be evaluated at a later point after the hot spots have been remediated).

To determine the appropriate approach for chemical oxidation, a laboratory treatability study was conducted to confirm the concentration and type of chemical oxidant to be injected. Potassium permanganate (KMnO_4) was the selected oxidant and was effective with concentrations ranging from one to five percent KMnO_4 by weight in water. The treatability study results showed that chemical oxidation using KMnO_4 was effective in significantly lowering the vinyl chloride concentrations in representative groundwater samples from the Site.

A pilot test was conducted in May 2001 to optimize the KMnO_4 concentration, the rate of application, refine the spacing between injection wells, and estimate the costs for full-scale treatment. The tests indicated significant reductions in TCE, cis-DCE, and vinyl chloride. Based on the success of the pilot study, full-scale implementation of the chemical oxidation treatment was recommended for the two hot spots in the CVO portion of the Site. The results of the pilot test were used to prepare the design and specifications for full-scale implementation (CRA, 2001).

This report summarizes the full-scale implementation and results after four KMnO_4 injection events.

3.0 DESIGN AND IMPLEMENTATION

3.1 FULL SCALE DESIGN

The following schedule was recommended based on the pilot study test results:

Injection frequency:	Every eight weeks.
Injection quantity:	250 gallons of 2 wt% KMnO_4 solution and 250 gallons of flush water.
Total number of injections:	Four to six estimated depending on actual monitoring results.
Monitoring frequency:	Monitoring should be conducted prior to treatment and then three weeks after each injection.

Forty injection wells were installed in Area 1 and 15 injection wells were installed in Area 2, as shown in Figure 2.1. The wells were installed to approximately the top of the underlying clay layer and the well depths vary from 16 to 19 feet and average about 17 feet below ground surface. The well screens are 5 and 10 feet in length and alternate with each well. The 10-foot well screens provided are completed in both the vadose and saturated zones, while the 5-foot well screens are completed in the lower part of the saturated zone only. Although the field pilot study used a 10-foot well screen, a 5-foot well screen was selected for every other well to ensure that the chemical oxidant would be injected to the lower part of the water bearing unit, and not preferentially enter the vadose zone at every injection well.

3.2 FULL SCALE IMPLEMENTATION

Baseline groundwater samples were collected on December 13, 2001 from five injection wells. The same wells were sampled following each injection event. Wells IW-9, IW-12, and IW-33 were sampled in Area 1 and wells IW-46 and IW-49 were sampled in Area 2.

The groundwater sampling and injection events are summarized as follows:

<i>Event</i>	<i>Date of Injections</i>	<i>Date of Groundwater Sampling Event</i>
Baseline Sampling	N/A	December 13-14, 2001
1 st Injection	December 17-31, 2001	January 14, 2002
2 nd Injection	February 11-19, 2002	March 14, 2002
3 rd Injection	April 15-22, 2002	May 6, 2002
4 th Injection	June 17-24, 2002	July 22, 2002

Injections were gravity fed. Initial attempts to pump the material into the well resulted in KMnO₄ solution running up along the well casing annulus and onto the ground surface. Overall injection rates averaged between five and eight gallons per minute (gpm). In several cases, even gravity feed resulted in the injection solution rising to the ground level. In these cases the injection flow was reduced until the solution no longer escaped the well area at the ground surface.

Several wells produced very high injection rates. The highest injection rate observed was 125 gpm at IW-16. The lowest injection rate for IW-16 was 50 gpm. The injection wells with consistently high injection rates included IW-8, IW-9, IW-14 and IW-16. These atypically high rates may be due to these wells being screened in the bedding of a storm sewer or some other subsurface cavity. The KMnO₄ solution and water flush injection rates are shown in Tables 3.1 through 3.4.

All injections consisted of a KMnO₄ injection followed by a water flush except for the fourth injection. The five wells that were being sampled were not flushed with water after the KMnO₄ injection. All the wells other wells were flushed with 250 gallons of water.

4.0 GROUNDWATER MONITORING METHODOLOGY

4.1 WATER LEVEL MEASUREMENTS

Groundwater level measurements were collected to track mounding of the waterbearing unit during injection. Measurement frequencies included immediately before the first injection, approximately one-week after each injection event and during the post-injection sampling events.

4.2 POST-INJECTION MONITORING

To monitor the VOC destruction results of the KMnO_4 injections, groundwater was sampled immediately prior to the first injection to obtain baseline results for the VOC levels and between three and four weeks after each injection event. The same five wells were sampled during each sampling event.

The groundwater samples were analyzed for Site-specific VOCs, chloride, KMnO_4 , manganese and potassium. Following the first, third and fourth injections groundwater samples were also analyzed for aerobic and anaerobic total microbial populations. Field measurements included pH, specific conductivity, temperature, turbidity, dissolved oxygen and oxidation-reduction potential.

4.3 COMPREHENSIVE GROUNDWATER MONITORING

In November 2002, a groundwater-sampling event was conducted at the CVO area to monitor what changes (if any) had occurred since the last post-injection groundwater sampling event. Consistent with post injection sampling events described in Section 4.2, samples were collected from injection wells IW-9, IW-12, IW-33, IW-46 and IW-49. In addition to the five regularly sampled wells, four injection and five monitoring wells were sampled including IW-2, IW-18, IW-26, IW-30, IW-45, MW3, MW4, MW12, MW13 and MW14. Monitoring wells MW5 and MW6/GP18 were not sampled as planned because they were damaged. Well MW5 was crushed and MW6/GP18 was backfilled and covered with asphalt.

Samples from the November 2002 groundwater-sampling event were analyzed for VOCs, chloride, gasoline range organics (GRO), diesel range organics (DRO) and chemical oxygen demand (COD). Field measurements included pH, specific conductivity, temperature, turbidity, dissolved oxygen and oxidation-reduction potential.

5.0 DISCUSSION OF GROUNDWATER MONITORING RESULTS

5.1 GROUNDWATER LEVEL MEASUREMENTS

Groundwater levels have fluctuated considerably since the baseline monitoring was conducted in December 2001. Groundwater levels in Area 1 and Area 2 increased between 0.06 and 5.6 inches respectively, between each of the first three monitoring events. This period spans the winter and early spring months (December to April). Falling water levels were observed beginning with the fourth monitoring event (July) and continued to fall through the November sampling event. The significant drop in groundwater levels between the July and November measurements was over 24 inches in some wells. The groundwater level measurements for each well are shown in Table 5.1.

During groundwater level measurements following the second injection in February 2002, light non-aqueous phase liquid (LNAPL) was observed for the first time in Area 1 well IW-16. During subsequent injection events, small amounts of LNAPL were observed on the water level probe used at IW-16. This well contained 10.3 inches of LNAPL in November 2002. The oil was dark brown in color and had a motor oil odor. Well IW-16 is located just north of the above ground gasoline and diesel fuel tanks and possibly in the bedding of a storm sewer.

In November 2002, LNAPL was also detected in Area 1 well IW-26 at a thickness of 6.6 inches. Water/LNAPL level measurements were collected from additional injection wells located along the storm sewer line that runs through the northeast portion of Area 1. Well IW-16 was the only other injection well along the sewer line that exhibited LNAPL.

Injection well IW-26 is located near the storm sewer line discussed above and also the former diesel fuel line which runs east/west and turns to run south at IW-26. The location of the former diesel fuel line is shown on Figure 2.1.

5.2 POST-INJECTION RESULTS

The baseline and post injection analytical results are presented in Table 5.2. The laboratory analytical data reports are provided in Appendix A. Complete documentation of the data review and validation is also provided in Appendix B.

The first KMnO_4 injection resulted in significant reductions in COCs TCE, cis-DCE, and vinyl chloride.

The second KMnO_4 injection produced mixed results for most wells. Two of the three wells in Area 1 showed continued reduction in COCs. The third well in Area 1 showed significant increases in some COCs. One of the two wells sampled in Area 2 showed a significant increase in cis-DCE. Other COCs in the two wells showed increases or little change in concentration. The increases in detected concentrations of certain COCs is likely due to the rising groundwater releasing residual COC previously held in the vadose zone into the groundwater.

The third KMnO_4 injection resulted in COCs reductions relative to the second injection event in four of the five wells sampled.

The fourth KMnO_4 injection produced mixed results. Three of the five wells showed significant increases, and two of the wells showed little change (one of these two wells already met the GSI criteria prior to the fourth injection).

5.3 COMPREHENSIVE GROUNDWATER MONITORING RESULTS

The November 2002 analytical results are presented in Table 5.3. In addition the results from the post-injection regularly sampled wells are presented in Table 5.2. The laboratory analytical data reports are provided in Appendix A. Complete documentation of the data review and validation is also provided in Appendix B.

5.3.1 AREA 1

Area 1 consists of 40 injection wells located at the west end of the CVO property. Three wells (IW-9, IW-12, and IW-33) have been regularly monitored following KMnO_4 injections. Four additional injection wells (IW-2, IW-18, IW-26, and IW-30) and one monitoring well (MW3) located northeast of the Area 1 injection wells were sampled in November. Well MW3 is included as part of Area 1 evaluation due to its location between Area 1 and Tyler Pond. Figure 5.1 presents the locations of the Area 1 wells sampled during the November 2002 sampling event.

As discussed in Section 5.1, LNAPL was detected in one well in February 2002 (IW-16), and in two wells (IW-16 and IW-26) in November 2002. The presence of LNAPL in these wells has likely impacted the effectiveness of the KMnO_4 treatment of groundwater at

these locations, as the LNAPL has a high COD demand and would have consumed the KMnO_4 before it was able to effectively treat the COCs in the groundwater at these locations. The COCs can be dissolved in the LNAPL and become inaccessible to attack by the KMnO_4 . Therefore, the presence of LNAPL can significantly impact the effectiveness of chemical oxidation performance.

The groundwater collected from IW-26 exhibited the presence of both DRO and GRO. The GRO result of 4.1 mg/l is well below the average for Area 1 wells, whereas the DRO result of 1.7 mg/l is the highest DRO concentration detected in Area 1, followed closely by IW-30 with 1.6 mg/l. Injection well IW-26 is located near the storm sewer line discussed in Section 5.1 and also the former diesel fuel line shown on Figure 2.1, which runs east/west and turns to run south at IW-26.

COD, chloride, DRO and GRO concentrations are significantly greater in Area 1 wells than in Area 2 wells. The high DRO and GRO concentrations decrease the effectiveness of the KMnO_4 injections. GRO and DRO are organics that will react with KMnO_4 and consume it prior to it treating the VOCs in the groundwater. A KMnO_4 reaction with GRO and DRO requires a much higher stoichiometric amount of KMnO_4 than the reaction with TCE and vinyl chloride does because of the greater number of carbon atoms in the GRO and DRO compounds. COD results verify the adverse impact of the presence of petroleum hydrocarbon on KMnO_4 treatment and suggest that additional application of the oxidizing agent is required. However, unless the DRO and GRO products are removed, the effect of KMnO_4 will continue to be inhibited. It should be noted that there were no indications of the high organic content (GRO, DRO) or presence of LNAPL during the evaluation of the chemical oxidation remediation option.

VOCs that exceed the MDEQ Part 201 GSI Criteria in Area 1 include 1,1-dichloroethene, 1,2,4-trimethylbenzene, ethyl benzene, naphthalene, toluene, TCE, vinyl chloride, cis-DCE, trans-DCE and xylenes. Monitoring well MW3, the closest Area 1 monitoring point to Tyler Pond, exhibited an exceedance of the GSI criterion for vinyl chloride only. Three Area 1 wells exceed the GSI criterion for TCE (IW-12, IW-18, IW-26) while all wells sampled in Area 1 exceeded the criteria for vinyl chloride and cis-DCE.

Part 201 GSI Criteria are generally protective for chronic surface water impacts. However, the new MDEQ Part 201 Rules (December 21, 2002) identify specific agency notification obligations if groundwater at the GSI is found to exceed acute GSI protection values; therefore, all November 2002 groundwater values that exceeded the Part 201 GSI Criteria were compared to the final acute values (FAV) as calculated using Rule 323.1057. Four VOCs detected in the November 2002 sampling event exceed the acute GSI protection values. As discussed above, MW3 is the closest Area 1 monitoring

point to Tyler Pond. Vinyl chloride and cis-DCE concentrations detected in MW3, exceeded GSI criteria, but only vinyl chloride exceeded the FAV. Well MW3 is located approximately 90 feet from the Tyler Pond shoreline and, therefore, may not accurately represent the GSI. Additional GSI monitoring points are required to fully assess compliance of GSI criteria.

TCE concentrations in the three regularly monitored injection wells decreased to below GSI criteria following the injections. Wells IW-12 and IW-33 showed an increase in TCE concentrations between the fourth injection and the November 2002 sampling event. All Area 1 vinyl chloride and cis-DCE concentrations increased since the last sampling event. Two wells (IW-9, IW-12) increased to approximately double their baseline vinyl chloride concentration, while the third well (IW-33) showed an increase to half of its baseline vinyl chloride concentration. The cis-DCE concentrations in two wells (IW-12, IW-33) increased but are below their baseline concentrations, while one well (IW-9) increased to approximately double its baseline cis-DCE concentration.

Groundwater levels in Area 1 fell between 12 and 27 inches since the July 2002 sampling event. Fluctuations of groundwater levels act as a soil flushing/washing mechanism and can trigger the release of COCs from the vadose zone. Figure 5.2 presents the approximate concentration contours for TCE, cis-DCE and vinyl chloride at the time of the November 2002 sampling event.

The groundwater remediation in Area 1 has been inhibited by the presence of LNAPL. The LNAPL may be coming from the storm sewer bedding or other subsurface void in the area (former diesel line). A Soil IRA will be conducted to remove the LNAPL, which will be followed by continued groundwater treatment by chemical oxidant injections. An evaluation of the compliance with FAV downgradient of Area 1 is currently underway.

5.3.2 AREA 2

Area 2 consists of 15 injection wells located along the south bank of Tyler Pond. Two injection wells (IW-46 and IW-49) have been regularly monitored following KMnO_4 injections; one additional injection well (IW-45) and one monitoring well (MW12) located east of the Area 2 injection wells were sampled in November. Figure 5.1 presents the locations of the Area 2 wells sampled during the November 2002 sampling event.

COD, chloride and DRO concentrations do not vary significantly within Area 2. The lower COD concentrations observed indicate that free product is not likely present and the organic oxidizing demand is compatible with additional KMnO_4 injections. The GRO concentration at IW-46 is an order of magnitude greater than other Area 2 wells. COD, chloride, DRO and GRO concentrations are significantly lower at MW-12 than in the sampled injection wells within Area 2.

VOCs that exceed the MDEQ Part 201 GSI criteria in Area 2 include TCE, vinyl chloride, cis-DCE and xylenes. The three injection wells sampled during this event exceed GSI criteria for both TCE and vinyl chloride, where only IW-46 exceeds for cis-DCE and xylenes. MW12 did not exhibit any GSI criteria exceedances. All VOCs detected in Area 2 at concentrations exceeding the GSI criteria were compared to FAV values. Well IW-46 was the only Area 2 well that exhibited a COC concentration in exceedance of a FAV (cis-DCE). Well IW-46 is located approximately 90 feet from the Tyler Pond shore and, therefore, may not accurately represent the GSI, so additional assessment is warranted.

TCE concentrations in the two regularly monitored injection wells have decreased. Vinyl chloride concentrations remain at approximately baseline levels, while cis-DCE concentrations have generally decreased.

Groundwater levels in Area 2 fell between 6 to 10 inches since the July 2002 sampling event. As discussed in Section 5.3.1, the fluctuating groundwater levels act as a soil flushing/washing mechanism and can result in the release of COCs from the vadose zone. Figure 5.2 presents the approximate concentration contours for TCE, cis-DCE and vinyl chloride at the time of the November 2002 sampling event.

The Area 2 KMnO_4 injections have been beneficial. All results indicate that no LNAPL is present in Area 2. Additional KMnO_4 injections will be completed to remediate VOCs to levels that will support NA. An evaluation of the compliance with FAV downgradient of Area 2 is currently underway.

5.3.3 SITE-WIDE WELLS

Additional Site-wide monitoring wells were added to the November 2002 sampling event to obtain a 'snap shot' of the CVO groundwater conditions. The Site-wide wells include MW4, MW13 and MW14, which are located on the south and east property boundaries, as shown in Figure 5.1. Monitoring well MW4 is located upgradient/crossgradient from Area 1, while MW13 and MW14 are

upgradient/crossgradient of Area 2. Groundwater at the Site generally moves east/northeast towards Tyler Pond.

Site-specific VOCs, DRO, or GRO were not detected above laboratory detection limits at any of the three wells. Well MW4 was the only well outside of Areas 1 and 2 that exhibited a COD value above laboratory detection limits. The COD value of 18 mg/l is well below any COD values detected in Area 1 and Area 2 injection wells. Since the GRO, DRO and VOCs were all found to be below laboratory detection limits, it is likely that the organic matter detected in the MW4 sample may be a naturally occurring carbon source. The chloride concentration of 1,530 mg/l detected in MW4 is similar to values detected in Area 1 wells IW-18 and IW-30, and well above chloride values found in Area 2 wells. Chloride concentrations detected in MW13 and MW14 (162 and 186 mg/l, respectively) are significantly lower than all other chloride concentrations detected at the Site.

Monitoring wells MW5 and MW6 were to be sampled during the November 2002 Site-wide groundwater evaluation, but were found to be damaged. Blasland Bouck & Lee obtained the last groundwater analysis available from these wells in 1996. The 1996 results indicate that DCE and vinyl chloride were present at detectable levels but were lower than the source areas (Areas 1 and 2). At present no groundwater monitoring points are available between Areas 1 and 2. These wells will be further inspected and properly abandoned and replaced if necessary.

5.4 OVERALL REMEDIATION RESULTS

The groundwater IRA was designed to reduce the COC concentrations within the hot spots to levels that would facilitate NA. Therefore, the criteria used to evaluate the effectiveness of the chemical oxidation remediation is not the Part 201 criteria, but merely a reduction in COC concentrations to a level below the baseline concentrations. In addition to the reduction in COC concentrations, the groundwater IRA is used to treat the COCs to comply with the FAV values.

Overall results of the injections relative to the baseline data in Area 1 are mixed. All three regularly sampled wells have one or two COC concentrations greater than the baseline data. Each well also shows additional Site-specific VOC concentrations that have increased to levels above the baseline values.

The results for Area 2 generally showed decreases in concentrations. Both regularly monitored Area 2 wells showed significant decreases in most chemicals. The

concentration of one COC (vinyl chloride) in IW-46 exceeded the baseline groundwater concentrations recorded.

The decrease and rebound in VOC concentrations following KMnO_4 injection is not an uncommon occurrence with this technology. When this phenomena occurs, its an indication that residual product may be present within the soil formation. Rising groundwater (due to natural precipitation or short-term rises due to the injections) displaces residual LNAPL and releases it into the groundwater (Area 1). When LNAPL is not present (Area 2), increases in groundwater concentrations can occur from desorbition from contaminated soil to groundwater.

The effectiveness of chemical oxidation in Area 1 was significantly inhibited due to the presence of DRO, GRO and LNAPL in the area around IW-16 and IW-26. The DRO, GRO and LNAPL have high COD demands and consume the KMnO_4 before it reaches and reacts with the VOC-impacted groundwater.

In Area 2, beneficial results were observed in response to KMnO_4 injections, but the effectiveness was inhibited by desorbition of VOCs from contaminated soil to groundwater that occurred due to fluctuating water levels. Results indicate that Area 2 conditions support additional KMnO_4 injections.

6.0 SUMMARY AND RECOMMENDATIONS

6.1 SUMMARY

Four injections of KMnO_4 were completed at the Site between December 2001 and June 2002. The injection program was designed to reduce COC concentrations in two concentrated areas to levels where the entire plume will be able to undergo NA and achieve compliance with Part 201 criteria. Injection Area 1 produced mixed results while injection Area 2 generally showed decreasing COC concentrations.

The mixed results in Area 1 are likely due to the presence of LNAPL in the vadose zone. Several of the wells (IW-8, IW-9, IW-14 and IW-16) in Area 1 exhibited unusually high injection flow rates. Each of these wells are thought to connect with storm sewer bedding that transects Area 1. One of these wells, IW-9, was sampled after each injection. This well consistently had the largest number of constituents that exceeded the MDEQ GSI criteria. Two other wells, IW-16 and IW-26, are also thought to connect with the same storm sewer bedding and significant amounts of LNAPL were detected in these wells during the last monitoring event. Groundwater concentrations in Area 1 have not been reduced to a level where NA can be considered as the primary remediation mechanism for the plume at the Site.

In Area 2, KMnO_4 injections achieved some positive results, but the overall effectiveness was likely inhibited by desorption from contaminated vadose zone soil to groundwater that occurred during rising and falling water level changes. Concentrations in Area 2 have not yet dropped to a level where NA can be considered as the primary remediation mechanism for the plume at the Site.

The MDEQ Part 201 revised rules (December 21, 2002) require that acute GSI values (FAV) be evaluated if chronic GSI values (Part 201 GSI criteria) are exceeded near a surface water body. An evaluation of compliance with the FAV at the Site is currently underway.

6.2 RECOMMENDATIONS

Based on the observations and results of the KMnO_4 injection treatment at the Site, CRA recommends five further investigation or remedial activities.

1. GSI Monitoring Wells

The installation and quarterly monitoring of additional groundwater monitoring points will be completed to provide more comprehensive understanding of COC

concentrations and trends as they relate to applicable Part 201 Criteria (GSI criteria and FAV in particular). The proposed monitoring locations will be located between the CVO fence line and the south bank of Tyler Pond.

2. Area 1 Treatment

The LNAPL in IW-16 and IW-26 needs to be removed before groundwater remediation can be effective. A Soil IRA should be completed, followed by additional chemical oxidation injections for the groundwater.

The Soil IRA will consist of excavating a limited area in the northeast section of Area 1, where LNAPL is known to be present, so any visible free product and excessively contaminated soil can be removed (vacuum truck or absorbent material). The primary goal of the Soil IRA is to remove as much LNAPL as possible, so the effectiveness of future groundwater chemical oxidation injections can be maximized.

The excavation area is centered on the storm sewer running through the northeast section of Area 1. During the excavation the storm sewer will be inspected for evidence that groundwater may be infiltrating the sewer or using the sewer bedding as a preferential pathway to migrate from the area.

Prior to excavation, the monitoring wells in Area 1 will be checked for the presence of LNAPL. A sample of the LNAPL will be collected from IW-16 and IW-26 and a fingerprint analysis will be completed to characterize its source.

Approximately six monitoring wells will be removed during the limited excavation and will be reinstalled to allow for additional chemical injections and monitoring.

3. Area 2 Treatment

The groundwater sampling results, specifically the COD values indicated that further chemical treatment using KMnO_4 would be effective in decreasing concentrations of COCs in Area 2. Based on the thickness of the saturated zone in this area and the COD values observed, two to three additional KMnO_4 injections should reduce hot spot concentrations sufficiently.

4. Underground Utilities Investigation

An investigation of the underground utilities should be completed to identify all potential pathways that may lead contaminants off-Site. This may include dye tests to verify projected storm sewer connections and visual inspections (video camera) to determine if groundwater is infiltrating the storm sewer.

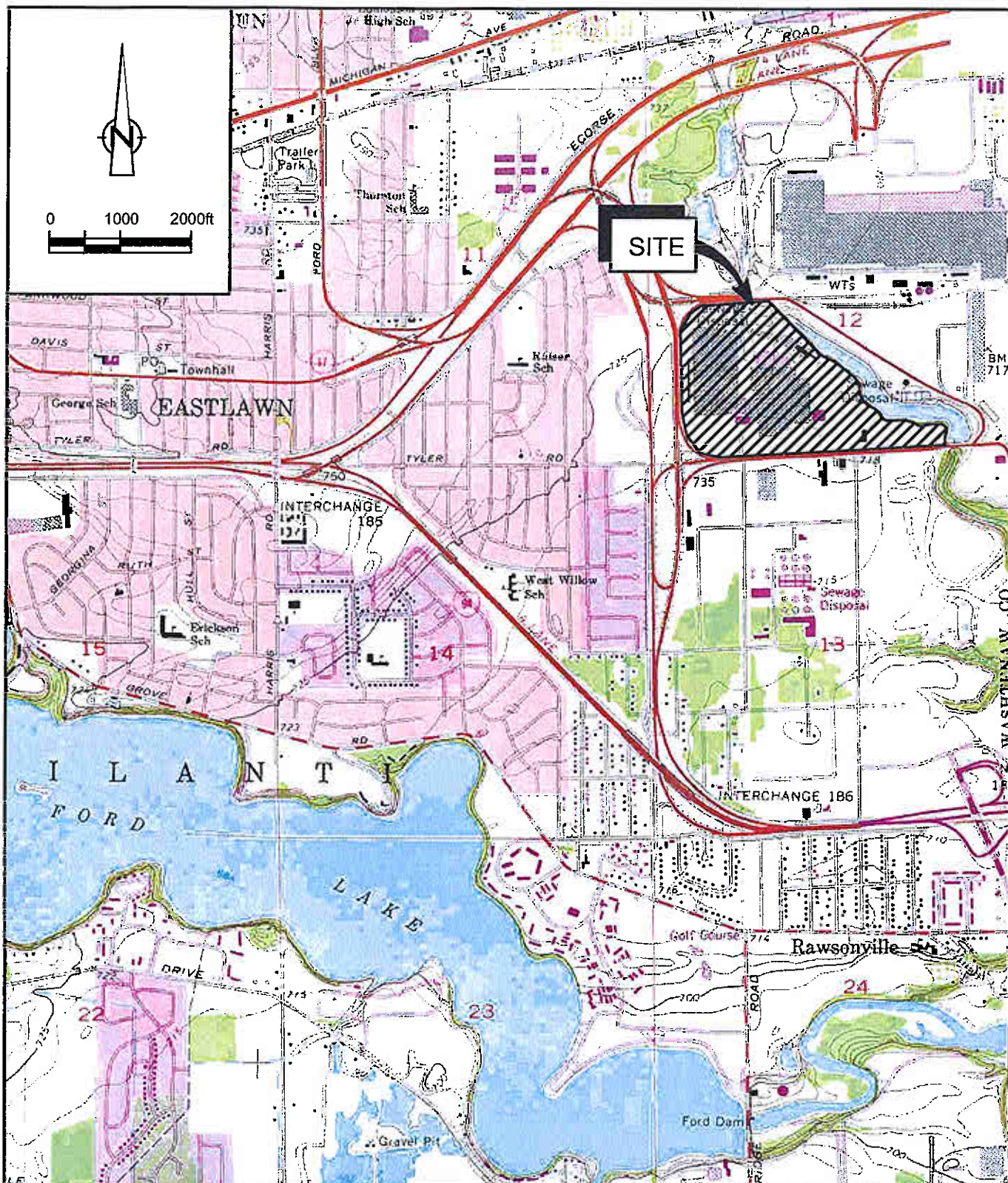
The former diesel line that runs along the north side of the maintenance building and an unknown utility line found in a sink hole on the CVO property will be located and evaluated to determine if they are potential conduits for preferential flow from the area. The conditions along these utility lines will be evaluated with ground penetrating radar (GPR) and investigative excavation. In addition, an evaluation of the usage history and current conditions of the former cyanide sludge line that runs through the CVO property from north of Tyler Pond to the Fons/Old Wayne landfills will be investigated.

5. Continued Groundwater Monitoring

Monitoring of groundwater VOC concentrations will continue on a semi-annual basis due to the additional monitoring associated with other planned investigations. The semi-annual monitoring will include the five regularly sampled injection wells (IW-9, IW-12, IW-33, IW-46, and IW-49), three GSI monitoring points, and MW5 and MW6 (or their replacements). Groundwater samples will be collected from these wells analyzed for Site-specific VOCs.

7.0 REFERENCES

CRA, Chemical Oxidation Design and Technical Specifications, November 2001

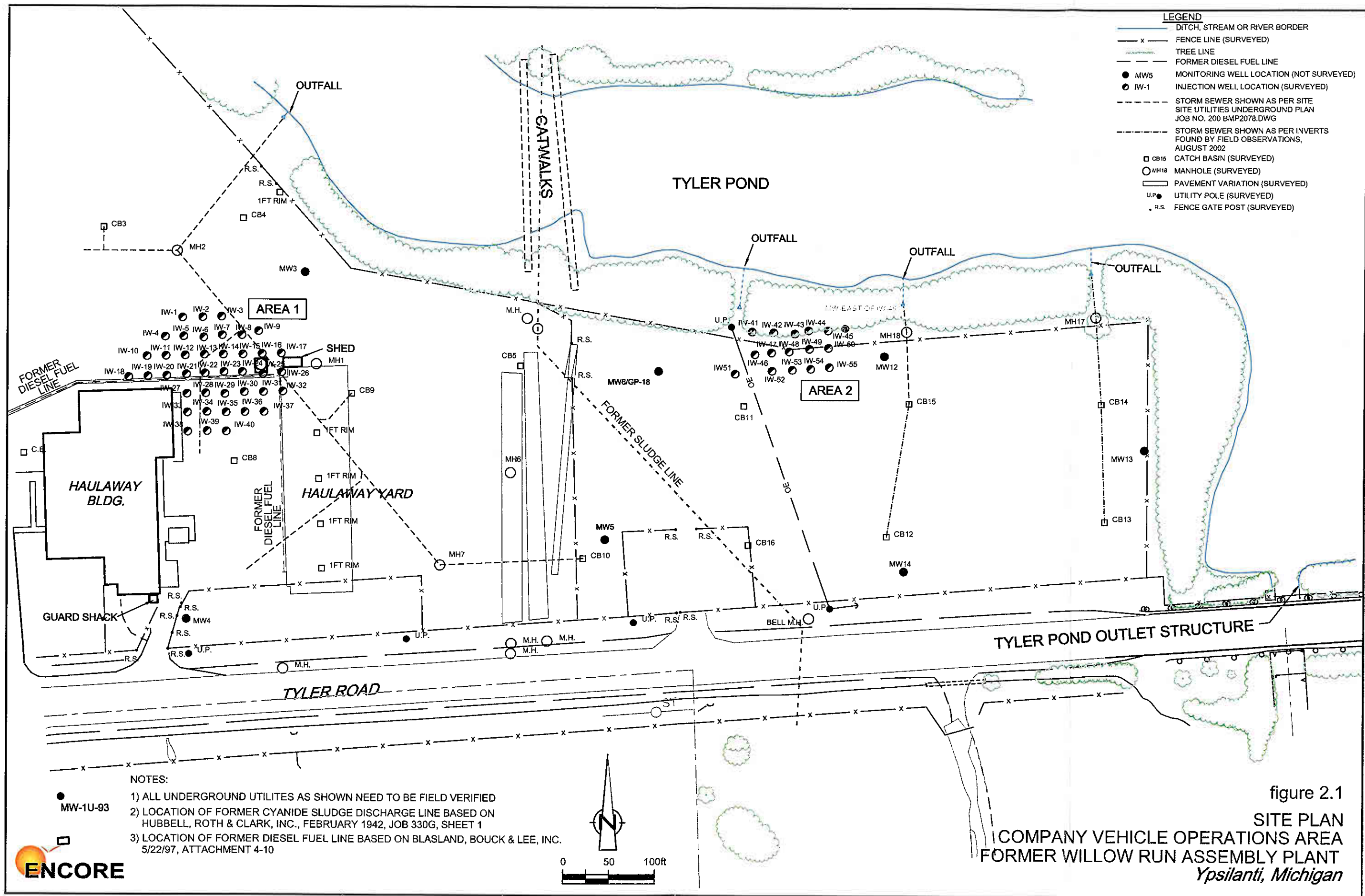


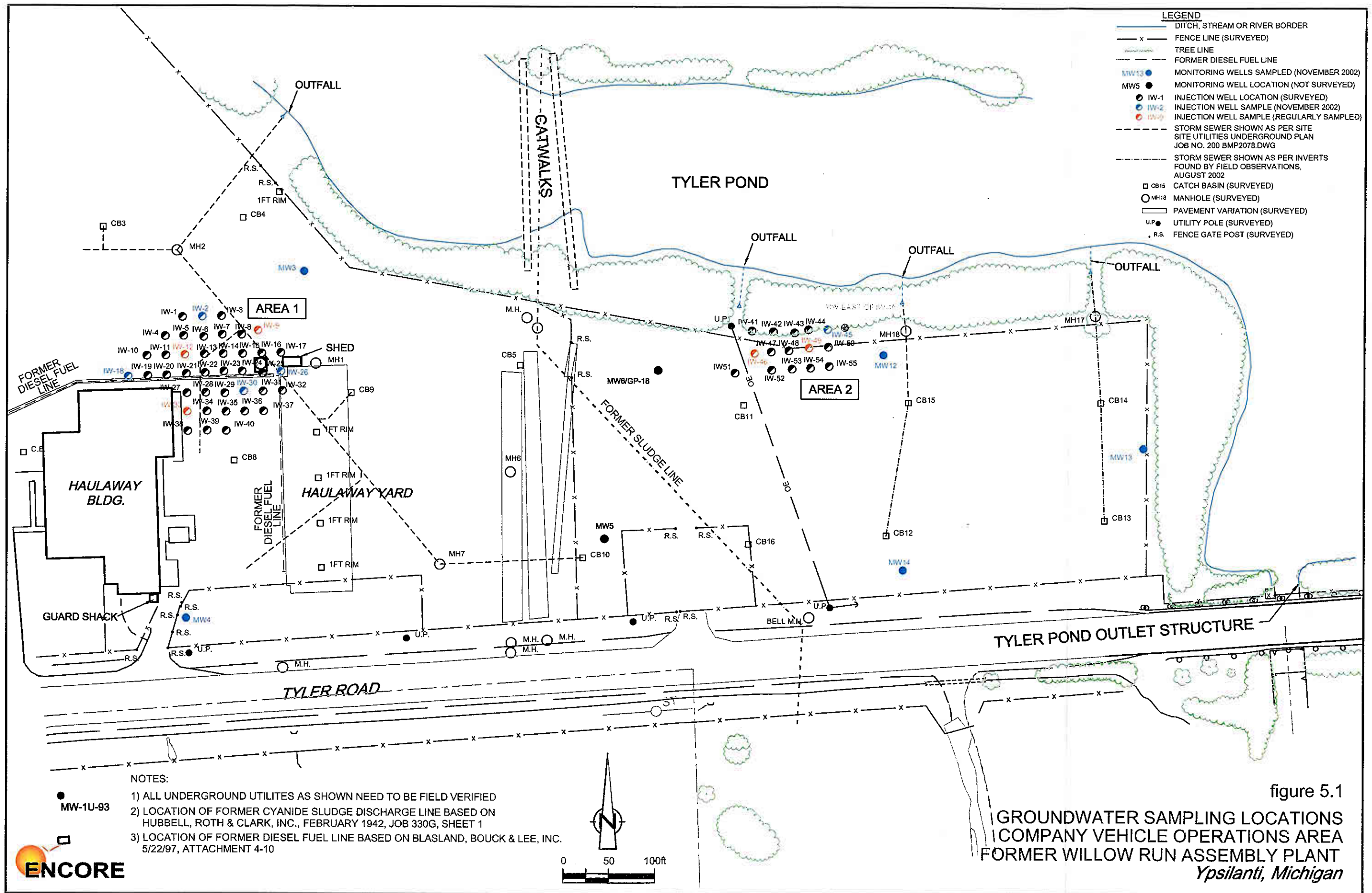
SOURCE: USGS QUADRANGLE MAP;
YPSILANTI EAST, MICHIGAN

figure 1.1

SITE LOCATION
COMPANY VEHICLE OPERATIONS AREA
FORMER WILLOW RUN ASSEMBLY PLANT
Ypsilanti, Michigan







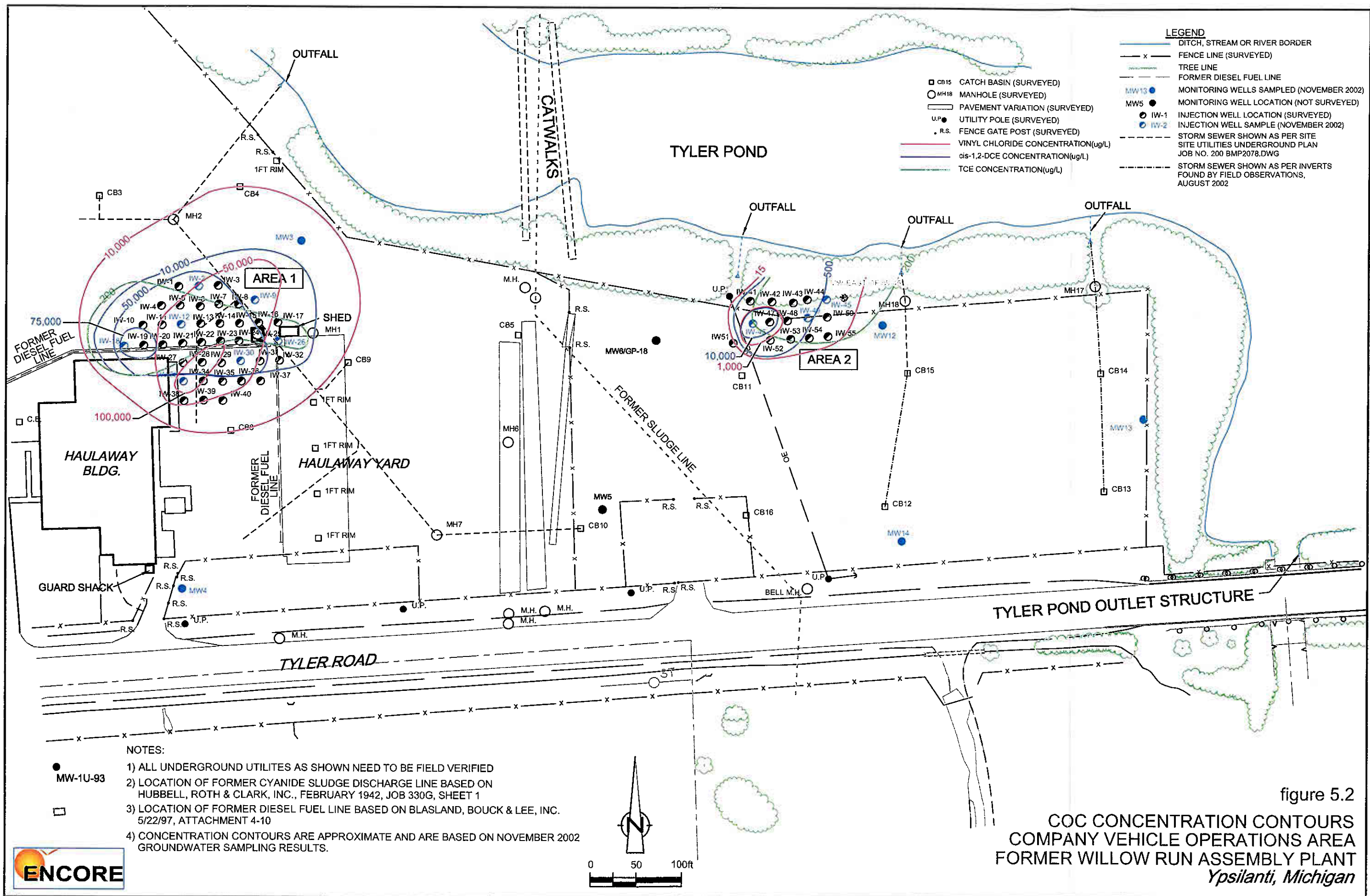


TABLE 3.1

DECEMBER 2001 KMnO₄ INJECTION SUMMARY
CVO AREA
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

Injection Well	Date of Injection	Sequence Number	KMnO ₄ Injection Time (min)	KMnO ₄ Volume Injected (gallons)	KMnO ₄ Injection Flow Rate (gpm)	Water Injection Time (min)	Water Volume Injected (gallons)	Water Injection Flow Rate (gpm)	Water Injection Comments
IW- 1	12/27/2001	44	55	250	4.5	25	250	10.0	
IW- 2	12/27/2001	40	20	250	12.5	27	250	9.3	
IW- 3	12/27/2001	41	11	250	22.7	15	250	16.7	
IW- 4	12/17/2001	7	14	250	17.9	23	250	10.9	
IW- 5	12/27/2001	43	17	250	14.7	33	250	7.6	
IW- 6	12/27/2001	42	16	250	15.6	13	250	19.2	
IW- 7	12/17/2001	2	5	250	50.0	25	250	10.0	
IW- 8	12/20/2001	28	20	700	35.0	33	250	7.6	
IW- 9	12/27/2001	36	7	250	35.7	7	250	35.7	
IW- 10	12/18/2001	10	33	250	7.6	51	250	4.9	
IW- 11	12/17/2001	8	20	250	12.5	28	250	8.9	
IW- 12	12/20/2001	33	25	250	10.0	30	250	8.3	
IW- 13	12/17/2001	3	25	250	10.0	31	250	8.1	
IW- 14	12/17/2001	1	3	250	83.3	5	250	50.0	
IW- 15	12/20/2001	29	6	250	41.7	7	250	35.7	
IW- 16	12/27/2001	34	5	250	50.0	4	250	62.5	
IW- 17	12/27/2001	35	7	250	35.7	10	250	25.0	
IW- 18	12/18/2001	12	60	250	4.2	65	250	3.8	
IW- 19	12/18/2001	11	190	250	1.3	100	250	2.5	
IW- 20	12/17/2001	9	30	250	8.3	134	250	1.9	
IW- 21	12/20/2001	32	35	250	7.1	37	250	6.8	
IW- 22	12/17/2001	4	25	250	10.0	50	250	5.0	
IW- 23	12/20/2001	31	10	250	25.0	10	250	25.0	
IW- 24	12/20/2001	30	7	250	35.7	10	250	25.0	
IW- 25	12/27/2001	37	19	250	13.2	15	250	16.7	
IW- 26	12/31/2001	55	12	250	20.8	30	250	8.3	
IW- 27	12/28/2001	46	42	250	6.0	90	250	2.8	
IW- 28	12/17/2001	5	10	250	25.0	25	250	10.0	
IW- 29	12/27/2001	45	25	250	10.0	20	250	12.5	
IW- 30	12/27/2001	38	53	250	4.7	40	250	6.3	
IW- 31	12/27/2001	39	20	250	12.5	20	250	12.5	
IW- 32	12/31/2001	54	28	250	8.9	25	250	10.0	
IW- 33	12/28/2001	47	35	250	7.1	40	250	6.3	
IW- 34	12/17/2001	6	35	250	7.1	25	250	10.0	
IW- 35	12/28/2001	50	25	250	10.0	50	250	5.0	
IW- 36	12/31/2001	52	38	250	6.6	55	250	4.5	
IW- 37	12/31/2001	53	22	250	11.4	28	250	8.9	
IW- 38	12/28/2001	48	10	250	25.0	20	250	12.5	
IW- 39	12/28/2001	49	40	250	6.3	68	250	3.7	
IW- 40	12/28/2001	51	43	250	5.8	32	250	7.8	
IW- 41	12/19/2001	19	130	250	1.9	75	250	3.3	See note 1
IW- 42	12/19/2001	20	125	250	2.0	93	250	2.7	See note 1
IW- 43	12/19/2001	21	125	250	2.0	100	250	2.5	See note 1
IW- 44	12/19/2001	22	155	250	1.6	105	250	2.4	See note 1
IW- 45	12/19/2001	23	125	250	2.0	85	250	2.9	See note 1
IW- 46	12/18/2001	16	25	250	10.0	25	250	10.0	
IW- 47	12/18/2001	14	23	250	10.9	27	250	9.3	
IW- 48	12/18/2001	17	55	250	4.5	75	250	3.3	
IW- 49	12/19/2001	24	45	250	5.6	35	250	7.1	
IW- 50	12/19/2001	27	40	250	6.3	15	250	16.7	
IW- 51	12/18/2001	13	27	250	9.3	35	250	7.1	
IW- 52	12/18/2001	15	25	250	10.0	25	250	10.0	
IW- 53	12/18/2001	18	25	250	10.0	25	250	10.0	
IW- 54	12/19/2001	25	38	250	6.6	35	250	7.1	
IW- 55	12/19/2001	26	50	250	5.0	100	250	2.5	
Totals/averages:			1611	14200	8.8	1858	13750	7.4	See note 2

Combined totals/averages:

Total volume Injected: 27950 gallons
Total Time of Injecting: 3469 minutes
Average Injection Rate: 8.1 gpm

Notes:

1) Injection to Wells 41, 42, 43, 44 and 45 was conducted simultaneously. Injection flow rate is based on worst case injection time of the five since this is the limiting factor for these five injections.

2) Takes into account that wells 41 through 45 occurred simultaneously. Therefore, 1250 gallons of KMnO₄ were injected over a period of 155 minutes (8.1gpm), of 155 minutes (8.1) and 1250 gallons of water were injected over a period of 105 minutes (11.9 gpm).

TABLE 3.2

FEBRUARY 2002 KMnO₄ INJECTION SUMMARY
CVO AREA
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

Injection Well	Date of Injection	Sequence Number	KMnO ₄ Injection Time (min)	KMnO ₄ Volume Injected (gallons)	KMnO ₄ Injection Flow Rate (gpm)	Water Injection Time (min)	Water Volume Injected (gallons)	Water Injection Flow Rate (gpm)	Water Injection Comments
IW- 1	02/13/02	22	56.0	250.0	4.5	61.0	250.0	4.1	
IW- 2	02/13/02	21	26.0	250.0	9.6	34.0	250.0	7.4	
IW- 3	02/13/02	20	13.0	250.0	19.2	65.0	250.0	3.8	
IW- 4	02/13/02	24	40.0	250.0	6.3	54.0	250.0	4.6	
IW- 5	02/13/02	23	53.0	250.0	4.7	52.0	250.0	4.8	
IW- 6	02/14/02	25	17.0	250.0	14.7	20.0	250.0	12.5	
IW- 7	02/13/02	19	47.0	250.0	5.3	53.0	250.0	4.7	
IW- 8	02/13/02	18	4.0	250.0	62.5	8.0	250.0	31.3	
IW- 9	02/15/02	35	3.0	250.0	83.3	6.0	250.0	41.7	
IW- 10	02/19/02	47	16.0	400.0	25.0	27.0	250.0	9.3	
IW- 11	02/19/02	48	20.0	250.0	12.5	35.0	250.0	7.1	
IW- 12	02/19/02	50	24.0	250.0	10.4	55.0	250.0	4.5	
IW- 13	02/14/02	26	32.0	250.0	7.8	39.0	250.0	6.4	
IW- 14	02/13/02	17	4.0	250.0	62.5	9.0	250.0	27.8	
IW- 15	02/13/02	16	13.0	250.0	19.2	20.0	250.0	12.5	
IW- 16	02/15/02	36	2.0	250.0	125.0	2.0	250.0	125.0	
IW- 17	02/15/02	37	24.0	250.0	10.4	18.0	250.0	13.9	
IW- 18	02/19/02	45	34.0	250.0	7.4	46.0	250.0	5.4	
IW- 19	02/19/02	46	51.0	250.0	4.9	60.0	250.0	4.2	
IW- 20	02/19/02	49	33.0	250.0	7.6	70.0	250.0	3.6	
IW- 21	02/19/02	51	20.0	250.0	12.5	36.0	250.0	6.9	
IW- 22	02/14/02	27	49.0	250.0	5.1	43.0	250.0	5.8	
IW- 23	02/14/02	28	11.0	250.0	22.7	25.0	250.0	10.0	
IW- 24	02/14/02	31	21.0	250.0	11.9	21.0	250.0	11.9	
IW- 25	02/14/02	33	78.0	250.0	3.2	40.0	250.0	6.3	
IW- 26	02/15/02	38	13.0	250.0	19.2	35.0	250.0	7.1	
IW- 27	02/19/02	52	84.0	250.0	3.0	88.0	250.0	2.8	
IW- 28	02/14/02	29	11.0	250.0	22.7	40.0	250.0	6.3	
IW- 29	02/14/02	30	35.0	250.0	7.1	35.0	250.0	7.1	
IW- 30	02/14/02	32	27.0	250.0	9.3	60.0	250.0	4.2	
IW- 31	02/14/02	34	38.0	250.0	6.6	70.0	250.0	3.6	
IW- 32	02/15/02	39	19.0	250.0	13.2	27.0	250.0	9.3	
IW- 33	02/19/02	54	76.0	250.0	3.3	81.0	250.0	3.1	
IW- 34	02/19/02	53	19.0	250.0	13.2	51.0	250.0	4.9	
IW- 35	02/15/02	42	28.0	250.0	8.9	55.0	250.0	4.5	
IW- 36	02/15/02	41	71.0	250.0	3.5	44.0	250.0	5.7	
IW- 37	02/15/02	40	44.0	250.0	5.7	28.0	250.0	8.9	
IW- 38	02/19/02	55	19.0	250.0	13.2	36.0	250.0	6.9	
IW- 39	02/15/02	44	75.0	250.0	3.3	57.0	250.0	4.4	
IW- 40	02/15/02	43	78.0	250.0	3.2	78.0	250.0	3.2	
IW- 41	02/12/02	12	17.0	250.0	14.7	73.0	250.0	3.4	
IW- 42	02/12/02	11	83.0	250.0	3.0	125.0	250.0	2.0	
IW- 43	02/12/02	13	23.0	250.0	10.9	53.0	250.0	4.7	
IW- 44	02/12/02	14	149.0	250.0	1.7	80.0	250.0	3.1	
IW- 45	02/12/02	15	62.0	250.0	4.0	30.0	250.0	8.3	
IW- 46	02/11/02	2	20.0	250.0	12.5	40.0	250.0	6.3	
IW- 47	02/11/02	4	33.0	250.0	7.6	20.0	250.0	12.5	
IW- 48	02/12/02	10	26.0	250.0	9.6	83.0	250.0	3.0	
IW- 49	02/12/02	9	34.0	250.0	7.4	57.0	250.0	4.4	
IW- 50	2/11-2/12/02	8	38.0	250.0	6.6	47.0	250.0	5.3	
IW- 51	02/11/02	1	41.0	250.0	6.1	23.0	250.0	10.9	
IW- 52	02/11/02	3	31.0	250.0	8.1	49.0	250.0	5.1	
IW- 53	02/11/02	5	33.0	250.0	7.6	46.0	250.0	5.4	
IW- 54	02/11/02	6	29.0	250.0	8.6	60.0	250.0	4.2	
IW- 55	02/11/02	7	76.0	250.0	3.3	60.0	250.0	4.2	
Totals/averages:			2023.0	13900.0	6.9	2530.0	13750.0	5.4	

Combined totals/averages:

Total volume Injected: 27650 gallons
Total Time of Injecting: 4553 minutes
Average Injection Rate: 6.1 gpm

TABLE 3.3

APRIL 2002 KMnO₄ INJECTION SUMMARY
CVO AREA
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

Injection Well	Date of Injection	Sequence Number	KMnO ₄ Injection Time (min)	KMnO ₄ Volume Injected (gallons)	KMnO ₄ Injection Flow Rate (gpm)	Water Injection Time (min)	Water Volume Injected (gallons)	Water Injection Flow Rate (gpm)	Water Injection Comments
IW- 1	04/19/02	41	38.0	250.0	6.6	36.0	250.0	6.9	
IW- 2	04/19/02	42	22.0	250.0	11.4	22.0	250.0	11.4	
IW- 3	04/19/02	47	13.0	250.0	19.2	19.0	250.0	13.2	
IW- 4	04/19/02	40	47.0	250.0	5.3	87.0	250.0	2.9	Small Tank/Small Hose
IW- 5	04/19/02	43	61.0	250.0	4.1	77.0	250.0	3.2	
IW- 6	04/19/02	44	30.0	250.0	8.3	40.0	250.0	6.3	
IW- 7	04/19/02	46	40.0	250.0	6.3	34.0	250.0	7.4	
IW- 8	04/22/02	49	6.0	250.0	41.7	8.0	250.0	31.3	
IW- 9	04/22/02	50	8.0	250.0	31.3	12.0	250.0	20.8	
IW- 10	04/18/02	35	11.0	250.0	22.7	20.0	250.0	12.5	
IW- 11	04/18/02	36	29.0	250.0	8.6	30.0	250.0	8.3	
IW- 12	04/19/02	39	52.0	250.0	4.8	42.0	250.0	6.0	
IW- 13	04/19/02	45	56.0	250.0	4.5	105.0	250.0	2.4	Small Tank/Small Hose
IW- 14	04/19/02	48	6.0	250.0	41.7	13.0	250.0	19.2	
IW- 15	04/22/02	51	14.0	250.0	17.9	15.0	250.0	16.7	
IW- 16	04/22/02	55	3.0	250.0	83.3	4.0	250.0	62.5	
IW- 17	04/22/02	54	27.0	250.0	9.3	26.0	250.0	9.6	
IW- 18	04/18/02	33	61.0	250.0	4.1	71.0	250.0	3.5	
IW- 19	04/18/02	34	59.0	250.0	4.2	119.0	250.0	2.1	Small Tank/Small Hose
IW- 20	4/18-4/19/02	37	96.0	250.0	2.6	156.0	250.0	1.6	Small Tank/Small Hose
IW- 21	04/19/02	38	36.0	250.0	6.9	40.0	250.0	6.3	
IW- 22	04/17/02	27	62.0	250.0	4.0	71.0	250.0	3.5	
IW- 23	04/22/02	52	21.0	250.0	11.9	24.0	250.0	10.4	
IW- 24	04/22/02	53	26.0	250.0	9.6	27.0	250.0	9.3	
IW- 25	4/16-4/17/02	18	26.0	250.0	9.6	65.0	250.0	3.8	Small Tank/Small Hose
IW- 26	04/16/02	17	47.0	250.0	5.3	37.0	250.0	6.8	
IW- 27	04/17/02	28	70.0	250.0	3.6	77.0	250.0	3.2	
IW- 28	04/17/02	26	20.0	250.0	12.5	23.0	250.0	10.9	
IW- 29	04/17/02	23	38.0	250.0	6.6	60.0	250.0	4.2	
IW- 30	04/17/02	21	32.0	250.0	7.8	32.0	250.0	7.8	
IW- 31	04/17/02	19	23.0	250.0	10.9	49.0	250.0	5.1	
IW- 32	04/16/02	16	32.0	250.0	7.8	42.0	250.0	6.0	
IW- 33	04/18/02	30	59.0	250.0	4.2	136.0	250.0	1.8	Small Tank/Small Hose
IW- 34	04/18/02	29	10.0	250.0	25.0	22.0	250.0	11.4	
IW- 35	04/17/02	24	31.0	250.0	8.1	35.0	250.0	7.1	
IW- 36	04/17/02	22	51.0	250.0	4.9	54.0	250.0	4.6	
IW- 37	04/17/02	20	31.0	250.0	8.1	42.0	250.0	6.0	
IW- 38	04/18/02	31	25.0	250.0	10.0	28.0	250.0	8.9	
IW- 39	04/18/02	32	74.0	250.0	3.4	117.0	250.0	2.1	100gal big tank/150gal small tank
IW- 40	04/17/02	25	61.0	250.0	4.1	138.0	250.0	1.8	Small Tank/Small Hose
IW- 41	04/15/02	3	14.0	250.0	17.9	100.0	250.0	2.5	
IW- 42	04/15/02	4	77.0	250.0	3.2	41.0	250.0	6.1	
IW- 43	04/16/02	13	54.0	250.0	4.6	33.0	250.0	7.6	
IW- 44	04/16/02	12	85.0	250.0	2.9	71.0	250.0	3.5	
IW- 45	04/16/02	11	27.0	250.0	9.3	55.0	250.0	4.5	
IW- 46	04/15/02	2	22.0	250.0	11.4	24.0	250.0	10.4	
IW- 47	04/15/02	6	9.0	250.0	27.8	17.0	250.0	14.7	
IW- 48	04/15/02	8	111.0	250.0	2.3	86.0	250.0	2.9	
IW- 49	04/16/02	10	44.0	250.0	5.7	51.0	250.0	4.9	
IW- 50	04/16/02	14	46.0	250.0	5.4	44.0	250.0	5.7	
IW- 51	04/15/02	1	44.0	250.0	5.7	27.0	250.0	9.3	
IW- 52	04/15/02	5	37.0	250.0	6.8	40.0	250.0	6.3	
IW- 53	04/15/02	7	56.0	250.0	4.5	72.0	250.0	3.5	
IW- 54	4/15-4/16/02	9	75.0	250.0	3.3	86.0	250.0	2.9	
IW- 55	04/16/02	15	107.0	250.0	2.3	122.0	250.0	2.0	Small Tank/Small Hose
Totals/averages:			2262.0	13750.0	6.1	2924.0	13750.0	4.7	

Combined totals/averages:

Total volume Injected: 27500 gallons
Total Time of Injecting: 5186 minutes
Average Injection Rate: 5.3 gpm

Note: Small Tank is equivalent to 425 gallon capacity;
Big Tank is equivalent to 1500 gallon capacity;
Small Hose is equivalent to 1 inch diameter (big hose is equivalent to 2 inch diameter).

TABLE 3.4

JUNE 2002 KMnO₄ INJECTION SUMMARY
CVO AREA
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

Injection Well	Date of Injection	Sequence Number	KMnO ₄ Injection Time (min)	KMnO ₄ Volume Injected (gallons)	KMnO ₄ Injection Flow Rate (gpm)	Water Injection Time (min)	Water Volume Injected (gallons)	Water Injection Flow Rate (gpm)	Water Injection Comments
IW- 1	06/21/02	44	85.0	250.0	2.9	56.0	250.0	4.5	
IW- 2	06/21/02	45	34.0	250.0	7.4	38.0	250.0	6.6	
IW- 3	06/21/02	47	12.0	250.0	20.8	17.0	250.0	14.7	
IW- 4	06/21/02	41	30.0	250.0	8.3	44.0	250.0	5.7	
IW- 5	06/21/02	43	50.0	250.0	5.0	87.0	250.0	2.9	
IW- 6	06/21/02	46	46.0	250.0	5.4	35.0	250.0	7.1	
IW- 7	06/21/02	48	32.0	250.0	7.8	43.0	250.0	5.8	
IW- 8	06/24/02	52	12.0	250.0	20.8	19.0	250.0	13.2	
IW- 9	06/24/02	53	11.0	250.0	22.7	0.0	0.0	0.0	No Water Flush (sampling well)
IW- 10	06/21/02	39	13.0	250.0	19.2	29.0	250.0	8.6	
IW- 11	06/21/02	40	29.0	250.0	8.6	35.0	250.0	7.1	
IW- 12	06/21/02	42	28.0	250.0	8.9	0.0	0.0	0.0	No Water Flush (sampling well)
IW- 13	06/24/02	49	30.0	250.0	8.3	25.0	250.0	10.0	
IW- 14	06/24/02	50	5.0	250.0	50.0	4.0	250.0	62.5	
IW- 15	06/24/02	51	29.0	250.0	8.6	15.0	250.0	16.7	
IW- 16	06/24/02	55	3.0	250.0	83.3	5.0	250.0	50.0	
IW- 17	06/24/02	54	22.0	250.0	11.4	33.0	250.0	7.6	
IW- 18	6/20-6/21/02	38	68.0	250.0	3.7	42.0	250.0	6.0	
IW- 19	06/20/02	37	59.0	250.0	4.2	73.0	250.0	3.4	
IW- 20	06/20/02	36	74.0	250.0	3.4	118.0	250.0	2.1	
IW- 21	06/20/02	34	35.0	250.0	7.1	44.0	250.0	5.7	
IW- 22	06/20/02	33	67.0	250.0	3.7	38.0	250.0	6.6	
IW- 23	06/20/02	30	18.0	250.0	13.9	34.0	250.0	7.4	
IW- 24	06/20/02	29	5.0	250.0	50.0	16.0	250.0	15.6	
IW- 25	6/18-6/19/02	18	40.0	250.0	6.3	68.0	250.0	3.7	
IW- 26	06/18/02	17	26.0	250.0	9.6	59.0	250.0	4.2	
IW- 27	06/20/02	35	111.0	250.0	2.3	96.0	250.0	2.6	
IW- 28	06/20/02	32	24.0	250.0	10.4	42.0	250.0	6.0	
IW- 29	06/20/02	31	51.0	250.0	4.9	39.0	250.0	6.4	
IW- 30	6/19-6/20/02	28	54.0	250.0	4.6	11.0	250.0	22.7	
IW- 31	06/19/02	27	51.0	250.0	4.9	68.0	250.0	3.7	
IW- 32	06/18/02	16	28.0	250.0	8.9	62.0	250.0	4.0	
IW- 33	06/19/02	19	41.0	250.0	6.1	0.0	0.0	0.0	No Water Flush (sampling well)
IW- 34	06/19/02	22	22.0	250.0	11.4	20.0	250.0	12.5	
IW- 35	06/19/02	23	38.0	250.0	6.6	46.0	250.0	5.4	
IW- 36	06/19/02	26	40.0	250.0	6.3	53.0	250.0	4.7	
IW- 37	06/19/02	25	27.0	250.0	9.3	40.0	250.0	6.3	
IW- 38	06/19/02	20	18.0	250.0	13.9	11.0	250.0	22.7	
IW- 39	06/19/02	21	77.0	250.0	3.2	61.0	250.0	4.1	
IW- 40	06/19/02	24	117.0	250.0	2.1	109.0	250.0	2.3	
IW- 41	06/18/02	15	64.0	250.0	3.9	49.0	250.0	5.1	
IW- 42	06/18/02	14	37.0	250.0	6.8	38.0	250.0	6.6	
IW- 43	06/18/02	13	30.0	250.0	8.3	34.0	250.0	7.4	
IW- 44	06/18/02	12	81.0	250.0	3.1	66.0	250.0	3.8	
IW- 45	06/18/02	11	25.0	250.0	10.0	53.0	250.0	4.7	
IW- 46	06/17/02	2	25.0	250.0	10.0	0.0	0.0	0.0	No Water Flush (sampling well)
IW- 47	06/17/02	4	26.0	400.0	15.4	30.0	250.0	8.3	
IW- 48	06/17/02	6	93.0	250.0	2.7	122.0	250.0	2.0	
IW- 49	06/17/02	9	40.0	250.0	6.3	0.0	0.0	0.0	No Water Flush (sampling well)
IW- 50	06/17/02	8	61.0	250.0	4.1	50.0	250.0	5.0	
IW- 51	06/17/02	1	32.0	250.0	7.8	42.0	250.0	6.0	
IW- 52	06/17/02	3	47.0	250.0	5.3	60.0	250.0	4.2	
IW- 53	06/17/02	5	63.0	250.0	4.0	60.0	250.0	4.2	
IW- 54	06/17/02	7	47.0	250.0	5.3	72.0	250.0	3.5	
IW- 55	06/18/02	10	84.0	250.0	3.0	56.0	250.0	4.5	
Totals/averages:			2317.0	13900.0	6.0	2367.0	12500.0	5.3	

Combined totals/averages:

Total volume Injected: 26400 gallons
Total Time of Injecting: 4684 minutes
Average Injection Rate: 5.6 gpm

TABLE 5.1

GROUNDWATER LEVEL DATA
CVO AREA
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

Well ID	Screen Length	Depth to Water						Change in Water Level from Previous Reading				
		12/12/2001	1/3/2002	2/22/2002	4/26/2002	7/2/2002	11/25/02	1/3/2002	2/22/2002	4/26/2002	7/2/2002	11/25/02
		<i>Baseline</i>	<i>After Injection 1</i>	<i>After Injection 2</i>	<i>After Injection 3</i>	<i>After Injection 4</i>	<i>Follow Up</i>	<i>After Injection 1</i>	<i>After Injection 2</i>	<i>After Injection 3</i>	<i>After Injection 4</i>	<i>Follow Up</i>
	(feet)	(feet)	(feet)	(feet)	(feet)	(feet)	(feet)	(feet)	(feet)	(feet)	(feet)	(feet)
INJECTION AREA 1:												
IW-1	10	10.99	10.94	10.58	10.28	10.51		0.05	0.36	0.30	-0.23	
IW-2	5	10.96	10.56	10.20	9.94	10.17	11.57	0.40	0.36	0.26	-0.23	-1.40
IW-3	10	10.33	10.27	9.90	9.66	9.96		0.06	0.37	0.24	-0.30	
IW-4	10	11.09	11.05	10.66	10.38	11.62		0.04	0.39	0.28	-1.24	
IW-5	5	10.93	10.84	10.48	10.23	10.47		0.09	0.36	0.25	-0.24	
IW-6	10	10.50	10.42	10.05	9.81	10.06		0.08	0.37	0.24	-0.25	
IW-7	5	10.40	10.32	9.96	9.73	9.97		0.08	0.36	0.23	-0.24	
IW-8	10	10.27	10.14	9.78	9.56	9.80	11.18	0.13	0.36	0.22	-0.24	-1.38
IW-9	5	10.10	10.00	9.64	9.43	9.66	11.05	0.10	0.36	0.21	-0.23	-1.39
IW-10	10	10.93	10.90	10.48	10.23	10.47		0.03	0.42	0.25	-0.24	
IW-11	5	10.99	10.93	10.52	10.30	10.54		0.06	0.41	0.22	-0.24	
IW-12	10	10.76	10.60	10.20	9.99	10.23	11.62	0.16	0.40	0.21	-0.24	-1.39
IW-13	5	10.70	10.58	10.19	9.99	10.24		0.12	0.39	0.20	-0.25	
IW-14	10	10.33	10.24	9.86	9.66	9.91		0.09	0.38	0.20	-0.25	
IW-15	5	10.27	10.17	9.81	9.62	9.84		0.10	0.36	0.19	-0.22	
IW-16	10	10.27	10.20	9.98	9.88	9.92	12.03*	0.07	0.22	0.10	-0.04	-2.11*
IW-17	5	10.01	9.94	9.58	9.36	9.63	11.9	0.07	0.36	0.22	-0.27	-2.27
IW-18	10	10.96	10.96	10.61	10.32	10.57	11.9	0.00	0.35	0.29	-0.25	-1.33
IW-19	5	11.38	11.29	10.91	10.64	10.92		0.09	0.38	0.27	-0.28	
IW-20	10	11.02	10.97	10.57	10.34	10.59		0.05	0.40	0.23	-0.25	
IW-21	5	10.99	10.92	10.53	10.32	10.57		0.07	0.39	0.21	-0.25	
IW-22	10	10.60	10.53	10.15	9.93	10.21		0.07	0.38	0.22	-0.28	
IW-23	5	10.60	10.50	10.13	9.92	10.17		0.10	0.37	0.21	-0.25	
IW-24	10	10.33	10.23	9.88	9.67	9.93		0.10	0.35	0.21	-0.26	
IW-25	5	10.07	9.98	9.65	9.43	9.70	10.82	0.09	0.33	0.22	-0.27	-1.12
IW-26	10	9.97	9.90	9.56	9.32	9.61	11.4*	0.07	0.34	0.24	-0.29	-1.79*
IW-27	10	11.15	11.08	10.72	10.48	10.75		0.07	0.36	0.24	-0.27	
IW-28	5	10.89	10.81	10.46	10.24	10.50		0.08	0.35	0.22	-0.26	
IW-29	10	10.24	10.13	9.78	9.55	9.82		0.11	0.35	0.23	-0.27	
IW-30	5	10.24	10.15	9.82	9.59	9.86	11.2	0.09	0.33	0.23	-0.27	-1.34
IW-31	10	9.94	9.84	9.51	9.27	9.56		0.10	0.33	0.24	-0.29	
IW-32	5	10.10	10.03	9.69	9.43	9.77	11.01	0.07	0.34	0.26	-0.34	-1.24
IW-33	5	11.19	11.13	10.79	10.51	10.83	12.13	0.06	0.34	0.28	-0.32	-1.30
IW-34	10	10.73	10.69	10.31	10.05	10.34		0.04	0.38	0.26	-0.29	
IW-35	5	10.37	10.22	9.90	9.63	9.93		0.15	0.32	0.27	-0.30	
IW-36	10	10.24	10.13	9.82	9.54	9.86		0.11	0.31	0.28	-0.32	
IW-37	5	10.17	10.08	9.77	9.49	9.83		0.09	0.31	0.28	-0.34	
IW-38	10	11.02	10.92	10.66	10.32	10.66		0.10	0.26	0.34	-0.34	
IW-39	5	10.63	10.56	10.28	9.97	10.29		0.07	0.28	0.31	-0.32	
IW-40	10	10.14	10.05	9.77	9.45	9.80		0.09	0.28	0.32	-0.35	
INJECTION AREA 2:												
IW-41	10	11.52	11.39	10.94	10.80	11.62		0.13	0.45	0.14	-0.82	
IW-42	5	11.88	11.72	11.27	11.07	11.90		0.16	0.45	0.20	-0.83	
IW-43	10	11.78	11.64	11.17	10.92	11.87		0.14	0.47	0.25	-0.95	
IW-44	5	11.29	11.14	10.68	10.47	11.43		0.15	0.46	0.21	-0.96	
IW-45	10	11.48	11.28	10.87	10.62	11.65	12.2	0.20	0.41	0.25	-1.03	-0.55
IW-46	5	11.88	11.75	11.31	11.04	11.83	12.7	0.13	0.44	0.27	-0.79	-0.87
IW-47	10	11.58	11.43	10.98	10.69	11.50		0.15	0.45	0.29	-0.81	
IW-48	5	11.91	11.76	11.32	11.00	11.86		0.15	0.44	0.32	-0.86	
IW-49	10	12.50	12.36	11.94	11.60	12.50	13.35	0.14	0.42	0.34	-0.90	-0.85
IW-50	5	12.34	12.19	11.80	11.43	12.37		0.15	0.39	0.37	-0.94	
IW-51	10	10.86	10.78	10.33	10.02	10.75		0.08	0.45	0.31	-0.73	
IW-52	5	11.58	11.42	10.98	10.65	11.43		0.16	0.44	0.33	-0.78	
IW-53	10	11.65	11.50	11.06	10.71	11.54		0.15	0.44	0.35	-0.83	
IW-54	5	11.94	11.79	11.38	10.99	11.85		0.15	0.41	0.39	-0.86	
IW-55	10	11.91	11.76	11.37	10.95	11.85		0.15	0.39	0.42	-0.90	
OTHER AREAS:												
MW-3	--	--	--	--	--	--	10.43					
MW-4	--	--	--	--	--	--	12.15					
MW-12	--	--	--	--	--	--	13.2					
MW-13	--	--	--	--	--	--	10.45					
MW-14	--	--	--	--	--	--	12.5					

Notes

* LNAPL present in this well at time of measurement.

TABLE 5.2
GROUNDWATER ANALYTICAL RESULTS
12/2001 THROUGH 11/2002
CVO AREA
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

Injection Well Identification:	IW-9						
Injection Area (1=West, 2 =East)	Area 1						
Groundwater Sample Date:	12/13/01	01/14/02	03/14/02	05/06/02	07/22/02	07/22/02	11/25/02
	Baseline	After Injection 1	After Injection 2	After Injection 3	After Injection 4	After Injection 4	Follow up
						(duplicate)	
Groundwater Sample ID:	GW-17303-JH-121301-100	GW-17303-011402-BN-111	GW-17303-031402-TJ-117	GW-17303-050602-MM-123	GW-17303-072202-MM-130	GW-17303-072202-MM-131	GW-17303-112502-MM-144
<u>Analytes</u>							
pH	6.79	7.73	6.91	7.37	7.13	7.13	7.38
DO (mg/l)	0.05	0.32	0.36	0.74	0.156	0.156	0.18
ORP (Mv)	-67.6	66	11	149	263.4	263.4	-112
Specific Conductivity (Ms/cm)	2.860	4.35	3.48	3.72	3.272	3.272	4.63
Turbidity (NTU)	0.6	2.72	1.31	2.66	~50	~50	3.5
Temp. (C)	13.8	11.34	10.47	12.26	18.212	18.212	13.04
Chloride (mg/l)	668	854	698	677	478	496	946
KMnO4 (mg/l)		ND(5)	ND(5)	ND(5)	ND(5)		na
Manganese (mg/l)	0.375	4.92	20	6.51	2.2	2.04	na
Potassium (mg/l)	8.13	591	77.3	619	89	86	na
Aerobic Total Microbial Population (CFUs/ml)		3.0E+04		3.3E+04	9.60E+03		
Aerobic Total Microbial Population (CFUs/ml)-dup		2.80E+04					
Anerobic Total Microbial Population (CFUs/ml)		1.10E+04		5.10E+03	9.60E+02		
Anerobic Total Microbial Population (CFUs/ml)-dup.		1.10E+04					
VOCs (ug/l): (MDEQ GSI Criteria shown in [brackets])							
1,1,2-Trichloroethane - [330(X)]	1	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,1-Dichloroethane - [740]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,1-Dichloroethene - [65(X)]	15	12	12	4	12	11	28
1,2,3-Trichloropropane	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,2,4-Trimethylbenzene - [17]	5	11	9	2	5	4	10
1,2-Dichloroethane - [360(X)]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,2-Dichloropropane - [290(X)]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,3,5-Trimethylbenzene - [ID]	2	4	3	ND(1)	2	ND(1)	4
2-Butanone (MEK) -[2,200]	640(J)	160	ND(50)	ND(50)	ND(50)	ND(50)	ND (25)
Acetone - [1,700]	ND(1)	130	160	ND(100)	ND(100)	ND(100)	ND (25)
Benzene- [200]	20	34	41	15	37	38	43
Bromodichloromethane - [ID]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND (1.0)
Carbon disulfide - [ID]	ND(5)	5	18	6	6	7	ND (5)
Chloroform - [170]	ND(1)	1	2	2	1	2	ND (1.0)
Ethylbenzene - [18]	71	ND(1)	150	40	110	120	30
Isopropylbenzene - [ID]	23	26	28	10	ND(1)	25	38
Methylene Chloride -[940]	5	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND (5)
n-Propylbenzene - [30]	1	1	1	ND(1)	ND(1)	ND(1)	ND (5)
Naphthalene - [13]	45	75	50	9	33	33	ND (5)
Toluene - [140]	380	2,100	1,100	220	900	1,100	1,200
Trichloroethene- [200]	450	170	160	150	51	54	14
Vinyl chloride -[15]	31,000	1,800	42,000	4,000	36,000	39,000	73,000
cis-1,2-Dichloroethene -[620]	16,000	2,100	24,000	4,800	20,000	20,000	29,000
trans-1,2-Dichloroethene - [1,500]	460	670	1,000	180	810	860	860 J
Xylenes (total) - [35]	268	570	ND(6000)	167	500	520	ND (3,000)
<u>Water Level Data</u>							
Depth to Water (feet below top of riser)	10.10	10.23	9.51	9.49	9.86	9.86	11.05
NOTES:					burgundy, then clear w/ Susp. Solids	burgundy, then clear w/ Susp. Solids	

MDEQ Part 201 GSI Criteria exists for compound

Meets MDEQ GSI Criteria

Does not meet MDEQ GSI Criteria

CFU = Colony Forming Unit

ND(x)=Not detected at or above concentration x

(J)=Estimated value

[ID] = Inadequate data to develop MDEQ criteria

na = not analyzed

{X} = The GSI criterion shown is not protective for surface water that is used as a drinking water source.

TABLE 5.2

GROUNDWATER ANALYTICAL RESULTS
12/2001 THROUGH 11/2002
CVO AREA
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

Injection Well Identification:	IW-12					
Injection Area (1=West, 2 =East)	Area 1					
Groundwater Sample Date:	12/13/01 Baseline	01/14/02 After Injection 1	03/14/02 After Injection 2	05/06/02 After Injection 3	07/22/02 After Injection 4	11/25/02 Follow up
Groundwater Sample ID:	GW-17303- JH-121301- 101	GW-17303- 011402-BN- 112	GW-17303- 031402-TJ- 118	GW-17303- 050602-MM- 124	GW-17303- 072202-MM- 132	GW-17303- 112502-MM- 145
<u>Analytes</u>						
pH	6.56	7.92	7.53	7.72	7.16	6.8
DO (mg/l)	0.08	0.17	0.19	0.26	0.074	0.17
ORP (Mv)	-76.8	58	-57	549	127.4	110
Specific Conductivity (Ms/cm)	3.067	4.53	4.35	4.5	4.054	3.72
Turbidity (NTU)	1.71	4.40	3.58	9.99 ^a	~10-15	2
Temp. (C)	15.0	12.14	11.59	12.4	19.624	14.09
Chloride (mg/l)	637	478	297	174	496	753
KMnO4 (mg/l)		ND(5)	ND(5)	610	ND(5)	na
Manganese (mg/l)	0.63	4.74	8.43	160	2	na
Potassium (mg/l)	18.6	1100	1110	1340	421	na
Aerobic Total Microbial Population (CFUs/ml)		2.90E+04		9.6E+02	8.00E+03	
Aerobic Total Microbial Population (CFUs/ml)-dup		2.90E+04				
Anerobic Total Microbial Population (CFUs/ml)		8.90E+04		no growth	8.40E+02	
Anerobic Total Microbial Population (CFUs/ml)-dup.		8.00E+04				
VOCs (ug/l): (MDEQ GSI Criteria shown in [brackets])						
1,1,2-Trichloroethane - [330(X)]	6	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,1-Dichloroethane - [740]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,1-Dichloroethene - [65(X)]	170	11	1	ND(1)	59	220
1,2,3-Trichloropropane	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,2,4-Trimethylbenzene - [17]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,2-Dichloroethane - [360(X)]	2	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,2-Dichloropropane - [290(X)]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,3,5-Trimethylbenzene - [ID]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
2-Butanone (MEK) - [2,200]	230	110	70	99	ND(50)	ND (25)
Acetone - [1,700]	ND(1)	340	280	2,600	ND(100)	ND (25)
Benzene- [200]	100	53	42	88	85	160
Bromodichloromethane - [ID]	ND(1)	ND(1)	ND(1)	1	2	ND(1)
Carbon disulfide - [ID]	ND(5)	8	7	ND(5)	6	5
Chloroform - [170]	ND(1)	3	4	4	5	ND(1)
Ethylbenzene - [18]	15	6	5	ND(1)	11	7
Isopropylbenzene - [ID]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND (5)
Methylene Chloride - [940]	5	ND(5)	ND(5)	ND(5)	ND(5)	ND (5)
n-Propylbenzene - [30]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND (5)
Naphthalene - [13]	ND(5)	7	6	ND(5)	ND(5)	ND (5)
Toluene - [140]	260	160	130	170	200	480
Trichloroethene- [200]	8	ND(1)	ND(1)	ND(1)	ND(1)	780
Vinyl chloride -[15]	39,000	2,200	210	ND(1)	14,000	74,000
cis-1,2-Dichloroethene - [620]	64,000	5,000	1,100	ND(1)	16,000	60,000
trans-1,2-Dichloroethene - [1,500]	760	260	100	ND(1)	950	2,200
Xylenes (total) - [35]	39	17	10	ND(3)	39	100
<u>Water Level Data</u>						
Depth to Water (feet below top of riser)	10.76	10.83	10.11	10.03 bright purple water	10.5	11.62
NOTES:						
MDEQ Part 201 GSI Criteria exists for compound						
Meets MDEQ GSI Criteria						
Does not meet MDEQ GSI Criteria						
CFU = Colony Forming Unit						
ND(x)=Not detected at or above concentration x						
(I)=Estimated value						
[ID] = Inadequate data to develop MDEQ criteria						
na = not analyzed						
{X} = The GSI criterion shown is not protective for surface water that is used as a drinking water source.						

TABLE 5.2
GROUNDWATER ANALYTICAL RESULTS
12/2001 THROUGH 11/2002
CVO AREA
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

Injection Well Identification:	IW-33						
Injection Area (1=West, 2 =East)	Area 1						
Groundwater Sample Date:	12/13/01 Baseline	01/14/02 After Injection 1	03/14/02 After Injection 2	05/06/02 After Injection 3	05/06/02 After Injection 3 (duplicate)	07/22/02 After Injection 4	11/26/02 Follow up
Groundwater Sample ID:	GW-17303- JH-121301- 102	GW-17303- 011402-BN- 113	GW-17303- 031402-TJ- 119	GW-17303- 050602-MM- 125	GW-17303- 050602-MM- 126	GW-17303- 072202-MM- 133	GW-17303- 112602-MM- 153
<u>Analytes</u>							
pH	6.36	8.19	7.37	7.37	7.37	7.136	6.66
DO (mg/l)	0.07	0.32	1.38	0.2	0.2	0.266	0.17
ORP (Mv)	-178.8	54	499	615	615	149.6	100
Specific Conductivity (Ms/cm)	4.860	4.89	4.36	3.59	3.59	9.516	6.99
Turbidity (NTU)	2.63	3.14	165.2	9.99	9.99'	~15	1.4
Temp. (C)	15.1	12.48	11.28	13.74	13.74	18.92	16.14
Chloride (mg/l)	1360	812	689	521	521	513	2,010
KMnO4 (mg/l)		ND(5)	ND(5)	230		222	na
Manganese (mg/l)	1.07	3.66	21	20.6	24.2	68	na
Potassium (mg/l)	20.7	1020	926	826	857	257	na
Aerobic Total Microbial Population (CFUs/ml)		3.00E+04		1.2E+03		no growth	
Aerobic Total Microbial Population (CFUs/ml)-dup		2.80E+04					
Anerobic Total Microbial Population (CFUs/ml)		8.00E+04		no growth		no growth	
Anerobic Total Microbial Population (CFUs/ml)-dup.		8.60E+04					
VOCs (ug/l): (MDEQ GSI Criteria shown in [brackets])							
1,1,2-Trichloroethane - [330(X)]	34	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	3
1,1-Dichloroethane - [740]	3	1	1	1	ND(1)	ND(1)	2
1,1-Dichloroethene - [65(X)]	31	12	ND(1)	ND(1)	ND(1)	ND(1)	33
1,2,3-Trichloropropane	3	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,2,4-Trimethylbenzene - [17]	2	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	3
1,2-Dichloroethane - [360(X)]	9	1	1	1	1	9	4
1,2-Dichloropropane - [290(X)]	6	ND(1)	2	1	2	ND(1)	ND(1)
1,3,5-Trimethylbenzene - [ID]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
2-Butanone (MEK) -[2,200]	ND(50)	110	ND(50)	ND(50)	ND(50)	ND(50)	ND (25)
Acetone - [1,700]	260	490	240	400	380	820	ND (25)
Benzene - [200]	180	80	68	58	62	8	180
Bromodichloromethane - [ID]	ND(1)	ND(1)	2	2	2	ND(1)	ND(1)
Carbon disulfide - [ID]	ND(5)	26	17	10	11	ND(5)	ND(5)
Chloroform - [170]	ND(1)	4	5	6	6	4	1
Ethylbenzene - [18]	26	10	1	1	2	ND(1)	ND(1)
Isopropylbenzene - [ID]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
Methylene Chloride -[940]	8	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
n-Propylbenzene - [30]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
Naphthalene - [13]	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
Toluene - [140]	170	84	66	48	53	4	210
Trichloroethene- [200]	12	30	12	ND(1)	ND(1)	ND(1)	150
Vinyl chloride -[15]	200,000	14,000	420	ND(1)	ND(1)	ND(1)	100,000
cis-1,2-Dichloroethene -[620]	12,000	2,800	590	ND(1)	ND(1)	ND(1)	7,400
trans-1,2-Dichloroethene - [1,500]	600	210	6	ND(1)	ND(1)	ND(1)	600
Xylenes (total) - [35]	115	63	36	20	21	ND(3)	196
<u>Water Level Data</u>							
Depth to Water (feet below top of riser)	11.19	11.33	10.69 Purple hue in samples	10.55 Dull purple water	10.55 Dull purple water	11.13 Yellow hue	12.13
NOTES:							

MDEQ Part 201 GSI Criteria exists for compound

Meets MDEQ GSI Criteria

Does not meet MDEQ GSI Criteria

CFU = Colony Forming Unit

ND(x)=Not detected at or above concentration x

(j)=Estimated value

[ID] = Inadequate data to develop MDEQ criteria

na = not analyzed

[X] = The GSI criterion shown is not protective for surface water that is used as a drinking water source.

TABLE 5.2
GROUNDWATER ANALYTICAL RESULTS
12/2001 THROUGH 11/2002
CVO AREA
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

Injection Well Identification:	IW-46							
Injection Area (1=West, 2 =East)	Area 2							
Groundwater Sample Date:	12/14/01 Baseline	01/14/02 After Injection 1	01/14/02 After Injection 1 (duplicate)	03/14/02 After Injection 2	03/14/02 After Injection 2 (duplicate)	05/06/02 After Injection 3	07/22/02 After Injection 4	11/25/02 Follow up
Groundwater Sample ID:	GW-17303- JH-121401- 103	GW-17303- 011402-BN- 114	GW-17303- 011402-BN- 115	GW-17303- 031402-TJ-120	GW-17303- 031402-TJ- 121	GW-17303- 050602-MM- 127	GW-17303- 072202-MM- 134	GW-17303- 112502-MM- 143
<u>Analytes</u>								
pH	6.82	7.25	7.25	6.94	6.94	7.43	7.186	6.88
DO (mg/l)	0.17	0.30	0.30	0.23	0.23	0.29	0.25	0.13
ORP (Mv)	35.8	52	52	417	417	614	650	218
Specific Conductivity (Ms/cm)	2.301	3	3	2.72	2.72	3.4	3.536	3.97
Turbidity (NTU)	1.5	4.7	4.7	115	115	'9.99'		3.2
Temp. (C)	14.4	12.65	12.65	12.09	12.09	12.6	18.27	14.06
Chloride (mg/l)	405	461	436	431	431	695	299	788
KMnO4 (mg/l)		ND(5)	ND(5)	ND(5)	ND(5)	50	ND(5)	na
Manganese (mg/l)	0.573	5.76	5.47	13.4	15.2	6.64	2.27	na
Potassium (mg/l)	5.54	324	327	154	174	496	256	na
Aerobic Total Microbial Population (CFUs/ml)		1.60E+04	1.70E+04			8.0E+02	9.00E+03	
Aerobic Total Microbial Population (CFUs/ml)-dup		1.60E+04	1.70E+04					
Anerobic Total Microbial Population (CFUs/ml)		6.20E+04	4.30E+04			no growth	8.80E+02	
Anerobic Total Microbial Population (CFUs/ml)-dup.		5.40E+04	5.10E+04					
VOCs (ug/l): (MDEQ GSI Criteria shown in [brackets])								
1,1,2-Trichloroethane - [330(X)]	ND(1)	ND(1)	ND(1)	9	8	4	ND(1)	2
1,1-Dichloroethane - [740]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,1-Dichloroethene - [65(X)]	20	2	2	6	6	ND(1)	ND(1)	18
1,2,3-Trichloropropane	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,2,4-Trimethylbenzene - [17]	10	6	5	16	ND(1)	ND(1)	ND(1)	1
1,2-Dichloroethane - [360(X)]	16	4	4	16	16	7	ND(1)	12
1,2-Dichloropropane - [290(X)]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,3,5-Trimethylbenzene - [ID]	3	2	2	6	6	ND(1)	ND(1)	ND(1)
2-Butanone (MEK) -[2,200]	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND (25)
Acetone - [1,700]	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	250	ND(100)	ND (25)
Benzene- [200]	20	5	5	22	21	10	1	15
Bromodichloromethane - [ID]	ND(1)	ND(1)	ND(1)	1	1	ND(1)	ND(1)	ND(1)
Carbon disulfide - [ID]	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND (5)
Chloroform - [170]	5	3	3	16	16	7	4	5
Ethylbenzene - [18]	55	23	21	16	61	34	ND(1)	ND (1)
Isopropylbenzene - [ID]	2	ND(1)	ND(1)	3	3	2	ND(1)	ND (5)
Methylene Chloride -[940]	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND (5)
n-Propylbenzene - [30]	ND(1)	ND(1)	ND(1)	2	2	1	ND(1)	ND (5)
Naphthalene - [13]	ND(5)	ND(5)	ND(5)	5	6	ND(5)	ND(5)	ND (5)
Toluene - [140]	95	25	25	88	83	44	ND(1)	40
Trichloroethene- [200]	1,200	380	380	350	360	ND(1)	1,700	220
Vinyl chloride -[15]	2,100	1,100	1,200	1,600	1,400	ND(1)	40	2,800
cis-1,2-Dichloroethene -[620]	16,000	1,200	1,400	13,000	11,000	ND(1)	180	13,000
trans-1,2-Dichloroethene - [1,500]	62	50	51	750	660	ND(1)	45	360 J
Xylenes (total) - [35]	350	170	158	440	430	104	ND(3)	49
<u>Water Level Data</u>								
Depth to Water (feet below top of riser)	11.88	11.87	11.87	11.11	11.11	11.15	12.19	12.7
NOTES:	Purple hue in samples Purple hue in samples Bright purple water							

MDEQ Part 201 GSI Criteria exists for compound
Meets MDEQ GSI Criteria

Does not meet MDEQ GSI Criteria

CFU = Colony Forming Unit

ND(x)=Not detected at or above concentration x

(J)=Estimated value

[ID] = Inadequate data to develop MDEQ criteria

na = not analyzed

{X} = The GSI criterion shown is not protective for surface water that is used as a drinking water source.

TABLE 5.2
GROUNDWATER ANALYTICAL RESULTS
12/2001 THROUGH 11/2002
CVO AREA
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

Injection Well Identification:	IW-49						
Injection Area (1=West, 2 =East)	Area 2						
Groundwater Sample Date:	12/14/01	12/14/01	01/14/02	03/14/02	05/06/02	07/22/02	11/25/02
	Baseline	Baseline	Injection 1	Injection 2	Injection 3	Injection 4	Follow up
		(duplicate)					
Groundwater Sample ID:	GW-17303-JH-121401-104	GW-17303-JH-121401-105	GW-17303-011402-BN-116	GW-17303-031402-TJ-122	GW-17303-050602-MM-128	GW-17303-072202-MM-135	GW-17303-112502-MM-142
<u>Analytes</u>							
pH	6.82	6.82	7.28	7.34	7.71	7.412	7.49
DO (mg/l)	1.18	1.18	0.75	0.23	0.21	0.226	0.42
ORP (Mv)	18.9	18.9	58	254	560	388.2	-138
Specific Conductivity (Ms/cm)	1.794	1.794	2.41	2.4	3.05	2.4	3.32
Turbidity (NTU)	NA	NA	2.39	4.31	20.2	~50	0.05
Temp. (C)	12.9	12.9	11.63	9.78	11.93	17.91	13.94
Chloride (mg/l)	345	362	290	345	339	1790	613
KMnO4 (mg/l)			ND(5)	ND(5)	ND(5)	ND(5)	na
Manganese (mg/l)	1.02	1.03	9.88	11.7	6.39	9.44	na
Potassium (mg/l)	3.83	4.12	528	341	693	1,270	na
Aerobic Total Microbial Population (CFUs/ml)			1.60E+04		1.8E+04	1.30E+04	
Aerobic Total Microbial Population (CFUs/ml)-dup			1.70E+04				
Anerobic Total Microbial Population (CFUs/ml)			5.30E+04		2.8E+03	1.50E+03	
Anerobic Total Microbial Population (CFUs/ml)-dup.			6.10E+04				
VOCs (ug/l): (MDEQ GSI Criteria shown in [brackets])							
1,1,2-Trichloroethane - [330(X)]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	2	ND(1)
1,1-Dichloroethane - [740]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	2	ND(1)
1,1-Dichloroethene - [65(X)]	2	2	ND(1)	ND(1)	ND(1)	3	ND(1)
1,2,3-Trichloropropane	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,2,4-Trimethylbenzene - [17]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,2-Dichloroethane - [360(X)]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	3	ND(1)
1,2-Dichloropropane - [290(X)]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,3,5-Trimethylbenzene - [11]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
2-Butanone (MEK) - [2,200]	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND (25)
Acetone - [1,700]	ND(100)	ND(100)	ND(100)	ND(100)	140	ND(100)	ND (25)
Benzene- [200]	5	5	3	3	2	110	ND (1)
Bromodichloromethane - [11]	ND(1)	ND(1)	1	2	2	ND(1)	ND (1.0)
Carbon disulfide - [11]	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	19	ND (5)
Chloroform - [170]	10	9	10	16	11	6	2
Ethylbenzene - [18]	ND(1)	1	ND(1)	ND(1)	ND(1)	ND(1)	ND (1)
Isopropylbenzene - [11]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND (5)
Methylene Chloride -[940]	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND (5)
n-Propylbenzene - [30]	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND (5)
Naphthalene - [13]	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND (5)
Toluene - [140]	4	4	1	1	1	120	1
Trichloroethene- [200]	10,000	13,000	8,400	8,300	5,800	65	1,400
Vinyl chloride -[15]	87(I)	96(I)	19	110	19	27,000	86
cis-1,2-Dichloroethene -[620]	2,100	2,300	310	700	360	1,500	570
trans-1,2-Dichloroethene - [1,500]	78	69	12	ND(50)	10	150	27
Xylenes (total) - [35]	ND(3)	ND(3)	ND(3)	ND(3)	ND(3)	93	ND (3)
<u>Water Level Data</u>							
Depth to Water (feet below top of riser)	12.5	12.5	12.47	11.71	11.72	13.03	13.35
NOTES:					Dark purple water	Light Brown / Purple Liquid	

MDEQ Part 201 GSI Criteria exists for compound
Meets MDEQ GSI Criteria
Does not meet MDEQ GSI Criteria
CFU = Colony Forming Unit
ND(x)=Not detected at or above concentration x
(I)=Estimated value
[11] = Inadequate data to develop MDEQ criteria
na = not analyzed
[X] = The GSI criterion shown is not protective for surface water that is used as a drinking water source.

TABLE 5.3

GROUNDWATER ANALYTICAL RESULTS
NOVEMBER 2002
CVO AREA
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

		Area 1									
Location			Regularly Monitored			Extended November Sampling Event					
			IW-9	IW-12	IW-33	IW-2	IW-18	IW-26	IW-30	IW-30	MW-3
			GW-17303-112502-MM-144	GW-17303-112502-MM-145	GW-17303-112602-MM-153	GW-17303-112602-MM-148	GW-17303-112602-MM-154	GW-17303-112602-MM-151	GW-17303-112602-MM-149	GW-17303-112602-MM-150	GW-17303-112602-MM-152
Analytes/Sample ID	GSI	FAV									
										Duplicate	
pH			7.38	6.8	6.66	6.88	6.85	7.01	6.7	6.7	7.02
DO (mg/l)			0.18	0.17	0.17	0.22	0.18	0.18	0.1	0.1	0.19
ORP (mV)			-112	110	100	116	-120	-4	-97	-97	-63
Specific Conductivity (mS/cm)			4.63	3.72	6.99	3.96	5.4	2.67	5.6	5.6	3.08
Turbidity (NTU)			3.5	2	1.4	3.7	2	0.5	0.3	0.3	3.5
Temp. (C)			13.04	14.09	16.14	13.47	14.79	13.14	15.33	15.33	15.87
Chemical Oxygen Demand (mg/l)			240	135	146	133	126	76.9	174	169	71.8
Chloride (mg/l)			946	753	2,010	928	1,580	560	1,490	1,490	595
Diesel Range Organics (mg/l)			0.75	0.49	0.25	1	0.66	1.7 J	1.6	0.29	ND (0.1)
Gasoline Range Organics (ug/l)			12,000	21,000	4,300	16,000	47,000	4,100	19,000	20,000	3,800
VOCs (ug/l):											
1,1,1,2-Tetrachloroethane	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,1-Trichloroethane	200		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,2,2-Tetrachloroethane	78 [X]		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,2-Trichloroethane	330 [X]		ND (1.0)	ND (1.0)	3	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethane	740		ND (1.0)	ND (1.0)	2	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethene	65 [X]	2,300	28	220	33	77	1,300	20 J	330	320	15
1,2,3-Trichloropropane	NA		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2,4-Trichlorobenzene	30		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2,4-Trimethylbenzene	17	310	10	ND (1.0)	3	ND (1.0)	44	36	20	20	ND (1.0)
1,2-Dibromo-3-chloropropane	NA		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichlorobenzene	16		1	ND (1.0)	ND (1.0)	ND (1.0)	2	ND (1.0)	3	ND (1.0)	ND (1.0)
1,2-Dichloroethane	360 [X]		ND (1.0)	ND (1.0)	4	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichloropropane	290 [X]		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,3,5-Trimethylbenzene	ID		4	ND (1.0)	ND (1.0)	ND (1.0)	10	7	7	8	ND (1.0)
1,3-Dichlorobenzene	38		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,4-Dichlorobenzene	13		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
2-Butanone (MEK)	2,200		ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)
2-Hexanone	NA		ND (50)	ND (50)	ND (50)	ND (50)	ND (50)	ND (50)	ND (50)	ND (50)	ND (50)
4-Methyl-2-pentanone	ID		ND (50)	ND (50)	ND (50)	ND (50)	ND (50)	ND (50)	ND (50)	ND (50)	ND (50)
Acetone	1,700		ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)
Benzene	200 [X]		43	160	180	48	32	21 J	160	150	59
Bromochloromethane	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Bromodichloromethane	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Bromoform	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Bromomethane	35		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Carbon disulfide	ID		ND (5.0)	5	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Carbon tetrachloride	45 [X]		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Chlorobenzene	47		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Chloroethane	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Chloroform	170 [X]		ND (1.0)	ND (1.0)	1	ND (1.0)	1	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Chloromethane	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Dibromochloromethane	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Dibromomethane	NA		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Dichlorodifluoromethane	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Ethyl Ether	ID		ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)
Ethylbenzene	18	320	30	7	ND (1.0)	ND (1.0)	170	28	5	5	1
Iodomethane	NA		ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
Isopropylbenzene	ID		38	ND (5.0)	ND (5.0)	ND (5.0)	16	58	94	94	ND (5.0)
Methylene Chloride	940 [X]		ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
n-Propylbenzene	ID		ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	5	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Naphthalene	13	200	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	20	100	73	83	ND (5.0)
Styrene	80		7	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	1	ND (1.0)	ND (1.0)
Tetrachloroethene	45 [X]		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Toluene	140	1,700	1,200	480	210	110	1,400 J	300	270	260	48
trans-1,4-Dichloro-2-Butene	NA		ND (50)	ND (50)	ND (50)	ND (50)	ND (50)	ND (50)	ND (50)	ND (50)	ND (50)
Trichloroethene	200 [X]	3,500	14	780	150	58	24,000	700	26	26	1
Vinyl chloride	15	17,000	73,000	74,000	100,000	49,000	17,000	12,000	75,000	75,000	19,000
cis-1,2-Dichloroethene	620	11,000	29,000	60,000	7,400	53,000	76,000	13,000	58,000	60,000	9,800
cis-1,3-Dichloropropene	NA		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
trans-1,2-Dichloroethene	1,500	28,000	860 J	2,200	600	1,800 J	8,400	440 J	3,800	4,100	420 J
trans-1,3-Dichloropropene	NA		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Xylenes (total)	35	630	ND (3,000)	100	196	83	1,360	120	260	260	6

Notes

- GSI Groundwater Surface Water Interface Criteria MDEQ Part 201 Generic Cleanup Criteria and Screening Levels - December 21, 2002
- FAV Final Acute Value, MDEQ [Rule 323.1057 (Toxic Substances) of the Part 4. Water Quality Standards]
- [X] The GSI criterion shown is not protective for surface water that is used as a drinking water source.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample (for detected parameters).
- ID Inadequate data to develop criterion.
- NA Criterion or value is not available.

TABLE 5.3

GROUNDWATER ANALYTICAL RESULTS
NOVEMBER 2002
CVO AREA
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

Location	GSI	FAV	Area 2			
			Regularly Monitored		Extended November Sampling Event	
			IW-46	IW-49	IW-45	MW-12
Analytes/Sample ID			GW-17303-112502-MM-143	GW-17303-112502-MM-142	GW-17303-112502-MM-140	GW-17303-112502-MM-141
pH			6.88	7.49	7.2	6.87
DO (mg/l)			0.13	0.42	0.52	0.39
ORP (mV)			218	-138	220	232
Specific Conductivity (mS/cm)			3.97	3.32	2.55	2.01
Turbidity (NTU)			3.2	0.05	1.3	2.4
Temp. (C)			14.06	13.94	12.01	11.48
Chemical Oxygen Demand (mg/l)			47.5	42.5	55	5
Chloride (mg/l)			788	613	359	280
Diesel Range Organics (mg/l)			0.26	0.2	0.47	ND (0.1)
Gasoline Range Organics (ug/l)			4,700	480	350	140
VOCs (ug/l):						
1,1,1,2-Tetrachloroethane	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,1-Trichloroethane	200		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,2,2-Tetrachloroethane	78 {X}		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,2-Trichloroethane	330 {X}		2	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethane	740		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethene	65 {X}		18	ND (1.0)	ND (1.0)	ND (1.0)
1,2,3-Trichloropropane	NA		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2,4-Trichlorobenzene	30		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2,4-Trimethylbenzene	17		1	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dibromo-3-chloropropane	NA		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichlorobenzene	16		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichloroethane	360 {X}		12	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichloropropane	290 {X}		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,3,5-Trimethylbenzene	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,3-Dichlorobenzene	38		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,4-Dichlorobenzene	13		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
2-Butanone (MEK)	2,200		ND (25)	ND (25)	ND (25)	ND (25)
2-Hexanone	NA		ND (50)	ND (50)	ND (50)	ND (50)
4-Methyl-2-pentanone	ID		ND (50)	ND (50)	ND (50)	ND (50)
Acetone	1,700		ND (25)	ND (25)	ND (25)	ND (25)
Benzene	200 {X}		15	ND (1.0)	ND (1.0)	ND (1.0)
Bromochloromethane	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Bromodichloromethane	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Bromoform	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Bromomethane	35		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Carbon disulfide	ID		ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Carbon tetrachloride	45 {X}		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Chlorobenzene	47		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Chloroethane	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Chloroform	170 {X}		5	2	ND (1.0)	ND (1.0)
Chloromethane	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Dibromochloromethane	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Dibromomethane	NA		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Dichlorodifluoromethane	ID		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Ethyl Ether	ID		ND (20)	ND (20)	ND (20)	ND (20)
Ethylbenzene	18		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Iodomethane	NA		ND (10)	ND (10)	ND (10)	ND (10)
Isopropylbenzene	ID		ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Methylene Chloride	940 {X}		ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
n-Propylbenzene	ID		ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Naphthalene	13		ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Styrene	80		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Tetrachloroethene	45 {X}		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Toluene	140		40	1	ND (1.0)	ND (1.0)
trans-1,4-Dichloro-2-Butene	NA		ND (50)	ND (50)	ND (50)	ND (50)
Trichloroethene	200 {X}	3,500	220	1,400	560 J	140
Vinyl chloride	15	17,000	2,800	86	32	ND (1.0)
cis-1,2-Dichloroethene	620	11,000	13,000	570	480	14
cis-1,3-Dichloropropene	NA		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
trans-1,2-Dichloroethene	1,500		360 J	27	ND (1.0)	ND (1.0)
trans-1,3-Dichloropropene	NA		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Xylenes (total)	35	630	49	ND (3.0)	ND (3.0)	ND (3.0)

Notes

GSI	Groundwater Surface Water Interface Criteria MDEQ Part 201 Generic Cleanup Criteria and Screening Levels - December 21, 2002
FAV	Final Acute Value, MDEQ [Rule 323.1057 (Toxic Substances) of the Part 4. Water Quality Standards]
{X}	The GSI criterion shown is not protective for surface water that is used as a drinking water source.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample (for detected parameters).
ID	Inadequate data to develop criterion.
NA	Criterion or value is not available.
	Exceeds GSI criteria
ND (50)	Not detected at the reporting limit (in brackets)

TABLE 5.3
GROUNDWATER ANALYTICAL RESULTS
NOVEMBER 2002
CVO AREA
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

		Site Wide Wells			
		Extended November Sampling Event			
Location		MW-4	MW-13	MW-13	MW-14
		GW-17303-112602-MM-155	GW-17303-112502-MM-137	GW-17303-112502-MM-139	GW-17303-112502-MM-138
Analytes/Sample ID	GSI FAV	Duplicate			
pH		7.09	7.14	7.14	7.24
DO (mg/l)		0.14	1.83	1.83	0.49
ORP (mV)		-127	126	126	-30
Specific Conductivity (mS/cm)		4.86	1.22	1.22	1.24
Turbidity (NTU)		4.3	0.43	0.43	0.8
Temp. (C)		11.24	12.24	12.24	13.37
Chemical Oxygen Demand (mg/l)		18	ND (3.0)	ND (3.0)	ND (3.0)
Chloride (mg/l)		1,530	186	151	162
Diesel Range Organics (mg/l)		ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Gasoline Range Organics (ug/l)		ND (20)	ND (20)	ND (20)	ND (20)
VOCs (ug/l):					
1,1,1,2-Tetrachloroethane	ID	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,1-Trichloroethane	200	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,2,2-Tetrachloroethane	78 [X]	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,2-Trichloroethane	330 [X]	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethane	740	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethene	65 [X]	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2,3-Trichloropropane	NA	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2,4-Trichlorobenzene	30	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2,4-Trimethylbenzene	17	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dibromo-3-chloropropane	NA	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichlorobenzene	16	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichloroethane	360 [X]	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichloropropane	290 [X]	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,3,5-Trimethylbenzene	ID	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,3-Dichlorobenzene	38	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,4-Dichlorobenzene	13	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
2-Butanone (MEK)	2,200	ND (25)	ND (25)	ND (25)	ND (25)
2-Hexanone	NA	ND (50)	ND (50)	ND (50)	ND (50)
4-Methyl-2-pentanone	ID	ND (50)	ND (50)	ND (50)	ND (50)
Acetone	1,700	ND (25)	ND (25)	ND (25)	ND (25)
Benzene	200 [X]	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Bromochloromethane	ID	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Bromodichloromethane	ID	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Bromoform	ID	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Bromomethane	35	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Carbon disulfide	ID	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Carbon tetrachloride	45 [X]	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Chlorobenzene	47	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Chloroethane	ID	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Chloroform	170 [X]	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Chloromethane	ID	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Dibromochloromethane	ID	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Dibromomethane	NA	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Dichlorodifluoromethane	ID	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Ethyl Ether	ID	ND (20)	ND (20)	ND (20)	ND (20)
Ethylbenzene	18	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Iodomethane	NA	ND (10)	ND (10)	ND (10)	ND (10)
Isopropylbenzene	ID	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Methylene Chloride	940 [X]	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
n-Propylbenzene	ID	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Naphthalene	13	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Styrene	80	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Tetrachloroethene	45 [X]	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Toluene	140	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
trans-1,4-Dichloro-2-Butene	NA	ND (50)	ND (50)	ND (50)	ND (50)
Trichloroethene	200 [X]	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Vinyl chloride	15	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
cis-1,2-Dichloroethene	620	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
cis-1,3-Dichloropropene	NA	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
trans-1,2-Dichloroethene	1,500	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
trans-1,3-Dichloropropene	NA	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Xylenes (total)	35	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)

Notes

GSI	Groundwater Surface Water Interface Criteria MDEQ Part 201 Generic Cleanup Criteria and Screening Levels - December 21, 2002
FAV	Final Acute Value, MDEQ [Rule 323.1057 (Toxic Substances) of the Part 4. Water Quality Standards]
[X]	The GSI criterion shown is not protective for surface water that is used as a drinking water source.
ID	Inadequate data to develop criterion.
NA	Criterion or value is not available.
	Exceeds GSI criteria
ND (50)	Not detected at the reporting limit (in brackets)

APPENDIX A

LABORATORY ANALYTICAL REPORTS



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
(713) 660-0901

Conestoga-Rovers & Associates

Certificate of Analysis Number:

01120595

Report To: Conestoga-Rovers & Associates Paul Wiseman 14496 Sheldon Rd. Suite 200 Plymouth MI 48170- ph: (734) 453-5123 fax: (734) 453-5201	Project Name: #17303-02 Willow Run Site: #17303-02 Willow Run Site Address: PO Number: 40-0017478 State: Michigan State Cert. No.: Date Reported: 1/3/02
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This Report Contains A Total Of 20 Pages

Excluding This Page

And

Chain Of Custody ORIGINAL ANALYTICAL REPORT

Project#: 17303-02 Lab#: 01120595

Name: Willow Run

Description

Event: GW EVENT

Samples: 3-W (12/13-100-102)

Analysis: VOC, select metals

TAT: 2 wks

Lab: SPL

Checked Against Preliminary Data:

Date: 2/18/02 Init.: L

Date of Validation Memo: 4/8/02

Invoice Approval Date: 1/3/02

Comments: _____ Date: _____

FEB 18 2002

CEA SD65



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:
Conestoga-Rovers & Associates

Certificate of Analysis Number:
01120595

Report To: Conestoga-Rovers & Associates Paul Wiseman 14496 Sheldon Rd. Suite 200 Plymouth MI 48170- ph: (734) 453-5123 fax: (734) 453-5201	Project Name: #17303-02 Willow Run Site: #17303-02 Willow Run Site Address: PO Number: 40-0017478 State: Michigan State Cert. No.: Date Reported: 1/3/02
--	---

Your samples "GW-17303-JH-121301-0101" (SPL ID: 01120595-02) was analyzed for the presence of Volatile Organics using Method 8260B. The concentrations of some target analytes in this sample required that multiple dilutions and analysis of the sample be performed. In order to provide the lowest possible reporting limits for other target analytes, the 2-Butanone and Toluene concentrations on this sample are reported with an "E" qualifier indicating that the reported concentration is above the concentration of the highest point on the instrument calibration curve.

Your samples "GW-17303-JH-121301-0102" (SPL ID: 01120595-03) was analyzed for the presence of Volatile Organics using Method 8260B. The concentrations of some target analytes in this sample required that multiple dilutions and analysis of the sample be performed. In order to provide the lowest possible reporting limits for other target analytes, the trans-1,2-Dichloroethene concentration on this sample is reported with an "E" qualifier indicating that the reported concentration is above the concentration of the highest point on the instrument calibration curve.

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

FEB 18 2002

Sonia West
Senior Project Manager

1/3/02

Date



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

Certificate of Analysis Number:

01120595

Report To: Conestoga-Rovers & Associates

Paul Wiseman
14496 Sheldon Rd.
Suite 200
Plymouth

MI

48170-

ph: (734) 453-5123

fax: (734) 453-5201

Project Name: #17303-02 Willow Run

Site: #17303-02 Willow Run

Site Address:

PO Number: 40-0017478

State: Michigan

State Cert. No.:

Date Reported: 1/3/02

Fax To:

Conestoga-Rovers & Associates

Paul Wiseman

fax : (734) 453-5201

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
GW-17303-JH-121301-0100	01120595-01	Water	12/13/01 11:30:00 AM	12/14/01 10:00:00 AM	18937	☐
GW-17303-JH-121301-0101	01120595-02	Water	12/13/01 2:40:00 PM	12/14/01 10:00:00 AM	18937	☐
GW-17303-JH-121301-0102	01120595-03	Water	12/13/01 4:50:00 PM	12/14/01 10:00:00 AM	18937	☐


Sonia West

Senior Project Manager

1/3/02

Date

Joel Grice
Laboratory Director

Ted Yen
Quality Assurance Officer

FILED 18 2002



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-JH-121301-0100

Collected: 12/13/01 11:30:0 SPL Sample ID: 01120595-01

Site: #17303-02 Willow Run

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	668	25	25		12/26/01 14:00	CV	964781
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	0.375	0.02	1		12/26/01 22:04	EG	969509
Potassium	8.13	2	1		12/26/01 22:04	EG	969509

Prep Method	Prep Date	Prep Initials
	12/14/2001 17:00	

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-JH-121301-0100

Collected: 12/13/01 11:30:0 SPL Sample ID: 01120595-01

Site: #17303-02 Willow Run

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1	1		12/22/01 8:14	C_V	962806
1,1,1-Trichloroethane	ND	1	1		12/22/01 8:14	C_V	962806
1,1,2,2-Tetrachloroethane	ND	1	1		12/22/01 8:14	C_V	962806
1,1,2-Trichloroethane	1	1	1		12/22/01 8:14	C_V	962806
1,1-Dichloroethane	ND	1	1		12/22/01 8:14	C_V	962806
1,1-Dichloroethene	15	1	1		12/22/01 8:14	C_V	962806
1,2,3-Trichloropropane	ND	1	1		12/22/01 8:14	C_V	962806
1,2,4-Trichlorobenzene	ND	5	1		12/22/01 8:14	C_V	962806
1,2,4-Trimethylbenzene	5	1	1		12/22/01 8:14	C_V	962806
1,2-Dibromo-3-chloropropane	ND	1	1		12/22/01 8:14	C_V	962806
1,2-Dichlorobenzene	ND	1	1		12/22/01 8:14	C_V	962806
1,2-Dichloroethane	ND	1	1		12/22/01 8:14	C_V	962806
1,2-Dichloropropane	ND	1	1		12/22/01 8:14	C_V	962806
1,3,5-Trimethylbenzene	2	1	1		12/22/01 8:14	C_V	962806
1,3-Dichlorobenzene	ND	1	1		12/22/01 8:14	C_V	962806
1,4-Dichlorobenzene	ND	1	1		12/22/01 8:14	C_V	962806
2-Butanone	640 J	12000	250		12/27/01 15:30	C_V	967408
2-Hexanone	ND	50	1		12/22/01 8:14	C_V	962806
4-Methyl-2-pentanone	ND	50	1		12/22/01 8:14	C_V	962806
Acetone	ND	100	1		12/22/01 8:14	C_V	962806
Benzene	20	1	1		12/22/01 8:14	C_V	962806
Bromochloromethane	ND	1	1		12/22/01 8:14	C_V	962806
Bromodichloromethane	ND	1	1		12/22/01 8:14	C_V	962806
Bromoform	ND	1	1		12/22/01 8:14	C_V	962806
Bromomethane	ND	1	1		12/22/01 8:14	C_V	962806
Carbon disulfide	ND	5	1		12/22/01 8:14	C_V	962806
Carbon tetrachloride	ND	1	1		12/22/01 8:14	C_V	962806
Chlorobenzene	ND	1	1		12/22/01 8:14	C_V	962806
Chloroethane	ND	1	1		12/22/01 8:14	C_V	962806
Chloroform	ND	1	1		12/22/01 8:14	C_V	962806
Chloromethane	ND	1	1		12/22/01 8:14	C_V	962806
Dibromochloromethane	ND	1	1		12/22/01 8:14	C_V	962806
Dibromomethane	ND	1	1		12/22/01 8:14	C_V	962806
Dichlorodifluoromethane	ND	1	1		12/22/01 8:14	C_V	962806
Ethyl Ether	ND	20	1		12/22/01 8:14	C_V	962806
Ethylbenzene	71	1	1		12/22/01 8:14	C_V	962806
Iodomethane	ND	1	1		12/22/01 8:14	C_V	962806
Isopropylbenzene	23	1	1		12/22/01 8:14	C_V	962806
Methylene chloride	5	5	1		12/22/01 8:14	C_V	962806
n-Propylbenzene	1	1	1		12/22/01 8:14	C_V	962806

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-JH-121301-0100

Collected: 12/13/01 11:30:0 SPL Sample ID: 01120595-01

Site: #17303-02 Willow Run

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	45	5	1		12/22/01 8:14	C_V	962806
Styrene	ND	1	1		12/22/01 8:14	C_V	962806
Tetrachloroethene	ND	1	1		12/22/01 8:14	C_V	962806
Toluene	380	250	250		12/27/01 15:30	C_V	967408
trans-1,4-Dichloro-2-Butene	ND	2	1		12/22/01 8:14	C_V	962806
Trichloroethene	450	250	250		12/27/01 15:30	C_V	967408
Vinyl chloride	31000	250	250		12/27/01 15:30	C_V	967408
cis-1,2-Dichloroethene	16000	250	250		12/27/01 15:30	C_V	967408
cis-1,3-Dichloropropene	ND	1	1		12/22/01 8:14	C_V	962806
trans-1,2-Dichloroethene	460	250	250		12/27/01 15:30	C_V	967408
trans-1,3-Dichloropropene	ND	1	1		12/22/01 8:14	C_V	962806
Xylenes, Total	268	3	1		12/22/01 8:14	C_V	962806
Surr: 1,2-Dichloroethane-d4	76.8	% 62-130	250		12/27/01 15:30	C_V	967408
Surr: 1,2-Dichloroethane-d4	80.0	% 62-130	1		12/22/01 8:14	C_V	962806
Surr: 4-Bromofluorobenzene	78.0	% 70-130	1		12/22/01 8:14	C_V	962806
Surr: 4-Bromofluorobenzene	74.4	% 70-130	250		12/27/01 15:30	C_V	967408
Surr: Toluene-d8	80.0	% 74-122	1		12/22/01 8:14	C_V	962806
Surr: Toluene-d8	80.0	% 74-122	250		12/27/01 15:30	C_V	967408

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-JH-121301-0101

Collected: 12/13/01 2:40:00 SPL Sample ID: 01120595-02

Site: #17303-02 Willow Run

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL		MCL	E325.3	Units: mg/L			
Chloride	637	10	10		12/26/01 14:00	CV	964784
METALS BY METHOD 6010B, TOTAL		MCL	SW6010B	Units: mg/L			
Manganese	0.63	0.02	1		12/26/01 22:48	EG	969515
Potassium	18.6	2	1		12/26/01 22:48	EG	969515

Prep Method	Prep Date	Prep Initials
SW3010A	12/14/2001 17:00	MME

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-JH-121301-0101

Collected: 12/13/01 2:40:00 SPL Sample ID: 01120595-02

Site: #17303-02 Willow Run

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B		MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	1	1		12/22/01 8:41	C_V	962809
1,1,1-Trichloroethane	ND	1	1		12/22/01 8:41	C_V	962809
1,1,2,2-Tetrachloroethane	ND	1	1		12/22/01 8:41	C_V	962809
1,1,2-Trichloroethane	6	1	1		12/22/01 8:41	C_V	962809
1,1-Dichloroethane	ND	1	1		12/22/01 8:41	C_V	962809
1,1-Dichloroethene	170	1	1		12/22/01 8:41	C_V	962809
1,2,3-Trichloropropane	ND	1	1		12/22/01 8:41	C_V	962809
1,2,4-Trichlorobenzene	ND	5	1		12/22/01 8:41	C_V	962809
1,2,4-Trimethylbenzene	ND	1	1		12/22/01 8:41	C_V	962809
1,2-Dibromo-3-chloropropane	ND	1	1		12/22/01 8:41	C_V	962809
1,2-Dichlorobenzene	ND	1	1		12/22/01 8:41	C_V	962809
1,2-Dichloroethane	2	1	1		12/22/01 8:41	C_V	962809
1,2-Dichloropropane	ND	1	1		12/22/01 8:41	C_V	962809
1,3,5-Trimethylbenzene	ND	1	1		12/22/01 8:41	C_V	962809
1,3-Dichlorobenzene	ND	1	1		12/22/01 8:41	C_V	962809
1,4-Dichlorobenzene	ND	1	1		12/22/01 8:41	C_V	962809
2-Butanone	230	50	1	E	12/22/01 8:41	C_V	962809
2-Hexanone	ND	50	1		12/22/01 8:41	C_V	962809
4-Methyl-2-pentanone	ND	50	1		12/22/01 8:41	C_V	962809
Acetone	ND	100	1		12/22/01 8:41	C_V	962809
Benzene	100	1	1		12/22/01 8:41	C_V	962809
Bromochloromethane	ND	1	1		12/22/01 8:41	C_V	962809
Bromodichloromethane	ND	1	1		12/22/01 8:41	C_V	962809
Bromoform	ND	1	1		12/22/01 8:41	C_V	962809
Bromomethane	ND	1	1		12/22/01 8:41	C_V	962809
Carbon disulfide	ND	5	1		12/22/01 8:41	C_V	962809
Carbon tetrachloride	ND	1	1		12/22/01 8:41	C_V	962809
Chlorobenzene	ND	1	1		12/22/01 8:41	C_V	962809
Chloroethane	ND	1	1		12/22/01 8:41	C_V	962809
Chloroform	ND	1	1		12/22/01 8:41	C_V	962809
Chloromethane	ND	1	1		12/22/01 8:41	C_V	962809
Dibromochloromethane	ND	1	1		12/22/01 8:41	C_V	962809
Dibromomethane	ND	1	1		12/22/01 8:41	C_V	962809
Dichlorodifluoromethane	ND	1	1		12/22/01 8:41	C_V	962809
Ethyl Ether	ND	20	1		12/22/01 8:41	C_V	962809
Ethylbenzene	15	1	1		12/22/01 8:41	C_V	962809
Iodomethane	ND	1	1		12/22/01 8:41	C_V	962809
Isopropylbenzene	ND	1	1		12/22/01 8:41	C_V	962809
Methylene chloride	5	5	1		12/22/01 8:41	C_V	962809
n-Propylbenzene	ND	1	1		12/22/01 8:41	C_V	962809

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 680-0901

Client Sample ID GW-17303-JH-121301-0101

Collected: 12/13/01 2:40:00 SPL Sample ID: 01120595-02

Site: #17303-02 Willow Run

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5	1		12/22/01 8:41	C_V	962809
Styrene	ND	1	1		12/22/01 8:41	C_V	962809
Tetrachloroethene	ND	1	1		12/22/01 8:41	C_V	962809
Toluene	260	1	1	E	12/22/01 8:41	C_V	962809
trans-1,4-Dichloro-2-Butene	ND	2	1		12/22/01 8:41	C_V	962809
Trichloroethene	8	1	1		12/22/01 8:41	C_V	962809
Vinyl chloride	39000	500	500		12/27/01 15:57	C_V	967409
cis-1,2-Dichloroethene	64000	500	500		12/27/01 15:57	C_V	967409
cis-1,3-Dichloropropene	ND	1	1		12/22/01 8:41	C_V	962809
trans-1,2-Dichloroethene	760	500	500		12/27/01 15:57	C_V	967409
trans-1,3-Dichloropropene	ND	1	1		12/22/01 8:41	C_V	962809
Xylenes, Total	39	3	1		12/22/01 8:41	C_V	962809
Surr: 1,2-Dichloroethane-d4	88.0	% 62-130	500		12/27/01 15:57	C_V	967409
Surr: 1,2-Dichloroethane-d4	80.0	% 62-130	1		12/22/01 8:41	C_V	962809
Surr: 4-Bromofluorobenzene	74.0	% 70-130	1		12/22/01 8:41	C_V	962809
Surr: 4-Bromofluorobenzene	76.0	% 70-130	500		12/27/01 15:57	C_V	967409
Surr: Toluene-d8	84.0	% 74-122	500		12/27/01 15:57	C_V	967409
Surr: Toluene-d8	78.0	% 74-122	1		12/22/01 8:41	C_V	962809

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-JH-121301-0102

Collected: 12/13/01 4:50:00 SPL Sample ID: 01120595-03

Site: #17303-02 Willow Run

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B		MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	1	1		12/22/01 9:07	C_V	962811
1,1,1-Trichloroethane	ND	1	1		12/22/01 9:07	C_V	962811
1,1,2,2-Tetrachloroethane	ND	1	1		12/22/01 9:07	C_V	962811
1,1,2-Trichloroethane	34	1	1		12/22/01 9:07	C_V	962811
1,1-Dichloroethane	3	1	1		12/22/01 9:07	C_V	962811
1,1-Dichloroethene	31	1	1		12/22/01 9:07	C_V	962811
1,2,3-Trichloropropane	3	1	1		12/22/01 9:07	C_V	962811
1,2,4-Trichlorobenzene	ND	5	1		12/22/01 9:07	C_V	962811
1,2,4-Trimethylbenzene	2	1	1		12/22/01 9:07	C_V	962811
1,2-Dibromo-3-chloropropane	ND	1	1		12/22/01 9:07	C_V	962811
1,2-Dichlorobenzene	ND	1	1		12/22/01 9:07	C_V	962811
1,2-Dichloroethane	9	1	1		12/22/01 9:07	C_V	962811
1,2-Dichloropropane	6	1	1		12/22/01 9:07	C_V	962811
1,3,5-Trimethylbenzene	ND	1	1		12/22/01 9:07	C_V	962811
1,3-Dichlorobenzene	ND	1	1		12/22/01 9:07	C_V	962811
1,4-Dichlorobenzene	ND	1	1		12/22/01 9:07	C_V	962811
2-Butanone	ND	50	1		12/22/01 9:07	C_V	962811
2-Hexanone	ND	50	1		12/22/01 9:07	C_V	962811
4-Methyl-2-pentanone	ND	50	1		12/22/01 9:07	C_V	962811
Acetone	260	100	1		12/22/01 9:07	C_V	962811
Benzene	180	1	1		12/22/01 9:07	C_V	962811
Bromochloromethane	ND	1	1		12/22/01 9:07	C_V	962811
Bromodichloromethane	ND	1	1		12/22/01 9:07	C_V	962811
Bromoform	ND	1	1		12/22/01 9:07	C_V	962811
Bromomethane	ND	1	1		12/22/01 9:07	C_V	962811
Carbon disulfide	ND	5	1		12/22/01 9:07	C_V	962811
Carbon tetrachloride	ND	1	1		12/22/01 9:07	C_V	962811
Chlorobenzene	ND	1	1		12/22/01 9:07	C_V	962811
Chloroethane	ND	1	1		12/22/01 9:07	C_V	962811
Chloroform	ND	1	1		12/22/01 9:07	C_V	962811
Chloromethane	ND	1	1		12/22/01 9:07	C_V	962811
Dibromochloromethane	ND	1	1		12/22/01 9:07	C_V	962811
Dibromomethane	ND	1	1		12/22/01 9:07	C_V	962811
Dichlorodifluoromethane	ND	1	1		12/22/01 9:07	C_V	962811
Ethyl Ether	ND	20	1		12/22/01 9:07	C_V	962811
Ethylbenzene	26	1	1		12/22/01 9:07	C_V	962811
Iodomethane	ND	1	1		12/22/01 9:07	C_V	962811
Isopropylbenzene	ND	1	1		12/22/01 9:07	C_V	962811
Methylene chloride	8	5	1		12/22/01 9:07	C_V	962811
n-Propylbenzene	ND	1	1		12/22/01 9:07	C_V	962811

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-JH-121301-0102

Collected: 12/13/01 4:50:00 SPL Sample ID: 01120595-03

Site: #17303-02 Willow Run

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	1360	25	25		12/26/01 14:00	CV	964785
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	1.07	0.02	1		12/26/01 23:06	EG	969518
Potassium	20.7	2	1		12/26/01 23:06	EG	969518

Prep Method	Prep Date	Prep Initials
SW3010A	12/14/2001 17:00	MME

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-JH-121301-0102

Collected: 12/13/01 4:50:00 SPL Sample ID: 01120595-03

Site: #17303-02 Willow Run

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5	1		12/22/01 9:07	C_V	962811
Styrene	ND	1	1		12/22/01 9:07	C_V	962811
Tetrachloroethene	ND	1	1		12/22/01 9:07	C_V	962811
Toluene	170	1	1		12/22/01 9:07	C_V	962811
trans-1,4-Dichloro-2-Butene	ND	2	1		12/22/01 9:07	C_V	962811
Trichloroethene	12	1	1		12/22/01 9:07	C_V	962811
Vinyl chloride	200000	1000	1000		12/27/01 16:24	C_V	967410
cis-1,2-Dichloroethene	12000	1000	1000		12/27/01 16:24	C_V	967410
cis-1,3-Dichloropropene	ND	1	1		12/22/01 9:07	C_V	962811
trans-1,2-Dichloroethene	600	1	1	E	12/22/01 9:07	C_V	962811
trans-1,3-Dichloropropene	ND	1	1		12/22/01 9:07	C_V	962811
Xylenes, Total	115	3	1		12/22/01 9:07	C_V	962811
Surr: 1,2-Dichloroethane-d4	78.0	% 62-130	1		12/22/01 9:07	C_V	962811
Surr: 1,2-Dichloroethane-d4	82.0	% 62-130	1000		12/27/01 16:24	C_V	967410
Surr: 4-Bromofluorobenzene	74.0	% 70-130	1000		12/27/01 16:24	C_V	967410
Surr: 4-Bromofluorobenzene	76.0	% 70-130	1		12/22/01 9:07	C_V	962811
Surr: Toluene-d8	82.0	% 74-122	1000		12/27/01 16:24	C_V	967410
Surr: Toluene-d8	84.0	% 74-122	1		12/22/01 9:07	C_V	962811

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

Quality Control Documentation



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

#17303-02 Willow Run

Analysis: Metals by Method 6010B, Total
Method: SW6010B

WorkOrder: 01120595
Lab Batch ID: 16857

Method Blank

Samples in Analytical Batch:

RunID:	TJA_011226C-969507	Units:	mg/L	<u>Lab Sample ID</u>	<u>Client Sample ID</u>
Analysis Date:	12/26/2001 21:52	Analyst:	EG	01120595-01C	GW-17303-JH-121301-0100
Preparation Date:	12/14/2001 17:00	Prep By:	MME Method SW3010A	01120595-02C	GW-17303-JH-121301-0101
				01120595-03C	GW-17303-JH-121301-0102

Analyte	Result	Rep Limit
Manganese	ND	0.02
Potassium	ND	2

Laboratory Control Sample (LCS)

RunID: TJA_011226C-969508 Units: mg/L
Analysis Date: 12/26/2001 21:58 Analyst: EG
Preparation Date: 12/14/2001 17:00 Prep By: MME Method SW3010A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Manganese	2	2.09	105	80	120
Potassium	20	20.4	102	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01120595-01
RunID: TJA_011226C-969510 Units: mg/L
Analysis Date: 12/26/2001 22:11 Analyst: EG
Preparation Date: 12/14/2001 17:00 Prep By: MME Method SW3010A

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Manganese	0.38	1	1.36	98.6	1	1.4	103	3.98	20	75	125
Potassium	8.1	10	18.1	100	10	18.8	107	6.92	20	75	125

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

#17303-02 Willow Run

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 01120595
Lab Batch ID: R50513

Method Blank

RunID: Q_011221C-962793 Units: ug/L
Analysis Date: 12/22/2001 5:31 Analyst: C_V

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
01120595-01A	GW-17303-JH-121301-0100
01120595-02A	GW-17303-JH-121301-0101
01120595-03A	GW-17303-JH-121301-0102

Analyte	Result	Rep Limit
1,1,1,2-Tetrachloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,1,2-Trichloroethane	ND	1.0
1,1-Dichloroethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,2,3-Trichloropropane	ND	1.0
1,2,4-Trichlorobenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	1.0
1,2-Dibromo-3-chloropropane	ND	1.0
1,2-Dichlorobenzene	ND	1.0
1,2-Dichloroethane	ND	1.0
1,2-Dichloropropane	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
2-Butanone	ND	50
2-Hexanone	ND	50
4-Methyl-2-pentanone	ND	50
Acetone	ND	100
Benzene	ND	1.0
Bromochloromethane	ND	1.0
Bromodichloromethane	ND	1.0
Bromoform	ND	1.0
Bromomethane	ND	1.0
Carbon disulfide	ND	5.0
Carbon tetrachloride	ND	1.0
Chlorobenzene	ND	1.0
Chloroethane	ND	1.0
Chloroform	ND	1.0
Chloromethane	ND	1.0
Dibromochloromethane	ND	1.0
Dibromomethane	ND	1.0
Dichlorodifluoromethane	ND	1.0
Ethyl Ether	ND	20
Ethylbenzene	ND	1.0
Iodomethane	ND	1.0
Isopropylbenzene	ND	1.0
Methylene chloride	ND	5.0
n-Propylbenzene	ND	1.0
Naphthalene	ND	5.0
Styrene	ND	1.0
Tetrachloroethene	ND	1.0
Toluene	ND	1.0
trans-1,4-Dichloro-2-Butene	ND	2.0
Trichloroethene	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

#17303-02 Willow Run

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 01120595
Lab Batch ID: R50513

Method Blank

RunID: Q_011221C-962793 Units: ug/L
Analysis Date: 12/22/2001 5:31 Analyst: C_V

Analyte	Result	Rep Limit
trans-1,3-Dichloropropene	ND	1.0
Xylenes, Total	ND	3.0
Surr. 1,2-Dichloroethane-d4	76.0	62-130
Surr. 4-Bromofluorobenzene	74.0	70-130
Surr. Toluene-d8	84.0	74-122

Laboratory Control Sample (LCS)

RunID: Q_011221C-962791 Units: ug/L
Analysis Date: 12/22/2001 4:37 Analyst: C_V

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	42	84	61	145
Benzene	50	48	96	76	127
Chlorobenzene	50	45	90	75	130
Toluene	50	46	92	76	125
Trichloroethene	50	44	88	71	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01120601-08
RunID: Q_011221C-962802 Units: ug/L
Analysis Date: 12/22/2001 7:19 Analyst: C_V

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	500	420	84	500	410	82.0	2	14	38	172
Benzene	ND	500	460	92	500	440	88.0	4	11	66	134
Chlorobenzene	ND	500	420	84	500	420	84.0	0	13	67	115
Toluene	ND	500	430	86	500	440	88.0	2	13	59	125
Trichloroethene	ND	500	420	84	500	400	80.0	5	14	61	134

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

#17303-02 Willow Run

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 01120595
Lab Batch ID: R50776

Method Blank

Samples in Analytical Batch:

RunID: Q_011227B-967407 Units: ug/L
Analysis Date: 12/27/2001 15:02 Analyst: C_V

Lab Sample ID	Client Sample ID
01120595-01A	GW-17303-JH-121301-0100
01120595-02A	GW-17303-JH-121301-0101
01120595-03A	GW-17303-JH-121301-0102

Analyte	Result	Rep Limit
2-Butanone	ND	50
Toluene	ND	1.0
Trichloroethene	ND	1.0
Vinyl chloride	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
Surr: 1,2-Dichloroethane-d4	84.0	62-130
Surr: 4-Bromofluorobenzene	74.0	70-130
Surr: Toluene-d8	82.0	74-122

Laboratory Control Sample (LCS)

RunID: Q_011227B-967406 Units: ug/L
Analysis Date: 12/27/2001 14:08 Analyst: C_V

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	44	88	61	145
Benzene	50	48	96	76	127
Chlorobenzene	50	45	90	75	130
Toluene	50	46	92	76	125
Trichloroethene	50	45	90	71	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01120741-03
RunID: Q_011227B-967414 Units: ug/L
Analysis Date: 12/27/2001 18:12 Analyst: C_V

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	250	210	84	250	220	88.0	5	14	38	172
Benzene	ND	250	250	100	250	230	92.0	8	11	66	134
Chlorobenzene	ND	250	230	92	250	230	92.0	0	13	67	115

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

#17303-02 Willow Run

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 01120595
Lab Batch ID: R50776

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01120741-03
RunID: Q_011227B-967414 Units: ug/L
Analysis Date: 12/27/2001 18:12 Analyst: C_V

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Toluene	ND	250	230	92	250	230	92.0	0	13	59	125
Trichloroethene	ND	250	230	92	250	220	88.0	4	14	61	134

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

#17303-02 Willow Run

Analysis: Chloride, Total
Method: E325.3

WorkOrder: 01120595
Lab Batch ID: R50608

Method Blank

Samples in Analytical Batch:

RunID: WET_011226J-964778 Units: mg/L
Analysis Date: 12/26/2001 14:00 Analyst: CV

Lab Sample ID	Client Sample ID
01120595-01B	GW-17303-JH-121301-0100
01120595-02B	GW-17303-JH-121301-0101
01120595-03B	GW-17303-JH-121301-0102

Analyte	Result	Rep Limit
Chloride	ND	1.0

Laboratory Control Sample (LCS)

RunID: WET_011226J-964780 Units: mg/L
Analysis Date: 12/26/2001 14:00 Analyst: CV

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	143	140	98	90	110

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01120595-01
RunID: WET_011226J-964782 Units: mg/L
Analysis Date: 12/26/2001 14:00 Analyst: CV

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	670	1250	1920	99.9	1250	1900	98.2	1.74	20	85	115

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

*Sample Receipt Checklist
And
Chain of Custody*



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	01120595	Received By:	DS
Date and Time Received:	12/14/01 10:00:00 AM	Carrier name:	FedEx
Temperature:	4	Chilled by:	Water Ice

- | | | | |
|--|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes ☒ | No ☐ | Not Present ☐ |
| 2. Custody seals intact on shipping container/cooler? | Yes ☒ | No ☐ | Not Present ☐ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☒ |
| 4. Chain of custody present? | Yes ☒ | No ☐ | |
| 5. Chain of custody signed when relinquished and received? | Yes ☒ | No ☐ | |
| 6. Chain of custody agrees with sample labels? | Yes ☒ | No ☐ | |
| 7. Samples in proper container/bottle? | Yes ☒ | No ☐ | |
| 8. Sample containers intact? | Yes ☒ | No ☐ | |
| 9. Sufficient sample volume for indicated test? | Yes ☒ | No ☐ | |
| 10. All samples received within holding time? | Yes ☒ | No ☐ | |
| 11. Container/Temp Blank temperature in compliance? | Yes ☒ | No ☐ | |
| 12. Water - VOA vials have zero headspace? | Yes ☒ | No ☐ | Not Applicable ☐ |
| 13. Water - pH acceptable upon receipt? | Yes ☒ | No ☐ | Not Applicable ☐ |

SPL Representative:

Contact Date & Time:

Client Name Contacted:

Non Conformance
Issues:

Client Instructions:

[illegible]



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
(713) 660-0901

Conestoga-Rovers & Associates

Certificate of Analysis Number:

01120641

Report To: Conestoga-Rovers & Associates Paul Wiseman 14496 Sheldon Rd. Suite 200 Plymouth MI 48170- ph: (734) 453-5123 fax: (734) 453-5201	Project Name: #17303 Willow Run/CVO Site: #17303 Willow Run/CVO Site Address: PO Number: 40-0017478 State: Michigan State Cert. No.: Date Reported: 1/4/02
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This Report Contains A Total Of 25 Pages

Excluding This Page

And

Chain Of Custody

ORIGINAL ANALYTICAL REPORT

Project#: 17303 Lab#: 01120641

Name: Willow Run

Description

Event: GW Event

Samples: 3-W (12/14-103-S)

Analysis: VOC, select metals

TAT: 2 wk

Lab: SPL

Checked Against Preliminary Data:

Date: 2/18/02 Init.: C

Date of Validation Memo: 4/8/02
2/15/02

Invoice Approval Date: _____

Comments: _____ Date

FEB 18 2002

CRA SD43



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:
Conestoga-Rovers & Associates

Certificate of Analysis Number:

01120641

Report To: Conestoga-Rovers & Associates Paul Wiseman 14496 Sheldon Rd. Suite 200 Plymouth MI 48170- ph: (734) 453-5123 fax: (734) 453-5201	Project Name: #17303 Willow Run/CVO Site: #17303 Willow Run/CVO Site Address: PO Number: 40-0017478 State: Michigan State Cert. No.: Date Reported: 1/4/02
---	---

A trip blank was received with the samples but was not written on the chain of custody (SPL ID: 01120641-04). Per a revised chain of custody, received via e-mail, on December 20, 2001, SPL analyzed the trip blank for VOC by method 8260.

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

FEB 18 2002

01120641 Page 1

2/15/02

Sonia West
Senior Project Manager

Date



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

Certificate of Analysis Number:

01120641

Report To: Conestoga-Rovers & Associates

Paul Wiseman
14496 Sheldon Rd.
Suite 200
Plymouth
MI

48170-

ph: (734) 453-5123 fax: (734) 453-5201

Fax To:

Conestoga-Rovers & Associates

Paul Wiseman

fax : (734) 453-5201

Project Name: #17303 Willow Run/CVO

Site: #17303 Willow Run/CVO

Site Address:

PO Number: 40-0017478

State: Michigan

State Cert. No.:

Date Reported: 1/4/02

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
GW-17303-JH-121401-103	01120641-01	Water	12/14/01 9:20:00 AM	12/15/01 10:00:00 AM	18086	☐
GW-17303-JH-121401-104	01120641-02	Water	12/14/01 10:50:00 AM	12/15/01 10:00:00 AM	18086	☐
GW-17303-JH-121401-105	01120641-03	Water	12/14/01 12:00:00 PM	12/15/01 10:00:00 AM	18086	☐
Trip Blank	01120641-04	Water	12/14/01	12/15/01 10:00:00 AM	18086	☐

Donna West
Donna West

Senior Project Manager

2/15/02

Date

Joel Grice

Laboratory Director

FEB 18 2002
Ted Yen
Quality Assurance Officer



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-JH-121401-103

Collected: 12/14/01 9:20:00 SPL Sample ID: 01120641-01

Site: #17303 Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	405	5	5		12/26/01 14:00	CV	964786
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	0.573	0.02	1		12/20/01 7:20	EG	957683
Potassium	5.54	2	1		12/20/01 7:20	EG	957683

Prep Method	Prep Date	Prep Initials
SW3010A	12/17/2001 13:30	MME

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-JH-121401-103

Collected: 12/14/01 9:20:00 SPL Sample ID: 01120641-01

Site: #17303 Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1	1		12/28/01 0:17	JN	966494
1,1,1-Trichloroethane	ND	1	1		12/28/01 0:17	JN	966494
1,1,2,2-Tetrachloroethane	ND	1	1		12/28/01 0:17	JN	966494
1,1,2-Trichloroethane	ND	1	1		12/28/01 0:17	JN	966494
1,1-Dichloroethane	ND	1	1		12/28/01 0:17	JN	966494
1,1-Dichloroethene	20	1	1		12/28/01 0:17	JN	966494
1,2,3-Trichloropropane	ND	1	1		12/28/01 0:17	JN	966494
1,2,4-Trichlorobenzene	ND	5	1		12/28/01 0:17	JN	966494
1,2,4-Trimethylbenzene	10	1	1		12/28/01 0:17	JN	966494
1,2-Dibromo-3-chloropropane	ND	1	1		12/28/01 0:17	JN	966494
1,2-Dichlorobenzene	ND	1	1		12/28/01 0:17	JN	966494
1,2-Dichloroethane	16	1	1		12/28/01 0:17	JN	966494
1,2-Dichloropropane	ND	1	1		12/28/01 0:17	JN	966494
1,3,5-Trimethylbenzene	3	1	1		12/28/01 0:17	JN	966494
1,3-Dichlorobenzene	ND	1	1		12/28/01 0:17	JN	966494
1,4-Dichlorobenzene	ND	1	1		12/28/01 0:17	JN	966494
2-Butanone	ND	50	1		12/28/01 0:17	JN	966494
2-Hexanone	ND	50	1		12/28/01 0:17	JN	966494
4-Methyl-2-pentanone	ND	50	1		12/28/01 0:17	JN	966494
Acetone	ND	100	1		12/28/01 0:17	JN	966494
Benzene	20	1	1		12/28/01 0:17	JN	966494
Bromochloromethane	ND	1	1		12/28/01 0:17	JN	966494
Bromodichloromethane	ND	1	1		12/28/01 0:17	JN	966494
Bromoform	ND	1	1		12/28/01 0:17	JN	966494
Bromomethane	ND	1	1		12/28/01 0:17	JN	966494
Carbon disulfide	ND	5	1		12/28/01 0:17	JN	966494
Carbon tetrachloride	ND	1	1		12/28/01 0:17	JN	966494
Chlorobenzene	ND	1	1		12/28/01 0:17	JN	966494
Chloroethane	ND	1	1		12/28/01 0:17	JN	966494
Chloroform	5	1	1		12/28/01 0:17	JN	966494
Chloromethane	ND	1	1		12/28/01 0:17	JN	966494
Dibromochloromethane	ND	1	1		12/28/01 0:17	JN	966494
Dibromomethane	ND	1	1		12/28/01 0:17	JN	966494
Dichlorodifluoromethane	ND	1	1		12/28/01 0:17	JN	966494
Ethyl Ether	ND	20	1		12/28/01 0:17	JN	966494
Ethylbenzene	55	1	1		12/28/01 0:17	JN	966494
Iodomethane	ND	1	1		12/28/01 0:17	JN	966494
Isopropylbenzene	2	1	1		12/28/01 0:17	JN	966494
Methylene chloride	ND	5	1		12/28/01 0:17	JN	966494
n-Propylbenzene	ND	1	1		12/28/01 0:17	JN	966494

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-JH-121401-103

Collected: 12/14/01 9:20:00 SPL Sample ID: 01120641-01

Site: #17303 Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5	1		12/28/01 0:17	JN	966494
Styrene	ND	1	1		12/28/01 0:17	JN	966494
Tetrachloroethene	ND	1	1		12/28/01 0:17	JN	966494
Toluene	95	1	1		12/28/01 0:17	JN	966494
trans-1,4-Dichloro-2-Butene	ND	2	1		12/28/01 0:17	JN	966494
Trichloroethene	1200	100	100		12/28/01 18:04	JC	970556
Vinyl chloride	2100	100	100		12/28/01 18:04	JC	970556
cis-1,2-Dichloroethene	16000	100	100		12/28/01 18:04	JC	970556
cis-1,3-Dichloropropene	ND	1	1		12/28/01 0:17	JN	966494
trans-1,2-Dichloroethene	62	1	1		12/28/01 0:17	JN	966494
trans-1,3-Dichloropropene	ND	1	1		12/28/01 0:17	JN	966494
Xylenes, Total	350	3	1		12/28/01 0:17	JN	966494
Surr: 1,2-Dichloroethane-d4	108	% 62-130	100		12/28/01 18:04	JC	970556
Surr: 1,2-Dichloroethane-d4	102	% 62-130	1		12/28/01 0:17	JN	966494
Surr: 4-Bromofluorobenzene	100	% 70-130	1		12/28/01 0:17	JN	966494
Surr: 4-Bromofluorobenzene	84.0	% 70-130	100		12/28/01 18:04	JC	970556
Surr: Toluene-d8	96.0	% 74-122	100		12/28/01 18:04	JC	970556
Surr: Toluene-d8	96.0	% 74-122	1		12/28/01 0:17	JN	966494

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
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Client Sample ID GW-17303-JH-121401-104

Collected: 12/14/01 10:50:0 SPL Sample ID: 01120641-02

Site: #17303 Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	345	5	5		12/26/01 14:00	CV	964787
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	1.02	0.02	1		12/20/01 7:57	EG	957689
Potassium	3.83	2	1		12/20/01 7:57	EG	957689

Prep Method	Prep Date	Prep Initials
SW3010A	12/17/2001 13:30	MME

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
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HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-JH-121401-104

Collected: 12/14/01 10:50:0 SPL Sample ID: 01120641-02

Site: #17303 Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1	1		12/28/01 0:46	JN	966497
1,1,1-Trichloroethane	ND	1	1		12/28/01 0:46	JN	966497
1,1,2,2-Tetrachloroethane	ND	1	1		12/28/01 0:46	JN	966497
1,1,2-Trichloroethane	ND	1	1		12/28/01 0:46	JN	966497
1,1-Dichloroethane	ND	1	1		12/28/01 0:46	JN	966497
1,1-Dichloroethene	2	1	1		12/28/01 0:46	JN	966497
1,2,3-Trichloropropane	ND	1	1		12/28/01 0:46	JN	966497
1,2,4-Trichlorobenzene	ND	5	1		12/28/01 0:46	JN	966497
1,2,4-Trimethylbenzene	ND	1	1		12/28/01 0:46	JN	966497
1,2-Dibromo-3-chloropropane	ND	1	1		12/28/01 0:46	JN	966497
1,2-Dichlorobenzene	ND	1	1		12/28/01 0:46	JN	966497
1,2-Dichloroethane	ND	1	1		12/28/01 0:46	JN	966497
1,2-Dichloropropane	ND	1	1		12/28/01 0:46	JN	966497
1,3,5-Trimethylbenzene	ND	1	1		12/28/01 0:46	JN	966497
1,3-Dichlorobenzene	ND	1	1		12/28/01 0:46	JN	966497
1,4-Dichlorobenzene	ND	1	1		12/28/01 0:46	JN	966497
2-Butanone	ND	50	1		12/28/01 0:46	JN	966497
2-Hexanone	ND	50	1		12/28/01 0:46	JN	966497
4-Methyl-2-pentanone	ND	50	1		12/28/01 0:46	JN	966497
Acetone	ND	100	1		12/28/01 0:46	JN	966497
Benzene	5	1	1		12/28/01 0:46	JN	966497
Bromochloromethane	ND	1	1		12/28/01 0:46	JN	966497
Bromodichloromethane	ND	1	1		12/28/01 0:46	JN	966497
Bromoform	ND	1	1		12/28/01 0:46	JN	966497
Bromomethane	ND	1	1		12/28/01 0:46	JN	966497
Carbon disulfide	ND	5	1		12/28/01 0:46	JN	966497
Carbon tetrachloride	ND	1	1		12/28/01 0:46	JN	966497
Chlorobenzene	ND	1	1		12/28/01 0:46	JN	966497
Chloroethane	ND	1	1		12/28/01 0:46	JN	966497
Chloroform	10	1	1		12/28/01 0:46	JN	966497
Chloromethane	ND	1	1		12/28/01 0:46	JN	966497
Dibromochloromethane	ND	1	1		12/28/01 0:46	JN	966497
Dibromomethane	ND	1	1		12/28/01 0:46	JN	966497
Dichlorodifluoromethane	ND	1	1		12/28/01 0:46	JN	966497
Ethyl Ether	ND	20	1		12/28/01 0:46	JN	966497
Ethylbenzene	ND	1	1		12/28/01 0:46	JN	966497
Iodomethane	ND	1	1		12/28/01 0:46	JN	966497
Isopropylbenzene	ND	1	1		12/28/01 0:46	JN	966497
Methylene chloride	ND	5	1		12/28/01 0:46	JN	966497
n-Propylbenzene	ND	1	1		12/28/01 0:46	JN	966497

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-JH-121401-104

Collected: 12/14/01 10:50:0 SPL Sample ID: 01120641-02

Site: #17303 Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5	1		12/28/01 0:46	JN	966497
Styrene	ND	1	1		12/28/01 0:46	JN	966497
Tetrachloroethene	ND	1	1		12/28/01 0:46	JN	966497
Toluene	4	1	1		12/28/01 0:46	JN	966497
trans-1,4-Dichloro-2-Butene	ND	2	1		12/28/01 0:46	JN	966497
Trichloroethene	10000	100	100		12/28/01 15:18	JC	970549
Vinyl chloride	87 J	100	100		12/28/01 15:18	JC	970549
cis-1,2-Dichloroethene	2100	100	100		12/28/01 15:18	JC	970549
cis-1,3-Dichloropropene	ND	1	1		12/28/01 0:46	JN	966497
trans-1,2-Dichloroethene	78	1	1		12/28/01 0:46	JN	966497
trans-1,3-Dichloropropene	ND	1	1		12/28/01 0:46	JN	966497
Xylenes, Total	ND	3	1		12/28/01 0:46	JN	966497
Surr: 1,2-Dichloroethane-d4	96.0	% 62-130	1		12/28/01 0:46	JN	966497
Surr: 1,2-Dichloroethane-d4	104	% 62-130	100		12/28/01 15:18	JC	970549
Surr: 4-Bromofluorobenzene	78.0	% 70-130	100		12/28/01 15:18	JC	970549
Surr: 4-Bromofluorobenzene	102	% 70-130	1		12/28/01 0:46	JN	966497
Surr: Toluene-d8	96.0	% 74-122	1		12/28/01 0:46	JN	966497
Surr: Toluene-d8	94.0	% 74-122	100		12/28/01 15:18	JC	970549

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
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J - Estimated Value between MDL and PQL

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D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



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Client Sample ID GW-17303-JH-121401-105

Collected: 12/14/01 12:00:0 SPL Sample ID: 01120641-03

Site: #17303 Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	362	5	5		12/26/01 14:00	CV	964788
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	1.03	0.02	1		12/20/01 8:04	EG	957690
Potassium	4.12	2	1		12/20/01 8:04	EG	957690

Prep Method	Prep Date	Prep Initials
SW3010A	12/17/2001 13:30	MME

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

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D - Surrogate Recovery Unreportable due to Dilution
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HOUSTON LABORATORY
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HOUSTON, TX 77054
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Client Sample ID GW-17303-JH-121401-105

Collected: 12/14/01 12:00:0 SPL Sample ID: 01120641-03

Site: #17303 Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B		MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	1	1		12/28/01 1:15	JN	966498
1,1,1-Trichloroethane	ND	1	1		12/28/01 1:15	JN	966498
1,1,2,2-Tetrachloroethane	ND	1	1		12/28/01 1:15	JN	966498
1,1,2-Trichloroethane	ND	1	1		12/28/01 1:15	JN	966498
1,1-Dichloroethane	ND	1	1		12/28/01 1:15	JN	966498
1,1-Dichloroethene	2	1	1		12/28/01 1:15	JN	966498
1,2,3-Trichloropropane	ND	1	1		12/28/01 1:15	JN	966498
1,2,4-Trichlorobenzene	ND	5	1		12/28/01 1:15	JN	966498
1,2,4-Trimethylbenzene	ND	1	1		12/28/01 1:15	JN	966498
1,2-Dibromo-3-chloropropane	ND	1	1		12/28/01 1:15	JN	966498
1,2-Dichlorobenzene	ND	1	1		12/28/01 1:15	JN	966498
1,2-Dichloroethane	ND	1	1		12/28/01 1:15	JN	966498
1,2-Dichloropropane	ND	1	1		12/28/01 1:15	JN	966498
1,3,5-Trimethylbenzene	ND	1	1		12/28/01 1:15	JN	966498
1,3-Dichlorobenzene	ND	1	1		12/28/01 1:15	JN	966498
1,4-Dichlorobenzene	ND	1	1		12/28/01 1:15	JN	966498
2-Butanone	ND	50	1		12/28/01 1:15	JN	966498
2-Hexanone	ND	50	1		12/28/01 1:15	JN	966498
4-Methyl-2-pentanone	ND	50	1		12/28/01 1:15	JN	966498
Acetone	ND	100	1		12/28/01 1:15	JN	966498
Benzene	5	1	1		12/28/01 1:15	JN	966498
Bromochloromethane	ND	1	1		12/28/01 1:15	JN	966498
Bromodichloromethane	ND	1	1		12/28/01 1:15	JN	966498
Bromoform	ND	1	1		12/28/01 1:15	JN	966498
Bromomethane	ND	1	1		12/28/01 1:15	JN	966498
Carbon disulfide	ND	5	1		12/28/01 1:15	JN	966498
Carbon tetrachloride	ND	1	1		12/28/01 1:15	JN	966498
Chlorobenzene	ND	1	1		12/28/01 1:15	JN	966498
Chloroethane	ND	1	1		12/28/01 1:15	JN	966498
Chloroform	9	1	1		12/28/01 1:15	JN	966498
Chloromethane	ND	1	1		12/28/01 1:15	JN	966498
Dibromochloromethane	ND	1	1		12/28/01 1:15	JN	966498
Dibromomethane	ND	1	1		12/28/01 1:15	JN	966498
Dichlorodifluoromethane	ND	1	1		12/28/01 1:15	JN	966498
Ethyl Ether	ND	20	1		12/28/01 1:15	JN	966498
Ethylbenzene	1	1	1		12/28/01 1:15	JN	966498
Iodomethane	ND	1	1		12/28/01 1:15	JN	966498
Isopropylbenzene	ND	1	1		12/28/01 1:15	JN	966498
Methylene chloride	ND	5	1		12/28/01 1:15	JN	966498
n-Propylbenzene	ND	1	1		12/28/01 1:15	JN	966498

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-JH-121401-105

Collected: 12/14/01 12:00:0 SPL Sample ID: 01120641-03

Site: #17303 Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5	1		12/28/01 1:15	JN	966498
Styrene	ND	1	1		12/28/01 1:15	JN	966498
Tetrachloroethene	ND	1	1		12/28/01 1:15	JN	966498
Toluene	4	1	1		12/28/01 1:15	JN	966498
trans-1,4-Dichloro-2-Butene	ND	2	1		12/28/01 1:15	JN	966498
Trichloroethene	13000	100	100		12/28/01 15:46	JC	970550
Vinyl chloride	96 J	100	100		12/28/01 15:46	JC	970550
cis-1,2-Dichloroethene	2300	100	100		12/28/01 15:46	JC	970550
cis-1,3-Dichloropropene	ND	1	1		12/28/01 1:15	JN	966498
trans-1,2-Dichloroethene	69	1	1		12/28/01 1:15	JN	966498
trans-1,3-Dichloropropene	ND	1	1		12/28/01 1:15	JN	966498
Xylenes, Total	ND	3	1		12/28/01 1:15	JN	966498
Surr: 1,2-Dichloroethane-d4	98.0 %	62-130	1		12/28/01 1:15	JN	966498
Surr: 1,2-Dichloroethane-d4	104 %	62-130	100		12/28/01 15:46	JC	970550
Surr: 4-Bromofluorobenzene	78.0 %	70-130	100		12/28/01 15:46	JC	970550
Surr: 4-Bromofluorobenzene	104 %	70-130	1		12/28/01 1:15	JN	966498
Surr: Toluene-d8	98.0 %	74-122	1		12/28/01 1:15	JN	966498
Surr: Toluene-d8	96.0 %	74-122	100		12/28/01 15:46	JC	970550

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



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Client Sample ID Trip Blank

Collected: 12/14/01

SPL Sample ID: 01120641-04

Site: #17303 Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1	1		12/28/01 8:28	JN	967461
1,1,1-Trichloroethane	ND	1	1		12/28/01 8:28	JN	967461
1,1,2,2-Tetrachloroethane	ND	1	1		12/28/01 8:28	JN	967461
1,1,2-Trichloroethane	ND	1	1		12/28/01 8:28	JN	967461
1,1-Dichloroethane	ND	1	1		12/28/01 8:28	JN	967461
1,1-Dichloroethene	ND	1	1		12/28/01 8:28	JN	967461
1,2,3-Trichloropropane	ND	1	1		12/28/01 8:28	JN	967461
1,2,4-Trichlorobenzene	ND	5	1		12/28/01 8:28	JN	967461
1,2,4-Trimethylbenzene	ND	1	1		12/28/01 8:28	JN	967461
1,2-Dibromo-3-chloropropane	ND	1	1		12/28/01 8:28	JN	967461
1,2-Dichlorobenzene	ND	1	1		12/28/01 8:28	JN	967461
1,2-Dichloroethane	ND	1	1		12/28/01 8:28	JN	967461
1,2-Dichloropropane	ND	1	1		12/28/01 8:28	JN	967461
1,3,5-Trimethylbenzene	ND	1	1		12/28/01 8:28	JN	967461
1,3-Dichlorobenzene	ND	1	1		12/28/01 8:28	JN	967461
1,4-Dichlorobenzene	ND	1	1		12/28/01 8:28	JN	967461
2-Butanone	ND	50	1		12/28/01 8:28	JN	967461
2-Hexanone	ND	50	1		12/28/01 8:28	JN	967461
4-Methyl-2-pentanone	ND	50	1		12/28/01 8:28	JN	967461
Acetone	ND	100	1		12/28/01 8:28	JN	967461
Benzene	ND	1	1		12/28/01 8:28	JN	967461
Bromochloromethane	ND	1	1		12/28/01 8:28	JN	967461
Bromodichloromethane	ND	1	1		12/28/01 8:28	JN	967461
Bromoform	ND	1	1		12/28/01 8:28	JN	967461
Bromomethane	ND	1	1		12/28/01 8:28	JN	967461
Carbon disulfide	ND	5	1		12/28/01 8:28	JN	967461
Carbon tetrachloride	ND	1	1		12/28/01 8:28	JN	967461
Chlorobenzene	ND	1	1		12/28/01 8:28	JN	967461
Chloroethane	ND	1	1		12/28/01 8:28	JN	967461
Chloroform	ND	1	1		12/28/01 8:28	JN	967461
Chloromethane	ND	1	1		12/28/01 8:28	JN	967461
Dibromochloromethane	ND	1	1		12/28/01 8:28	JN	967461
Dibromomethane	ND	1	1		12/28/01 8:28	JN	967461
Dichlorodifluoromethane	ND	1	1		12/28/01 8:28	JN	967461
Ethyl Ether	ND	20	1		12/28/01 8:28	JN	967461
Ethylbenzene	ND	1	1		12/28/01 8:28	JN	967461
Iodomethane	ND	1	1		12/28/01 8:28	JN	967461
Isopropylbenzene	ND	1	1		12/28/01 8:28	JN	967461
Methylene chloride	ND	5	1		12/28/01 8:28	JN	967461
n-Propylbenzene	ND	1	1		12/28/01 8:28	JN	967461

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



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Client Sample ID Trip Blank

Collected: 12/14/01

SPL Sample ID: 01120641-04

Site: #17303 Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5	1		12/28/01 8:28	JN	967461
Styrene	ND	1	1		12/28/01 8:28	JN	967461
Tetrachloroethene	ND	1	1		12/28/01 8:28	JN	967461
Toluene	ND	1	1		12/28/01 8:28	JN	967461
trans-1,4-Dichloro-2-Butene	ND	2	1		12/28/01 8:28	JN	967461
Trichloroethene	ND	1	1		12/28/01 8:28	JN	967461
Vinyl chloride	ND	1	1		12/28/01 8:28	JN	967461
cis-1,2-Dichloroethene	ND	1	1		12/28/01 8:28	JN	967461
cis-1,3-Dichloropropene	ND	1	1		12/28/01 8:28	JN	967461
trans-1,2-Dichloroethene	ND	1	1		12/28/01 8:28	JN	967461
trans-1,3-Dichloropropene	ND	1	1		12/28/01 8:28	JN	967461
Xylenes, Total	ND	3	1		12/28/01 8:28	JN	967461
Surr: 1,2-Dichloroethane-d4	94.0	% 62-130	1		12/28/01 8:28	JN	967461
Surr: 4-Bromofluorobenzene	100	% 70-130	1		12/28/01 8:28	JN	967461
Surr: Toluene-d8	96.0	% 74-122	1		12/28/01 8:28	JN	967461

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

Quality Control Documentation



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
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Conestoga-Rovers & Associates

#17303 Willow Run/CVO

Analysis: Metals by Method 6010B, Total
Method: SW6010B

WorkOrder: 01120641
Lab Batch ID: 16910

Method Blank

RunID: TJA_011219E-957681 Units: mg/L
Analysis Date: 12/20/2001 7:08 Analyst: EG
Preparation Date: 12/17/2001 13:30 Prep By: MME Method SW3010A

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
01120641-01C	GW-17303-JH-121401-103
01120641-02C	GW-17303-JH-121401-104
01120641-03C	GW-17303-JH-121401-105

Analyte	Result	Rep Limit
Manganese	ND	0.02
Potassium	ND	2

Laboratory Control Sample (LCS)

RunID: TJA_011219E-957682 Units: mg/L
Analysis Date: 12/20/2001 7:14 Analyst: EG
Preparation Date: 12/17/2001 13:30 Prep By: MME Method SW3010A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Manganese	2	1.92	96	80	120
Potassium	20	20.1	100	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01120641-01
RunID: TJA_011219E-957684 Units: mg/L
Analysis Date: 12/20/2001 7:26 Analyst: EG
Preparation Date: 12/17/2001 13:30 Prep By: MME Method SW3010A

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Manganese	0.57	1	1.5	92.5	1	1.53	95.9	3.53	20	75	125
Potassium	5.5	10	16	105	10	16.2	107	1.40	20	75	125

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

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Conestoga-Rovers & Associates

#17303 Willow Run/CVO

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 01120641
Lab Batch ID: R50730

Method Blank

RunID: K_011227A-966467 Units: ug/L
Analysis Date: 12/27/2001 16:33 Analyst: JN

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
01120641-01A	GW-17303-JH-121401-103
01120641-02A	GW-17303-JH-121401-104
01120641-03A	GW-17303-JH-121401-105

Analyte	Result	Rep Limit
1,1,1,2-Tetrachloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,1,2-Trichloroethane	ND	1.0
1,1-Dichloroethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,2,3-Trichloropropane	ND	1.0
1,2,4-Trichlorobenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	1.0
1,2-Dibromo-3-chloropropane	ND	1.0
1,2-Dichlorobenzene	ND	1.0
1,2-Dichloroethane	ND	1.0
1,2-Dichloropropane	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
2-Butanone	ND	50
2-Hexanone	ND	50
4-Methyl-2-pentanone	ND	50
Acetone	ND	100
Benzene	ND	1.0
Bromochloromethane	ND	1.0
Bromodichloromethane	ND	1.0
Bromoform	ND	1.0
Bromomethane	ND	1.0
Carbon disulfide	ND	5.0
Carbon tetrachloride	ND	1.0
Chlorobenzene	ND	1.0
Chloroethane	ND	1.0
Chloroform	ND	1.0
Chloromethane	ND	1.0
Dibromochloromethane	ND	1.0
Dibromomethane	ND	1.0
Dichlorodifluoromethane	ND	1.0
Ethyl Ether	ND	20
Ethylbenzene	ND	1.0
Iodomethane	ND	1.0
Isopropylbenzene	ND	1.0
Methylene chloride	ND	5.0
n-Propylbenzene	ND	1.0
Naphthalene	ND	5.0
Styrene	ND	1.0
Tetrachloroethene	ND	1.0
Toluene	ND	1.0
trans-1,4-Dichloro-2-Butene	ND	2.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

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Conestoga-Rovers & Associates

#17303 Willow Run/CVO

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 01120641
Lab Batch ID: R50730

Method Blank

RunID: K_011227A-966467 Units: ug/L
Analysis Date: 12/27/2001 16:33 Analyst: JN

Analyte	Result	Rep Limit
Xylenes, Total	ND	3.0
Surr: 1,2-Dichloroethane-d4	100.0	62-130
Surr: 4-Bromofluorobenzene	102.0	70-130
Surr: Toluene-d8	98.0	74-122

Laboratory Control Sample (LCS)

RunID: K_011227A-966466 Units: ug/L
Analysis Date: 12/27/2001 15:34 Analyst: JN

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	38	76	61	145
Benzene	50	48	96	76	127
Chlorobenzene	50	54	108	75	130
Toluene	50	51	102	76	125
Trichloroethene	50	55	110	71	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01120667-06
RunID: K_011227A-966488 Units: ug/L
Analysis Date: 12/27/2001 23:19 Analyst: JN

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	10000	7600	76	10000	7600	76.0	0	14	38	172
Benzene	ND	10000	9500	95	10000	9200	92.0	3	11	66	134
Chlorobenzene	ND	10000	10000	100	10000	10000	100	0	13	67	115
Toluene	ND	10000	10000	100	10000	10000	100	0	13	59	125
Trichloroethene	2900	10000	13000	101	10000	13000	101	0	14	61	134

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

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Conestoga-Rovers & Associates

#17303 Willow Run/CVO

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 01120641
Lab Batch ID: R50748

Method Blank

RunID: N_011228A-966901 Units: ug/L
Analysis Date: 12/28/2001 10:20 Analyst: JC

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
01120641-01A	GW-17303-JH-121401-103
01120641-02A	GW-17303-JH-121401-104
01120641-03A	GW-17303-JH-121401-105

Analyte	Result	Rep Limit
Trichloroethene	ND	1.0
Vinyl chloride	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
Surr: 1,2-Dichloroethane-d4	110.0	62-130
Surr: 4-Bromofluorobenzene	78.0	70-130
Surr: Toluene-d8	92.0	74-122

Laboratory Control Sample (LCS)

RunID: N_011228A-966899 Units: ug/L
Analysis Date: 12/28/2001 9:26 Analyst: JC

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	40	80	61	145
Benzene	50	44	88	76	127
Chlorobenzene	50	45	90	75	130
Toluene	50	46	92	76	125
Trichloroethene	50	40	80	71	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01120885-11
RunID: N_011228A-966907 Units: ug/L
Analysis Date: 12/28/2001 11:42 Analyst: JC

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	50	44	88	50	41	82.0	7	14	38	172
Benzene	ND	50	51	102	50	47	94.0	8	11	66	134
Chlorobenzene	ND	50	52	104	50	50	100	4	13	67	115
Toluene	ND	50	53	106	50	50	100	6	13	59	125
Trichloroethene	ND	50	44	88	50	42	84.0	5	14	61	134

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

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Conestoga-Rovers & Associates

#17303 Willow Run/CVO

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 01120641
Lab Batch ID: R50748

Qualifiers:	ND/U - Not Detected at the Reporting Limit	MI - Matrix Interference
	B - Analyte detected in the associated Method Blank	D - Recovery Unreportable due to Dilution
	J - Estimated value between MDL and PQL	* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

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Conestoga-Rovers & Associates

#17303 Willow Run/CVO

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 01120641
Lab Batch ID: R50777

Method Blank

Samples in Analytical Batch:

RunID: N_011228B-967457 Units: ug/L
Analysis Date: 12/28/2001 6:33 Analyst: JN

Lab Sample ID Client Sample ID
01120641-04A Trip Blank

Analyte	Result	Rep Limit
1,1,1,2-Tetrachloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,1,2-Trichloroethane	ND	1.0
1,1-Dichloroethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,2,3-Trichloropropane	ND	1.0
1,2,4-Trichlorobenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	1.0
1,2-Dibromo-3-chloropropane	ND	1.0
1,2-Dichlorobenzene	ND	1.0
1,2-Dichloroethane	ND	1.0
1,2-Dichloropropane	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
2-Butanone	ND	50
2-Hexanone	ND	50
4-Methyl-2-pentanone	ND	50
Acetone	ND	100
Benzene	ND	1.0
Bromochloromethane	ND	1.0
Bromodichloromethane	ND	1.0
Bromoform	ND	1.0
Bromomethane	ND	1.0
Carbon disulfide	ND	5.0
Carbon tetrachloride	ND	1.0
Chlorobenzene	ND	1.0
Chloroethane	ND	1.0
Chloroform	ND	1.0
Chloromethane	ND	1.0
Dibromochloromethane	ND	1.0
Dibromomethane	ND	1.0
Dichlorodifluoromethane	ND	1.0
Ethyl Ether	ND	20
Ethylbenzene	ND	1.0
Iodomethane	ND	1.0
Isopropylbenzene	ND	1.0
Methylene chloride	ND	5.0
n-Propylbenzene	ND	1.0
Naphthalene	ND	5.0
Styrene	ND	1.0
Tetrachloroethene	ND	1.0
Toluene	ND	1.0
trans-1,4-Dichloro-2-Butene	ND	2.0
Trichloroethene	ND	1.0
Vinyl chloride	ND	1.0
cis-1,2-Dichloroethene	ND	1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit

MI - Matrix Interference

B - Analyte detected in the associated Method Blank

D - Recovery Unreportable due to Dilution

J - Estimated value between MDL and PQL

* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

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Conestoga-Rovers & Associates

#17303 Willow Run/CVO

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 01120641
Lab Batch ID: R50777

Method Blank

RunID: N_011228B-967457 Units: ug/L
Analysis Date: 12/28/2001 6:33 Analyst: JN

Analyte	Result	Rep Limit
cis-1,3-Dichloropropene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Xylenes, Total	ND	3.0
Surr: 1,2-Dichloroethane-d4	94.0	62-130
Surr: 4-Bromofluorobenzene	100.0	70-130
Surr: Toluene-d8	94.0	74-122

Laboratory Control Sample (LCS)

RunID: N_011228B-967456 Units: ug/L
Analysis Date: 12/28/2001 5:36 Analyst: JN

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	40	80	61	145
Benzene	50	48	96	76	127
Chlorobenzene	50	51	102	75	130
Toluene	50	50	100	76	125
Trichloroethene	50	52	104	71	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01120667-06
RunID: N_011228B-967452 Units: ug/L
Analysis Date: 12/27/2001 23:19 Analyst: JN

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	10000	7600	76	10000	7600	76.0	0	14	38	172
Benzene	ND	10000	9500	95	10000	9200	92.0	3	11	66	134
Chlorobenzene	ND	10000	10000	100	10000	10000	100	0	13	67	115
Toluene	ND	10000	10000	100	10000	10000	100	0	13	59	125
Trichloroethene	2900	10000	13000	101	10000	13000	101	0	14	61	134

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

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HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

#17303 Willow Run/CVO

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 01120641
Lab Batch ID: R50777

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

#17303 Willow Run/CVO

Analysis: Chloride, Total
Method: E325.3

WorkOrder: 01120641
Lab Batch ID: R50608

Method Blank

RunID: WET_011226J-964778 Units: mg/L
Analysis Date: 12/26/2001 14:00 Analyst: CV

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
01120641-01B	GW-17303-JH-121401-103
01120641-02B	GW-17303-JH-121401-104
01120641-03B	GW-17303-JH-121401-105

Analyte	Result	Rep Limit
Chloride	ND	1.0

Laboratory Control Sample (LCS)

RunID: WET_011226J-964780 Units: mg/L
Analysis Date: 12/26/2001 14:00 Analyst: CV

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	143	140	98	90	110

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01120595-01
RunID: WET_011226J-964782 Units: mg/L
Analysis Date: 12/26/2001 14:00 Analyst: CV

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	670	1250	1920	99.9	1250	1900	98.2	1.74	20	85	115

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

*Sample Receipt Checklist
And
Chain of Custody*



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	01120641	Received By:	DS
Date and Time Received:	12/15/01 10:00:00 AM	Carrier name:	FedEx
Temperature:	2	Chilled by:	Water Ice

- | | | | |
|--|---|--|---|
| 1. Shipping container/cooler in good condition? | Yes ☒ | No ☐ | Not Present ☐ |
| 2. Custody seals intact on shipping container/cooler? | Yes ☒ | No ☐ | Not Present ☐ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☒ |
| 4. Chain of custody present? | Yes ☒ | No ☐ | |
| 5. Chain of custody signed when relinquished and received? | Yes ☒ | No ☐ | |
| 6. Chain of custody agrees with sample labels?
1.Trip Blank received but not on COC | Yes ☐ | No ☒ | |
| 7. Samples in proper container/bottle? | Yes ☒ | No ☐ | |
| 8. Sample containers intact? | Yes ☒ | No ☐ | |
| 9. Sufficient sample volume for indicated test? | Yes ☒ | No ☐ | |
| 10. All samples received within holding time? | Yes ☒ | No ☐ | |
| 11. Container/Temp Blank temperature in compliance? | Yes ☒ | No ☐ | |
| 12. Water - VOA vials have zero headspace? | Yes ☒ | No ☐ | Not Applicable ☐ |
| 13. Water - pH acceptable upon receipt? | Yes ☒ | No ☐ | Not Applicable ☐ |

SPL Representative: Wyatt, Neaundra

Contact Date & Time: 12/20/01 10:30:00 AM

Client Name Contacted: Steven Carter

Non Conformance Issues: 1. Logged in on hold until further notice

Client Instructions: Notified client via fax along with confirmation of receipt on December 18, 2001. Sent e-mail to Paul Wiseman and Steven Carter on December 20, 2001. Per Steven Carter via revised chain of custody received, via fax, SPL analyzed the Trip Blank for VOC by method 8260.

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.

14496 Sheldon Road, Suite 200

Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

SPL / HOUSTON

01120641

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17303

PROJECT NAME:

WILLOW RUN/CVO

REVISED
12/20/01SAMPLER'S
SIGNATURE:PRINTED
NAME:

JASON HAEZLE

NO. OF
CONTAINERS

PARAMETERS

SEQ:
No.

DATE

TIME

SAMPLE
TYPE

REMARKS

VOC
CHLORIDE
Mn & K

SEQ: No.	DATE	TIME	SAMPLE TYPE
1	12/14/01	0920	GW-17303-JH-121401-103
2	12/14/01	1050	GW-17303-JH-121401-104
3	12/14/01	1200	GW-17303-JH-121401-105

WATER

5

X

X

X

WATER

5

X

X

X

WATER

5

X

X

X

Trip Blank

~ please analyze the trip blank

Three Street Codes
in 100 lot

TOTAL NUMBER OF CONTAINERS

15

RELINQUISHED BY:

1.

DATE: 12/14/01

TIME: 10:41 AM

RECEIVED BY:

1.

DATE:

TIME:

RELINQUISHED BY:

2.

DATE:

TIME:

RECEIVED BY:

2.

DATE:

TIME:

RELINQUISHED BY:

3.

DATE:

TIME:

RECEIVED BY:

1.

DATE:

TIME:

METHOD OF SHIPMENT:

Federal Express

AIR BILL No. 8296 7298 5651

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

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY:

D. Amma

DATE: 12/15/01 TIME: 1000

13086

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.

14496 Sheldon Road, Suite 200

Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

SPL / HOUSTON

01120641

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17303

PROJECT NAME:

WILLOW RUN / CVO

SAMPLER'S
SIGNATURE:

JASON E. JAHN

PRINTED

NAME: JASON HAEZLE

No. OF
CONTAINERS

PARAMETERS

VOC

CHLORIDE

Mn & K

PH

12/15

REMARKS

SEQ.
No.

DATE

TIME

SAMPLE
TYPE

1

12/14/01

0920

GW-17303-JH-121401-103

WATER

5

X

X

X

2

12/14/01

1050

GW-17303-JH-121401-104

WATER

5

X

X

X

3

12/14/01

1200

GW-17303-JH-121401-105

WATER

5

X

X

X

TOTAL NUMBER OF CONTAINERS

15

RELINQUISHED BY:

1. [Signature]

DATE: 12/14/01

TIME: 10:41 AM

RECEIVED BY:

1. _____

DATE:

TIME:

RELINQUISHED BY:

2. _____

DATE:

TIME:

RECEIVED BY:

2. _____

DATE:

TIME:

RELINQUISHED BY:

3. _____

DATE:

TIME:

RECEIVED BY:

1. _____

DATE:

TIME:

METHOD OF SHIPMENT:

Federal Express

AIR BILL No. 8296 7298 5651

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

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY:

D. Amma

DATE: 12/15/01 TIME: 1000

18086



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
(713) 660-0901

Conestoga-Rovers & Associates

Certificate of Analysis Number:

02010394

<u>Report To:</u> Conestoga-Rovers & Associates Paul Wiseman 14496 Sheldon Rd. Suite 200 Plymouth MI 48170- ph: (734) 453-5123 fax: (734) 453-5201	<u>Project Name:</u> #17303-Former Willow Run Assembly <u>Site:</u> #17303-Former Willow Run Assembly <u>Site Address:</u> <u>PO Number:</u> 40-0017478 <u>State:</u> Michigan <u>State Cert. No.:</u> <u>Date Reported:</u> 2/6/02
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This Report Contains A Total Of 35 Pages

Excluding This Page

And

Chain Of Custody

ORIGINAL ANALYTICAL REPORT

Project#: 17303 Lab#: 02010394

Name: Former Willow Run

Description

Event: GW Sampling

Samples: 6-W (1/14-111-116)

Analysis: VOC, Select Metals

TAT: 2 wk

Lab: SPL

Checked Against Preliminary Data:

Date: 2/15/02 Init.: ~

Date of Validation Memo: 2/13/02

Invoice Approval Date: 4/8/02

Comments: _____

FEB 14 2002

CEA SDG 6.



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:
Conestoga-Rovers & Associates

Certificate of Analysis Number:

02010394

Report To: Conestoga-Rovers & Associates Paul Wiseman 14496 Sheldon Rd. Suite 200 Plymouth MI 48170- ph: (734) 453-5123 fax: (734) 453-5201	Project Name: #17303-Former Willow Run Assembly Site: #17303-Former Willow Run Assembly Site Address: PO Number: 40-0017478 State: Michigan State Cert. No.: Date Reported: 2/6/02
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Your sample "GW-17303-011402-BN-113" (SPL ID: 02010394-03) was analyzed for the presence of Volatile Organics using Method 8260B. The concentrations of some target analytes in this sample required that multiple dilutions and analysis of the sample be performed. In order to provide the lowest possible reporting limits for other target analytes, the trans-1,2-Dichloroethene concentration on this sample is reported with an "E" qualifier indicating that the reported concentration is above the concentration of the highest point on the instrument calibration curve.

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

FEB 14 2002

Sonia West

2/13/02

Date

Senior Project Manager



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

Certificate of Analysis Number:

02010394

Report To: Conestoga-Rovers & Associates

Paul Wiseman
14496 Sheldon Rd.
Suite 200
Plymouth
MI

48170-

ph: (734) 453-5123

fax: (734) 453-5201

Project Name: #17303-Former Willow Run Assembly

Site: #17303-Former Willow Run Assembly

Site Address:

PO Number: 40-0017478

State: Michigan

State Cert. No.:

Date Reported: 2/6/02

Fax To:

Conestoga-Rovers & Associates

Paul Wiseman

fax: (734) 453-5201

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
GW-17303-011402-BN-111	02010394-01	Water	1/14/02 9:10:00 AM	1/15/02 10:00:00 AM	18640	☐
GW-17303-011402-BN-112	02010394-02	Water	1/14/02 11:05:00 AM	1/15/02 10:00:00 AM	18640	☐
GW-17303-011402-BN-113	02010394-03	Water	1/14/02 12:50:00 PM	1/15/02 10:00:00 AM	18640	☐
GW-17303-011402-BN-114	02010394-04	Water	1/14/02 3:45:00 PM	1/15/02 10:00:00 AM	18640	☐
GW-17303-011402-BN-115	02010394-05	Water	1/14/02 4:40:00 PM	1/15/02 10:00:00 AM	18640	☐
GW-17303-011402-BN-116	02010394-06	Water	1/14/02 5:50:00 PM	1/15/02 10:00:00 AM	18640	☐
TRIP BLANK	02010394-07	Water	1/14/02	1/15/02 10:00:00 AM	18640	☐

Sonia West
Sonia West

Senior Project Manager

2/13/02

Date

Joel Grice
Laboratory Director

Ted Yen
Quality Assurance Officer

FEB 14 2002



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-111

Collected: 1/14/02 9:10:00 SPL Sample ID: 02010394-01

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL				E325.3	Units: mg/L		
Chloride	854	20	25		01/24/02 11:30	CV	995281
METALS BY METHOD 6010B, TOTAL				SW6010B	Units: mg/L		
Manganese	4.92	0.02	1		01/22/02 2:42	NS	989189
Potassium	591	4	2		01/30/02 11:37	NS	1000946

Prep Method	Prep Date	Prep Initials
SW3010A	01/16/2002 14:00	JME

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-111

Collected: 1/14/02 9:10:00

SPL Sample ID: 02010394-01

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B		MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	1	1		01/16/02 17:00	C_V	983477
1,1,1-Trichloroethane	ND	1	1		01/16/02 17:00	C_V	983477
1,1,2,2-Tetrachloroethane	ND	1	1		01/16/02 17:00	C_V	983477
1,1,2-Trichloroethane	ND	1	1		01/16/02 17:00	C_V	983477
1,1-Dichloroethane	ND	1	1		01/16/02 17:00	C_V	983477
1,1-Dichloroethene	12	1	1		01/16/02 17:00	C_V	983477
1,2,3-Trichloropropane	ND	1	1		01/16/02 17:00	C_V	983477
1,2,4-Trichlorobenzene	ND	5	1		01/16/02 17:00	C_V	983477
1,2,4-Trimethylbenzene	11	1	1		01/16/02 17:00	C_V	983477
1,2-Dibromo-3-chloropropane	ND	1	1		01/16/02 17:00	C_V	983477
1,2-Dichlorobenzene	ND	1	1		01/16/02 17:00	C_V	983477
1,2-Dichloroethane	ND	1	1		01/16/02 17:00	C_V	983477
1,2-Dichloropropane	ND	1	1		01/16/02 17:00	C_V	983477
1,3,5-Trimethylbenzene	4	1	1		01/16/02 17:00	C_V	983477
1,3-Dichlorobenzene	ND	1	1		01/16/02 17:00	C_V	983477
1,4-Dichlorobenzene	ND	1	1		01/16/02 17:00	C_V	983477
2-Butanone	160	50	1		01/16/02 17:00	C_V	983477
2-Hexanone	ND	50	1		01/16/02 17:00	C_V	983477
4-Methyl-2-pentanone	ND	50	1		01/16/02 17:00	C_V	983477
Acetone	130	100	1		01/16/02 17:00	C_V	983477
Benzene	34	1	1		01/16/02 17:00	C_V	983477
Bromochloromethane	ND	1	1		01/16/02 17:00	C_V	983477
Bromodichloromethane	ND	1	1		01/16/02 17:00	C_V	983477
Bromoform	ND	1	1		01/16/02 17:00	C_V	983477
Bromomethane	ND	1	1		01/16/02 17:00	C_V	983477
Carbon disulfide	5	5	1		01/16/02 17:00	C_V	983477
Carbon tetrachloride	ND	1	1		01/16/02 17:00	C_V	983477
Chlorobenzene	ND	1	1		01/16/02 17:00	C_V	983477
Chloroethane	ND	1	1		01/16/02 17:00	C_V	983477
Chloroform	1	1	1		01/16/02 17:00	C_V	983477
Chloromethane	ND	1	1		01/16/02 17:00	C_V	983477
Dibromochloromethane	ND	1	1		01/16/02 17:00	C_V	983477
Dibromomethane	ND	1	1		01/16/02 17:00	C_V	983477
Dichlorodifluoromethane	ND	1	1		01/16/02 17:00	C_V	983477
Ethyl Ether	ND	20	1		01/16/02 17:00	C_V	983477
Ethylbenzene	110	1	1		01/16/02 17:00	C_V	983477
Iodomethane	ND	1	1		01/16/02 17:00	C_V	983477
Isopropylbenzene	26	1	1		01/16/02 17:00	C_V	983477
Methylene chloride	ND	5	1		01/16/02 17:00	C_V	983477
n-Propylbenzene	1	1	1		01/16/02 17:00	C_V	983477

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-111

Collected: 1/14/02 9:10:00

SPL Sample ID: 02010394-01

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	75	5	1		01/16/02 17:00	C_V	983477
Styrene	ND	1	1		01/16/02 17:00	C_V	983477
Tetrachloroethene	ND	1	1		01/16/02 17:00	C_V	983477
Toluene	2100	200	200		01/17/02 13:42	C_V	984314
trans-1,4-Dichloro-2-Butene	ND	2	1		01/16/02 17:00	C_V	983477
Trichloroethene	170	1	1		01/16/02 17:00	C_V	983477
Vinyl chloride	18000	200	200		01/17/02 13:42	C_V	984314
cis-1,2-Dichloroethene	21000	200	200		01/17/02 13:42	C_V	984314
cis-1,3-Dichloropropene	ND	1	1		01/16/02 17:00	C_V	983477
trans-1,2-Dichloroethene	670	200	200		01/17/02 13:42	C_V	984314
trans-1,3-Dichloropropene	ND	1	1		01/16/02 17:00	C_V	983477
Xylenes, Total	570	3	1		01/16/02 17:00	C_V	983477
Surr: 1,2-Dichloroethane-d4	94.0	% 62-130	1		01/16/02 17:00	C_V	983477
Surr: 1,2-Dichloroethane-d4	96.0	% 62-130	200		01/17/02 13:42	C_V	984314
Surr: 4-Bromofluorobenzene	94.0	% 70-130	1		01/16/02 17:00	C_V	983477
Surr: 4-Bromofluorobenzene	90.0	% 70-130	200		01/17/02 13:42	C_V	984314
Surr: Toluene-d8	98.0	% 74-122	1		01/16/02 17:00	C_V	983477
Surr: Toluene-d8	100	% 74-122	200		01/17/02 13:42	C_V	984314

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-112

Collected: 1/14/02 11:05:00 SPL Sample ID: 02010394-02

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	478	10	10		01/24/02 11:30	CV	995284
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	4.74	0.02	1		01/22/02 3:05	NS	989195
Potassium	1100	10	5		01/30/02 11:41	NS	1000949

Prep Method	Prep Date	Prep Initials
SW3010A	01/16/2002 14:00	MME

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-112

Collected: 1/14/02 11:05:00 SPL Sample ID: 02010394-02

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1		1	01/16/02 17:27	C_V	983478
1,1,1-Trichloroethane	ND	1		1	01/16/02 17:27	C_V	983478
1,1,2,2-Tetrachloroethane	ND	1		1	01/16/02 17:27	C_V	983478
1,1,2-Trichloroethane	ND	1		1	01/16/02 17:27	C_V	983478
1,1-Dichloroethane	ND	1		1	01/16/02 17:27	C_V	983478
1,1-Dichloroethene	11	1		1	01/16/02 17:27	C_V	983478
1,2,3-Trichloropropane	ND	1		1	01/16/02 17:27	C_V	983478
1,2,4-Trichlorobenzene	ND	5		1	01/16/02 17:27	C_V	983478
1,2,4-Trimethylbenzene	ND	1		1	01/16/02 17:27	C_V	983478
1,2-Dibromo-3-chloropropane	ND	1		1	01/16/02 17:27	C_V	983478
1,2-Dichlorobenzene	ND	1		1	01/16/02 17:27	C_V	983478
1,2-Dichloroethane	ND	1		1	01/16/02 17:27	C_V	983478
1,2-Dichloropropane	ND	1		1	01/16/02 17:27	C_V	983478
1,3,5-Trimethylbenzene	ND	1		1	01/16/02 17:27	C_V	983478
1,3-Dichlorobenzene	ND	1		1	01/16/02 17:27	C_V	983478
1,4-Dichlorobenzene	ND	1		1	01/16/02 17:27	C_V	983478
2-Butanone	110	50		1	01/16/02 17:27	C_V	983478
2-Hexanone	ND	50		1	01/16/02 17:27	C_V	983478
4-Methyl-2-pentanone	ND	50		1	01/16/02 17:27	C_V	983478
Acetone	340	100		1	01/16/02 17:27	C_V	983478
Benzene	53	1		1	01/16/02 17:27	C_V	983478
Bromochloromethane	ND	1		1	01/16/02 17:27	C_V	983478
Bromodichloromethane	ND	1		1	01/16/02 17:27	C_V	983478
Bromoform	ND	1		1	01/16/02 17:27	C_V	983478
Bromomethane	ND	1		1	01/16/02 17:27	C_V	983478
Carbon disulfide	8	5		1	01/16/02 17:27	C_V	983478
Carbon tetrachloride	ND	1		1	01/16/02 17:27	C_V	983478
Chlorobenzene	ND	1		1	01/16/02 17:27	C_V	983478
Chloroethane	ND	1		1	01/16/02 17:27	C_V	983478
Chloroform	3	1		1	01/16/02 17:27	C_V	983478
Chloromethane	ND	1		1	01/16/02 17:27	C_V	983478
Dibromochloromethane	ND	1		1	01/16/02 17:27	C_V	983478
Dibromomethane	ND	1		1	01/16/02 17:27	C_V	983478
Dichlorodifluoromethane	ND	1		1	01/16/02 17:27	C_V	983478
Ethyl Ether	ND	20		1	01/16/02 17:27	C_V	983478
Ethylbenzene	6	1		1	01/16/02 17:27	C_V	983478
Iodomethane	ND	1		1	01/16/02 17:27	C_V	983478
Isopropylbenzene	ND	1		1	01/16/02 17:27	C_V	983478
Methylene chloride	ND	5		1	01/16/02 17:27	C_V	983478
n-Propylbenzene	ND	1		1	01/16/02 17:27	C_V	983478

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-112

Collected: 1/14/02 11:05:00 SPL Sample ID: 02010394-02

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	7	5	1		01/16/02 17:27	C_V	983478
Styrene	ND	1	1		01/16/02 17:27	C_V	983478
Tetrachloroethene	ND	1	1		01/16/02 17:27	C_V	983478
Toluene	160	1	1		01/16/02 17:27	C_V	983478
trans-1,4-Dichloro-2-Butene	ND	2	1		01/16/02 17:27	C_V	983478
Trichloroethene	ND	1	1		01/16/02 17:27	C_V	983478
Vinyl chloride	2200	200	200		01/17/02 15:03	C_V	984317
cis-1,2-Dichloroethene	5000	200	200		01/17/02 15:03	C_V	984317
cis-1,3-Dichloropropene	ND	1	1		01/16/02 17:27	C_V	983478
trans-1,2-Dichloroethene	260	200	200		01/17/02 15:03	C_V	984317
trans-1,3-Dichloropropene	ND	1	1		01/16/02 17:27	C_V	983478
Xylenes, Total	17	3	1		01/16/02 17:27	C_V	983478
Surr: 1,2-Dichloroethane-d4	94.0	% 62-130	1		01/16/02 17:27	C_V	983478
Surr: 1,2-Dichloroethane-d4	98.0	% 62-130	200		01/17/02 15:03	C_V	984317
Surr: 4-Bromofluorobenzene	90.0	% 70-130	200		01/17/02 15:03	C_V	984317
Surr: 4-Bromofluorobenzene	94.0	% 70-130	1		01/16/02 17:27	C_V	983478
Surr: Toluene-d8	100	% 74-122	200		01/17/02 15:03	C_V	984317
Surr: Toluene-d8	98.0	% 74-122	1		01/16/02 17:27	C_V	983478

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-113

Collected: 1/14/02 12:50:00 SPL Sample ID: 02010394-03

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	812	10	10		01/24/02 11:30	CV	995285
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	3.66	0.02	1		01/22/02 3:11	NS	989197
Potassium	1020	10	5		01/30/02 11:46	NS	1000952

Prep Method	Prep Date	Prep Initials
SW3010A	01/16/2002 14:00	MME

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-113

Collected: 1/14/02 12:50:00 SPL Sample ID: 02010394-03

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1	1		01/16/02 17:55	C_V	983479
1,1,1-Trichloroethane	ND	1	1		01/16/02 17:55	C_V	983479
1,1,2,2-Tetrachloroethane	ND	1	1		01/16/02 17:55	C_V	983479
1,1,2-Trichloroethane	ND	1	1		01/16/02 17:55	C_V	983479
1,1-Dichloroethane	1	1	1		01/16/02 17:55	C_V	983479
1,1-Dichloroethene	12	1	1		01/16/02 17:55	C_V	983479
1,2,3-Trichloropropane	ND	1	1		01/16/02 17:55	C_V	983479
1,2,4-Trichlorobenzene	ND	5	1		01/16/02 17:55	C_V	983479
1,2,4-Trimethylbenzene	ND	1	1		01/16/02 17:55	C_V	983479
1,2-Dibromo-3-chloropropane	ND	1	1		01/16/02 17:55	C_V	983479
1,2-Dichlorobenzene	ND	1	1		01/16/02 17:55	C_V	983479
1,2-Dichloroethane	1	1	1		01/16/02 17:55	C_V	983479
1,2-Dichloropropane	ND	1	1		01/16/02 17:55	C_V	983479
1,3,5-Trimethylbenzene	ND	1	1		01/16/02 17:55	C_V	983479
1,3-Dichlorobenzene	ND	1	1		01/16/02 17:55	C_V	983479
1,4-Dichlorobenzene	ND	1	1		01/16/02 17:55	C_V	983479
2-Butanone	110	50	1		01/16/02 17:55	C_V	983479
2-Hexanone	ND	50	1		01/16/02 17:55	C_V	983479
4-Methyl-2-pentanone	ND	50	1		01/16/02 17:55	C_V	983479
Acetone	490	100	1		01/16/02 17:55	C_V	983479
Benzene	80	1	1		01/16/02 17:55	C_V	983479
Bromochloromethane	ND	1	1		01/16/02 17:55	C_V	983479
Bromodichloromethane	ND	1	1		01/16/02 17:55	C_V	983479
Bromoform	ND	1	1		01/16/02 17:55	C_V	983479
Bromomethane	ND	1	1		01/16/02 17:55	C_V	983479
Carbon disulfide	26	5	1		01/16/02 17:55	C_V	983479
Carbon tetrachloride	ND	1	1		01/16/02 17:55	C_V	983479
Chlorobenzene	ND	1	1		01/16/02 17:55	C_V	983479
Chloroethane	ND	1	1		01/16/02 17:55	C_V	983479
Chloroform	4	1	1		01/16/02 17:55	C_V	983479
Chloromethane	ND	1	1		01/16/02 17:55	C_V	983479
Dibromochloromethane	ND	1	1		01/16/02 17:55	C_V	983479
Dibromomethane	ND	1	1		01/16/02 17:55	C_V	983479
Dichlorodifluoromethane	ND	1	1		01/16/02 17:55	C_V	983479
Ethyl Ether	ND	20	1		01/16/02 17:55	C_V	983479
Ethylbenzene	10	1	1		01/16/02 17:55	C_V	983479
Iodomethane	ND	1	1		01/16/02 17:55	C_V	983479
Isopropylbenzene	ND	1	1		01/16/02 17:55	C_V	983479
Methylene chloride	ND	5	1		01/16/02 17:55	C_V	983479
n-Propylbenzene	ND	1	1		01/16/02 17:55	C_V	983479

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-113

Collected: 1/14/02 12:50:00 SPL Sample ID: 02010394-03

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5	1		01/16/02 17:55	C_V	983479
Styrene	ND	1	1		01/16/02 17:55	C_V	983479
Tetrachloroethene	ND	1	1		01/16/02 17:55	C_V	983479
Toluene	84	1	1		01/16/02 17:55	C_V	983479
trans-1,4-Dichloro-2-Butene	ND	2	1		01/16/02 17:55	C_V	983479
Trichloroethene	30	1	1		01/16/02 17:55	C_V	983479
Vinyl chloride	14000	200	200		01/21/02 15:54	C_V	989012
cis-1,2-Dichloroethene	2800	200	200		01/21/02 15:54	C_V	989012
cis-1,3-Dichloropropene	ND	1	1		01/16/02 17:55	C_V	983479
trans-1,2-Dichloroethene	210	1	1	E	01/16/02 17:55	C_V	983479
trans-1,3-Dichloropropene	ND	1	1		01/16/02 17:55	C_V	983479
Xylenes, Total	63	3	1		01/16/02 17:55	C_V	983479
Surr: 1,2-Dichloroethane-d4	90.0	% 62-130	1		01/16/02 17:55	C_V	983479
Surr: 1,2-Dichloroethane-d4	100	% 62-130	200		01/21/02 15:54	C_V	989012
Surr: 4-Bromofluorobenzene	92.0	% 70-130	1		01/16/02 17:55	C_V	983479
Surr: 4-Bromofluorobenzene	100	% 70-130	200		01/21/02 15:54	C_V	989012
Surr: Toluene-d8	102	% 74-122	1		01/16/02 17:55	C_V	983479
Surr: Toluene-d8	100	% 74-122	200		01/21/02 15:54	C_V	989012

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-114

Collected: 1/14/02 3:45:00

SPL Sample ID: 02010394-04

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	461	10	10		01/24/02 11:30	CV	995286
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	5.76	0.02	1		01/22/02 3:17	NS	989200
Potassium	324	2	1		01/30/02 11:19	NS	1000940

Prep Method	Prep Date	Prep Initials
SW3010A	01/16/2002 14:00	IMME

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-114

Collected: 1/14/02 3:45:00

SPL Sample ID: 02010394-04

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B		MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	1	1		01/16/02 18:21	C_V	983480
1,1,1-Trichloroethane	ND	1	1		01/16/02 18:21	C_V	983480
1,1,2,2-Tetrachloroethane	ND	1	1		01/16/02 18:21	C_V	983480
1,1,2-Trichloroethane	ND	1	1		01/16/02 18:21	C_V	983480
1,1-Dichloroethane	ND	1	1		01/16/02 18:21	C_V	983480
1,1-Dichloroethene	2	1	1		01/16/02 18:21	C_V	983480
1,2,3-Trichloropropane	ND	1	1		01/16/02 18:21	C_V	983480
1,2,4-Trichlorobenzene	ND	5	1		01/16/02 18:21	C_V	983480
1,2,4-Trimethylbenzene	6	1	1		01/16/02 18:21	C_V	983480
1,2-Dibromo-3-chloropropane	ND	1	1		01/16/02 18:21	C_V	983480
1,2-Dichlorobenzene	ND	1	1		01/16/02 18:21	C_V	983480
1,2-Dichloroethane	4	1	1		01/16/02 18:21	C_V	983480
1,2-Dichloropropane	ND	1	1		01/16/02 18:21	C_V	983480
1,3,5-Trimethylbenzene	2	1	1		01/16/02 18:21	C_V	983480
1,3-Dichlorobenzene	ND	1	1		01/16/02 18:21	C_V	983480
1,4-Dichlorobenzene	ND	1	1		01/16/02 18:21	C_V	983480
2-Butanone	ND	50	1		01/16/02 18:21	C_V	983480
2-Hexanone	ND	50	1		01/16/02 18:21	C_V	983480
4-Methyl-2-pentanone	ND	50	1		01/16/02 18:21	C_V	983480
Acetone	ND	100	1		01/16/02 18:21	C_V	983480
Benzene	5	1	1		01/16/02 18:21	C_V	983480
Bromochloromethane	ND	1	1		01/16/02 18:21	C_V	983480
Bromodichloromethane	ND	1	1		01/16/02 18:21	C_V	983480
Bromoform	ND	1	1		01/16/02 18:21	C_V	983480
Bromomethane	ND	1	1		01/16/02 18:21	C_V	983480
Carbon disulfide	ND	5	1		01/16/02 18:21	C_V	983480
Carbon tetrachloride	ND	1	1		01/16/02 18:21	C_V	983480
Chlorobenzene	ND	1	1		01/16/02 18:21	C_V	983480
Chloroethane	ND	1	1		01/16/02 18:21	C_V	983480
Chloroform	3	1	1		01/16/02 18:21	C_V	983480
Chloromethane	ND	1	1		01/16/02 18:21	C_V	983480
Dibromochloromethane	ND	1	1		01/16/02 18:21	C_V	983480
Dibromomethane	ND	1	1		01/16/02 18:21	C_V	983480
Dichlorodifluoromethane	ND	1	1		01/16/02 18:21	C_V	983480
Ethyl Ether	ND	20	1		01/16/02 18:21	C_V	983480
Ethylbenzene	23	1	1		01/16/02 18:21	C_V	983480
Iodomethane	ND	1	1		01/16/02 18:21	C_V	983480
Isopropylbenzene	ND	1	1		01/16/02 18:21	C_V	983480
Methylene chloride	ND	5	1		01/16/02 18:21	C_V	983480
n-Propylbenzene	ND	1	1		01/16/02 18:21	C_V	983480

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-114

Collected: 1/14/02 3:45:00

SPL Sample ID: 02010394-04

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5	1		01/16/02 18:21	C_V	983480
Styrene	ND	1	1		01/16/02 18:21	C_V	983480
Tetrachloroethene	ND	1	1		01/16/02 18:21	C_V	983480
Toluene	25	1	1		01/16/02 18:21	C_V	983480
trans-1,4-Dichloro-2-Butene	ND	2	1		01/16/02 18:21	C_V	983480
Trichloroethene	380	100	100		01/21/02 17:15	C_V	989248
Vinyl chloride	1100	100	100		01/21/02 17:15	C_V	989248
cis-1,2-Dichloroethene	1200	100	100		01/21/02 17:15	C_V	989248
cis-1,3-Dichloropropene	ND	1	1		01/16/02 18:21	C_V	983480
trans-1,2-Dichloroethene	50	1	1		01/16/02 18:21	C_V	983480
trans-1,3-Dichloropropene	ND	1	1		01/16/02 18:21	C_V	983480
Xylenes, Total	170	3	1		01/16/02 18:21	C_V	983480
Surr: 1,2-Dichloroethane-d4	94.0	% 62-130	1		01/16/02 18:21	C_V	983480
Surr: 1,2-Dichloroethane-d4	106	% 62-130	100		01/21/02 17:15	C_V	989248
Surr: 4-Bromofluorobenzene	92.0	% 70-130	1		01/16/02 18:21	C_V	983480
Surr: 4-Bromofluorobenzene	108	% 70-130	100		01/21/02 17:15	C_V	989248
Surr: Toluene-d8	100	% 74-122	1		01/16/02 18:21	C_V	983480
Surr: Toluene-d8	104	% 74-122	100		01/21/02 17:15	C_V	989248

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-115

Collected: 1/14/02 4:40:00

SPL Sample ID: 02010394-05

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	436	10	10		01/24/02 11:30	CV	995287
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	5.47	0.02	1		01/22/02 3:24	NS	989202
Potassium	327	2	1		01/30/02 11:24	NS	1000942

Prep Method	Prep Date	Prep Initials
SW3010A	01/16/2002 14:00	MME

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-115

Collected: 1/14/02 4:40:00

SPL Sample ID: 02010394-05

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B		MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	1	1		01/16/02 18:48 C_V		983481
1,1,1-Trichloroethane	ND	1	1		01/16/02 18:48 C_V		983481
1,1,2,2-Tetrachloroethane	ND	1	1		01/16/02 18:48 C_V		983481
1,1,2-Trichloroethane	ND	1	1		01/16/02 18:48 C_V		983481
1,1-Dichloroethane	ND	1	1		01/16/02 18:48 C_V		983481
1,1-Dichloroethene	2	1	1		01/16/02 18:48 C_V		983481
1,2,3-Trichloropropane	ND	1	1		01/16/02 18:48 C_V		983481
1,2,4-Trichlorobenzene	ND	5	1		01/16/02 18:48 C_V		983481
1,2,4-Trimethylbenzene	5	1	1		01/16/02 18:48 C_V		983481
1,2-Dibromo-3-chloropropane	ND	1	1		01/16/02 18:48 C_V		983481
1,2-Dichlorobenzene	ND	1	1		01/16/02 18:48 C_V		983481
1,2-Dichloroethane	4	1	1		01/16/02 18:48 C_V		983481
1,2-Dichloropropane	ND	1	1		01/16/02 18:48 C_V		983481
1,3,5-Trimethylbenzene	2	1	1		01/16/02 18:48 C_V		983481
1,3-Dichlorobenzene	ND	1	1		01/16/02 18:48 C_V		983481
1,4-Dichlorobenzene	ND	1	1		01/16/02 18:48 C_V		983481
2-Butanone	ND	50	1		01/16/02 18:48 C_V		983481
2-Hexanone	ND	50	1		01/16/02 18:48 C_V		983481
4-Methyl-2-pentanone	ND	50	1		01/16/02 18:48 C_V		983481
Acetone	ND	100	1		01/16/02 18:48 C_V		983481
Benzene	5	1	1		01/16/02 18:48 C_V		983481
Bromochloromethane	ND	1	1		01/16/02 18:48 C_V		983481
Bromodichloromethane	ND	1	1		01/16/02 18:48 C_V		983481
Bromoform	ND	1	1		01/16/02 18:48 C_V		983481
Bromomethane	ND	1	1		01/16/02 18:48 C_V		983481
Carbon disulfide	ND	5	1		01/16/02 18:48 C_V		983481
Carbon tetrachloride	ND	1	1		01/16/02 18:48 C_V		983481
Chlorobenzene	ND	1	1		01/16/02 18:48 C_V		983481
Chloroethane	ND	1	1		01/16/02 18:48 C_V		983481
Chloroform	3	1	1		01/16/02 18:48 C_V		983481
Chloromethane	ND	1	1		01/16/02 18:48 C_V		983481
Dibromochloromethane	ND	1	1		01/16/02 18:48 C_V		983481
Dibromomethane	ND	1	1		01/16/02 18:48 C_V		983481
Dichlorodifluoromethane	ND	1	1		01/16/02 18:48 C_V		983481
Ethyl Ether	ND	20	1		01/16/02 18:48 C_V		983481
Ethylbenzene	21	1	1		01/16/02 18:48 C_V		983481
Iodomethane	ND	1	1		01/16/02 18:48 C_V		983481
Isopropylbenzene	ND	1	1		01/16/02 18:48 C_V		983481
Methylene chloride	ND	5	1		01/16/02 18:48 C_V		983481
n-Propylbenzene	ND	1	1		01/16/02 18:48 C_V		983481

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-115

Collected: 1/14/02 4:40:00 SPL Sample ID: 02010394-05

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5	1		01/16/02 18:48	C_V	983481
Styrene	ND	1	1		01/16/02 18:48	C_V	983481
Tetrachloroethene	ND	1	1		01/16/02 18:48	C_V	983481
Toluene	25	1	1		01/16/02 18:48	C_V	983481
trans-1,4-Dichloro-2-Butene	ND	2	1		01/16/02 18:48	C_V	983481
Trichloroethene	380	100	100		01/17/02 16:24	C_V	984318
Vinyl chloride	1200	100	100		01/17/02 16:24	C_V	984318
cis-1,2-Dichloroethene	1400	100	100		01/17/02 16:24	C_V	984318
cis-1,3-Dichloropropene	ND	1	1		01/16/02 18:48	C_V	983481
trans-1,2-Dichloroethene	51	1	1		01/16/02 18:48	C_V	983481
trans-1,3-Dichloropropene	ND	1	1		01/16/02 18:48	C_V	983481
Xylenes, Total	158	3	1		01/16/02 18:48	C_V	983481
Surr: 1,2-Dichloroethane-d4	92.0	% 62-130	1		01/16/02 18:48	C_V	983481
Surr: 1,2-Dichloroethane-d4	106	% 62-130	100		01/17/02 16:24	C_V	984318
Surr: 4-Bromofluorobenzene	92.0	% 70-130	1		01/16/02 18:48	C_V	983481
Surr: 4-Bromofluorobenzene	94.0	% 70-130	100		01/17/02 16:24	C_V	984318
Surr: Toluene-d8	106	% 74-122	100		01/17/02 16:24	C_V	984318
Surr: Toluene-d8	98.0	% 74-122	1		01/16/02 18:48	C_V	983481

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-116

Collected: 1/14/02 5:50:00

SPL Sample ID: 02010394-06

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	290	5	5		01/24/02 11:30	CV	995288
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	9.88	0.02	1		01/22/02 3:30	NS	989205
Potassium	528	4	2		01/30/02 11:50	NS	1000960

Prep Method	Prep Date	Prep Initials
SW3010A	01/16/2002 14:00	MME

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-116

Collected: 1/14/02 5:50:00 SPL Sample ID: 02010394-06

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1	1		01/16/02 19:16	C_V	983482
1,1,1-Trichloroethane	ND	1	1		01/16/02 19:16	C_V	983482
1,1,2,2-Tetrachloroethane	ND	1	1		01/16/02 19:16	C_V	983482
1,1,2-Trichloroethane	ND	1	1		01/16/02 19:16	C_V	983482
1,1-Dichloroethane	ND	1	1		01/16/02 19:16	C_V	983482
1,1-Dichloroethene	ND	1	1		01/16/02 19:16	C_V	983482
1,2,3-Trichloropropane	ND	1	1		01/16/02 19:16	C_V	983482
1,2,4-Trichlorobenzene	ND	5	1		01/16/02 19:16	C_V	983482
1,2,4-Trimethylbenzene	ND	1	1		01/16/02 19:16	C_V	983482
1,2-Dibromo-3-chloropropane	ND	1	1		01/16/02 19:16	C_V	983482
1,2-Dichlorobenzene	ND	1	1		01/16/02 19:16	C_V	983482
1,2-Dichloroethane	ND	1	1		01/16/02 19:16	C_V	983482
1,2-Dichloropropane	ND	1	1		01/16/02 19:16	C_V	983482
1,3,5-Trimethylbenzene	ND	1	1		01/16/02 19:16	C_V	983482
1,3-Dichlorobenzene	ND	1	1		01/16/02 19:16	C_V	983482
1,4-Dichlorobenzene	ND	1	1		01/16/02 19:16	C_V	983482
2-Butanone	ND	50	1		01/16/02 19:16	C_V	983482
2-Hexanone	ND	50	1		01/16/02 19:16	C_V	983482
4-Methyl-2-pentanone	ND	50	1		01/16/02 19:16	C_V	983482
Acetone	ND	100	1		01/16/02 19:16	C_V	983482
Benzene	3	1	1		01/16/02 19:16	C_V	983482
Bromochloromethane	ND	1	1		01/16/02 19:16	C_V	983482
Bromodichloromethane	1	1	1		01/16/02 19:16	C_V	983482
Bromoform	ND	1	1		01/16/02 19:16	C_V	983482
Bromomethane	ND	1	1		01/16/02 19:16	C_V	983482
Carbon disulfide	ND	5	1		01/16/02 19:16	C_V	983482
Carbon tetrachloride	ND	1	1		01/16/02 19:16	C_V	983482
Chlorobenzene	ND	1	1		01/16/02 19:16	C_V	983482
Chloroethane	ND	1	1		01/16/02 19:16	C_V	983482
Chloroform	10	1	1		01/16/02 19:16	C_V	983482
Chloromethane	ND	1	1		01/16/02 19:16	C_V	983482
Dibromochloromethane	ND	1	1		01/16/02 19:16	C_V	983482
Dibromomethane	ND	1	1		01/16/02 19:16	C_V	983482
Dichlorodifluoromethane	ND	1	1		01/16/02 19:16	C_V	983482
Ethyl Ether	ND	20	1		01/16/02 19:16	C_V	983482
Ethylbenzene	ND	1	1		01/16/02 19:16	C_V	983482
Iodomethane	ND	1	1		01/16/02 19:16	C_V	983482
Isopropylbenzene	ND	1	1		01/16/02 19:16	C_V	983482
Methylene chloride	ND	5	1		01/16/02 19:16	C_V	983482
n-Propylbenzene	ND	1	1		01/16/02 19:16	C_V	983482

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-011402-BN-116

Collected: 1/14/02 5:50:00

SPL Sample ID: 02010394-06

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5	1		01/16/02 19:16	C_V	983482
Styrene	ND	1	1		01/16/02 19:16	C_V	983482
Tetrachloroethene	ND	1	1		01/16/02 19:16	C_V	983482
Toluene	1	1	1		01/16/02 19:16	C_V	983482
trans-1,4-Dichloro-2-Butene	ND	2	1		01/16/02 19:16	C_V	983482
Trichloroethene	8400	100	100		01/17/02 16:51	C_V	984319
Vinyl chloride	19	1	1		01/16/02 19:16	C_V	983482
cis-1,2-Dichloroethene	310	100	100		01/17/02 16:51	C_V	984319
cis-1,3-Dichloropropene	ND	1	1		01/16/02 19:16	C_V	983482
trans-1,2-Dichloroethene	12	1	1		01/16/02 19:16	C_V	983482
trans-1,3-Dichloropropene	ND	1	1		01/16/02 19:16	C_V	983482
Xylenes, Total	ND	3	1		01/16/02 19:16	C_V	983482
Surr: 1,2-Dichloroethane-d4	102	% 62-130	100		01/17/02 16:51	C_V	984319
Surr: 1,2-Dichloroethane-d4	94.0	% 62-130	1		01/16/02 19:16	C_V	983482
Surr: 4-Bromofluorobenzene	90.0	% 70-130	1		01/16/02 19:16	C_V	983482
Surr: 4-Bromofluorobenzene	88.0	% 70-130	100		01/17/02 16:51	C_V	984319
Surr: Toluene-d8	98.0	% 74-122	1		01/16/02 19:16	C_V	983482
Surr: Toluene-d8	102	% 74-122	100		01/17/02 16:51	C_V	984319

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: TRIP BLANK

Collected: 1/14/02

SPL Sample ID: 02010394-07

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1	1		01/16/02 12:56	C_V	983473
1,1,1-Trichloroethane	ND	1	1		01/16/02 12:56	C_V	983473
1,1,2,2-Tetrachloroethane	ND	1	1		01/16/02 12:56	C_V	983473
1,1,2-Trichloroethane	ND	1	1		01/16/02 12:56	C_V	983473
1,1-Dichloroethane	ND	1	1		01/16/02 12:56	C_V	983473
1,1-Dichloroethene	ND	1	1		01/16/02 12:56	C_V	983473
1,2,3-Trichloropropane	ND	1	1		01/16/02 12:56	C_V	983473
1,2,4-Trichlorobenzene	ND	5	1		01/16/02 12:56	C_V	983473
1,2,4-Trimethylbenzene	ND	1	1		01/16/02 12:56	C_V	983473
1,2-Dibromo-3-chloropropane	ND	1	1		01/16/02 12:56	C_V	983473
1,2-Dichlorobenzene	ND	1	1		01/16/02 12:56	C_V	983473
1,2-Dichloroethane	ND	1	1		01/16/02 12:56	C_V	983473
1,2-Dichloropropane	ND	1	1		01/16/02 12:56	C_V	983473
1,3,5-Trimethylbenzene	ND	1	1		01/16/02 12:56	C_V	983473
1,3-Dichlorobenzene	ND	1	1		01/16/02 12:56	C_V	983473
1,4-Dichlorobenzene	ND	1	1		01/16/02 12:56	C_V	983473
2-Butanone	ND	50	1		01/16/02 12:56	C_V	983473
2-Hexanone	ND	50	1		01/16/02 12:56	C_V	983473
4-Methyl-2-pentanone	ND	50	1		01/16/02 12:56	C_V	983473
Acetone	ND	100	1		01/16/02 12:56	C_V	983473
Benzene	ND	1	1		01/16/02 12:56	C_V	983473
Bromochloromethane	ND	1	1		01/16/02 12:56	C_V	983473
Bromodichloromethane	ND	1	1		01/16/02 12:56	C_V	983473
Bromoform	ND	1	1		01/16/02 12:56	C_V	983473
Bromomethane	ND	1	1		01/16/02 12:56	C_V	983473
Carbon disulfide	ND	5	1		01/16/02 12:56	C_V	983473
Carbon tetrachloride	ND	1	1		01/16/02 12:56	C_V	983473
Chlorobenzene	ND	1	1		01/16/02 12:56	C_V	983473
Chloroethane	ND	1	1		01/16/02 12:56	C_V	983473
Chloroform	ND	1	1		01/16/02 12:56	C_V	983473
Chloromethane	ND	1	1		01/16/02 12:56	C_V	983473
Dibromochloromethane	ND	1	1		01/16/02 12:56	C_V	983473
Dibromomethane	ND	1	1		01/16/02 12:56	C_V	983473
Dichlorodifluoromethane	ND	1	1		01/16/02 12:56	C_V	983473
Ethyl Ether	ND	20	1		01/16/02 12:56	C_V	983473
Ethylbenzene	ND	1	1		01/16/02 12:56	C_V	983473
Iodomethane	ND	1	1		01/16/02 12:56	C_V	983473
Isopropylbenzene	ND	1	1		01/16/02 12:56	C_V	983473
Methylene chloride	ND	5	1		01/16/02 12:56	C_V	983473
n-Propylbenzene	ND	1	1		01/16/02 12:56	C_V	983473

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: TRIP BLANK

Collected: 1/14/02

SPL Sample ID: 02010394-07

Site: #17303-Former Willow Run Assembly Plant

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5	1		01/16/02 12:56	C_V	983473
Styrene	ND	1	1		01/16/02 12:56	C_V	983473
Tetrachloroethene	ND	1	1		01/16/02 12:56	C_V	983473
Toluene	ND	1	1		01/16/02 12:56	C_V	983473
trans-1,4-Dichloro-2-Butene	ND	2	1		01/16/02 12:56	C_V	983473
Trichloroethene	ND	1	1		01/16/02 12:56	C_V	983473
Vinyl chloride	ND	1	1		01/16/02 12:56	C_V	983473
cis-1,2-Dichloroethene	ND	1	1		01/16/02 12:56	C_V	983473
cis-1,3-Dichloropropene	ND	1	1		01/16/02 12:56	C_V	983473
trans-1,2-Dichloroethene	ND	1	1		01/16/02 12:56	C_V	983473
trans-1,3-Dichloropropene	ND	1	1		01/16/02 12:56	C_V	983473
Xylenes, Total	ND	3	1		01/16/02 12:56	C_V	983473
Surr: 1,2-Dichloroethane-d4	98.0	% 62-130	1		01/16/02 12:56	C_V	983473
Surr: 4-Bromofluorobenzene	88.0	% 70-130	1		01/16/02 12:56	C_V	983473
Surr: Toluene-d8	100	% 74-122	1		01/16/02 12:56	C_V	983473

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference

Quality Control Documentation



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates #17303-Former Willow Run Assembly Plant

Analysis: Metals by Method 6010B, Total
Method: SW6010B

WorkOrder: 02010394
Lab Batch ID: 17395

Method Blank

Samples in Analytical Batch:

RunID: TJA_020121D-989176 Units: mg/L
Analysis Date: 01/22/2002 1:46 Analyst: NS
Preparation Date: 01/16/2002 14:00 Prep By: MME Method SW3010A

Lab Sample ID	Client Sample ID
02010394-01C	GW-17303-011402-BN-111
02010394-02C	GW-17303-011402-BN-112
02010394-03C	GW-17303-011402-BN-113
02010394-04C	GW-17303-011402-BN-114
02010394-05C	GW-17303-011402-BN-115
02010394-06C	GW-17303-011402-BN-116

Analyte	Result	Rep Limit
Manganese	ND	0.02

Laboratory Control Sample (LCS)

RunID: TJA_020121D-989177 Units: mg/L
Analysis Date: 01/22/2002 1:52 Analyst: NS
Preparation Date: 01/16/2002 14:00 Prep By: MME Method SW3010A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Manganese	2	1.95	98	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02010393-01
RunID: TJA_020121D-989179 Units: mg/L
Analysis Date: 01/22/2002 2:05 Analyst: NS
Preparation Date: 01/16/2002 14:00 Prep By: MME Method SW3010A

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Manganese	ND	1	0.95	95.0	1	0.966	96.6	1.59	20	75	125

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates #17303-Former Willow Run Assembly Plant

Analysis: Metals by Method 6010B, Total
Method: SW6010B

WorkOrder: 02010394
Lab Batch ID: 17395B

Method Blank

Samples in Analytical Batch:

RunID: TJA_020129E-1000928 Units: mg/L

Analysis Date: 01/30/2002 10:12 Analyst: NS

Preparation Date: 01/16/2002 14:00 Prep By: MME Method SW3010A

Lab Sample ID	Client Sample ID
02010394-01C	GW-17303-011402-BN-111
02010394-02C	GW-17303-011402-BN-112
02010394-03C	GW-17303-011402-BN-113
02010394-04C	GW-17303-011402-BN-114
02010394-05C	GW-17303-011402-BN-115
02010394-06C	GW-17303-011402-BN-116

Analyte	Result	Rep Limit
Potassium	ND	2

Laboratory Control Sample (LCS)

RunID: TJA_020129E-1000929 Units: mg/L

Analysis Date: 01/30/2002 10:17 Analyst: NS

Preparation Date: 01/16/2002 14:00 Prep By: MME Method SW3010A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Potassium	20	20	99	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02010393-01

RunID: TJA_020129E-1000931 Units: mg/L

Analysis Date: 01/30/2002 10:31 Analyst: NS

Preparation Date: 01/16/2002 14:00 Prep By: MME Method SW3010A

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Potassium	4.8	10	16	108	10	16	108	0.769	20	75	125

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates #17303-Former Willow Run Assembly Plant

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02010394
Lab Batch ID: R51681

Method Blank

RunID: Q_0201166-983471 Units: ug/L
Analysis Date: 01/16/2002 12:29 Analyst: C_V

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02010394-01A	GW-17303-011402-BN-111
02010394-02A	GW-17303-011402-BN-112
02010394-03A	GW-17303-011402-BN-113
02010394-04A	GW-17303-011402-BN-114
02010394-05A	GW-17303-011402-BN-115
02010394-06A	GW-17303-011402-BN-116
02010394-07A	TRIP BLANK

Analyte	Result	Rep Limit
1,1,1,2-Tetrachloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,1,2-Trichloroethane	ND	1.0
1,1-Dichloroethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,2,3-Trichloropropane	ND	1.0
1,2,4-Trichlorobenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	1.0
1,2-Dibromo-3-chloropropane	ND	1.0
1,2-Dichlorobenzene	ND	1.0
1,2-Dichloroethane	ND	1.0
1,2-Dichloropropane	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
2-Butanone	ND	50
2-Hexanone	ND	50
4-Methyl-2-pentanone	ND	50
Acetone	ND	100
Benzene	ND	1.0
Bromochloromethane	ND	1.0
Bromodichloromethane	ND	1.0
Bromofom	ND	1.0
Bromomethane	ND	1.0
Carbon disulfide	ND	5.0
Carbon tetrachloride	ND	1.0
Chlorobenzene	ND	1.0
Chloroethane	ND	1.0
Chloroform	ND	1.0
Chloromethane	ND	1.0
Dibromochloromethane	ND	1.0
Dibromomethane	ND	1.0
Dichlorodifluoromethane	ND	1.0
Ethyl Ether	ND	20
Ethylbenzene	ND	1.0
Iodomethane	ND	1.0
Isopropylbenzene	ND	1.0
Methylene chloride	ND	5.0
n-Propylbenzene	ND	1.0
Naphthalene	ND	5.0
Styrene	ND	1.0
Tetrachloroethene	ND	1.0
Toluene	ND	1.0
trans-1,4-Dichloro-2-Butene	ND	2.0
Trichloroethene	ND	1.0
Vinyl chloride	ND	1.0
cis-1,2-Dichloroethene	ND	1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates #17303-Former Willow Run Assembly Plant

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02010394
Lab Batch ID: R51681

Method Blank

RunID: Q_020116B-983471 Units: ug/L
Analysis Date: 01/16/2002 12:29 Analyst: C_V

Analyte	Result	Rep Limit
cis-1,3-Dichloropropene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Xylenes, Total	ND	3.0
Surr: 1,2-Dichloroethane-d4	90.0	62-130
Surr: 4-Bromofluorobenzene	88.0	70-130
Surr: Toluene-d8	100.0	74-122

Laboratory Control Sample (LCS)

RunID: Q_020116B-983469 Units: ug/L
Analysis Date: 01/16/2002 11:35 Analyst: C_V

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	46	92	61	145
Benzene	50	52	104	76	127
Chlorobenzene	50	48	96	75	130
Toluene	50	50	100	76	125
Trichloroethene	50	48	96	71	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02010358-03
RunID: Q_020116B-983475 Units: ug/L
Analysis Date: 01/16/2002 14:44 Analyst: C_V

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	50	46	92	50	45	90.0	2	14	38	172
Benzene	960	50	1000	80	50	1000	80.0	0	11	66	134
Chlorobenzene	ND	50	50	100	50	49	98.0	2	13	67	115
Toluene	28	50	79	102	50	78	100	2	13	59	125
Trichloroethene	ND	50	49	98	50	48	96.0	2	14	61	134

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates
#17303-Former Willow Run Assembly Plant

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02010394
Lab Batch ID: R51681

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
 B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
 J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates #17303-Former Willow Run Assembly Plant

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02010394
Lab Batch ID: R51733

Method Blank

RunID: Q_020117A-984313 Units: ug/L
Analysis Date: 01/17/2002 13:15 Analyst: C_V

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02010394-01A	GW-17303-011402-BN-111
02010394-02A	GW-17303-011402-BN-112
02010394-05A	GW-17303-011402-BN-115
02010394-06A	GW-17303-011402-BN-116

Analyte	Result	Rep Limit
Toluene	ND	1.0
Trichloroethene	ND	1.0
Vinyl chloride	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
Surr: 1,2-Dichloroethane-d4	92.0	62-130
Surr: 4-Bromofluorobenzene	92.0	70-130
Surr: Toluene-d8	104.0	74-122

Laboratory Control Sample (LCS)

RunID: Q_020117A-984312 Units: ug/L
Analysis Date: 01/17/2002 11:43 Analyst: C_V

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	41	82	61	145
Benzene	50	50	100	76	127
Chlorobenzene	50	47	94	75	130
Toluene	50	48	96	76	125
Trichloroethene	50	46	92	71	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02010394-01
RunID: Q_020117A-984315 Units: ug/L
Analysis Date: 01/17/2002 14:09 Analyst: C_V

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	10000	8700	87	10000	8400	83.9	4	14	38	172
Benzene	ND	10000	10000	100	10000	10000	99.7	0	11	66	134
Chlorobenzene	ND	10000	10000	100	10000	10000	100	0	13	67	115
Toluene	1200	10000	12000	108	10000	12000	108	0	13	59	125

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates
#17303-Former Willow Run Assembly Plant

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02010394
Lab Batch ID: R51733

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02010394-01
RunID: Q_020117A-984315 Units: ug/L
Analysis Date: 01/17/2002 14:09 Analyst: C_V

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Trichloroethene	ND	10000	9400	92	10000	9200	90.3	2	14	61	134

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

#17303-Former Willow Run Assembly Plant

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02010394
Lab Batch ID: R52002

Method Blank

RunID: Q_020121A-989011 Units: ug/L
Analysis Date: 01/21/2002 12:45 Analyst: C_V

Samples in Analytical Batch:

Lab Sample ID Client Sample ID
02010394-03A GW-17303-011402-BN-113
02010394-04A GW-17303-011402-BN-114

Analyte	Result	Rep Limit
Trichloroethene	ND	1.0
Vinyl chloride	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
Surr: 1,2-Dichloroethane-d4	106.0	62-130
Surr: 4-Bromofluorobenzene	104.0	70-130
Surr: Toluene-d8	104.0	74-122

Laboratory Control Sample (LCS)

RunID: Q_020121A-989009 Units: ug/L
Analysis Date: 01/21/2002 11:08 Analyst: C_V

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	41	82	61	145
Benzene	50	48	96	76	127
Chlorobenzene	50	46	92	75	130
Toluene	50	47	94	76	125
Trichloroethene	50	47	94	71	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02010394-03
RunID: Q_020121A-989013 Units: ug/L
Analysis Date: 01/21/2002 16:21 Analyst: C_V

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	10000	8300	83	10000	8100	80.9	2	14	38	172
Benzene	ND	10000	9400	93	10000	9400	93.2	0	11	66	134
Chlorobenzene	ND	10000	9200	92	10000	9300	93.0	1	13	67	115
Toluene	ND	10000	9500	94	10000	9300	92.2	2	13	59	125
Trichloroethene	ND	10000	9900	99	10000	9700	96.7	2	14	61	134

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates
#17303-Former Willow Run Assembly Plant

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02010394
Lab Batch ID: R52002

Qualifiers:	ND/U - Not Detected at the Reporting Limit	MI - Matrix Interference
	B - Analyte detected in the associated Method Blank	D - Recovery Unreportable due to Dilution
	J - Estimated value between MDL and PQL	* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates
#17303-Former Willow Run Assembly Plant

Analysis: Chloride, Total
Method: E325.3

WorkOrder: 02010394
Lab Batch ID: R52309

Method Blank

Samples in Analytical Batch:

RunID: WET_020124W-995278 Units: mg/L
Analysis Date: 01/24/2002 11:30 Analyst: CV

Lab Sample ID	Client Sample ID
02010394-01B	GW-17303-011402-BN-111
02010394-02B	GW-17303-011402-BN-112
02010394-03B	GW-17303-011402-BN-113
02010394-04B	GW-17303-011402-BN-114
02010394-05B	GW-17303-011402-BN-115
02010394-06B	GW-17303-011402-BN-116

Analyte	Result	Rep Limit
Chloride	ND	1.0

Laboratory Control Sample (LCS)

RunID: WET_020124W-995280 Units: mg/L
Analysis Date: 01/24/2002 11:30 Analyst: CV

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	143	138.4	97	90	110

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02010394-01
RunID: WET_020124W-995282 Units: mg/L
Analysis Date: 01/24/2002 11:30 Analyst: CV

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	850	1250	2093	99.1	1250	2093	99.1	0	20	85	115

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

02010394 Page 33

2/13/02 3:29:08 PM

*Sample Receipt Checklist
And
Chain of Custody*



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder: 02010394

Received By: DS

Date and Time Received: 1/15/02 10:00:00 AM

Carrier name: FedEx

Temperature: 2

Chilled by: Water Ice

- | | | | |
|--|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes ☒ | No ☐ | Not Present ☐ |
| 2. Custody seals intact on shipping container/cooler? | Yes ☒ | No ☐ | Not Present ☐ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☒ |
| 4. Chain of custody present? | Yes ☒ | No ☐ | |
| 5. Chain of custody signed when relinquished and received? | Yes ☒ | No ☐ | |
| 6. Chain of custody agrees with sample labels? | Yes ☒ | No ☐ | |
| 7. Samples in proper container/bottle? | Yes ☒ | No ☐ | |
| 8. Sample containers intact? | Yes ☒ | No ☐ | |
| 9. Sufficient sample volume for indicated test? | Yes ☒ | No ☐ | |
| 10. All samples received within holding time? | Yes ☒ | No ☐ | |
| 11. Container/Temp Blank temperature in compliance? | Yes ☒ | No ☐ | |
| 12. Water - VOA vials have zero headspace? | Yes ☒ | No ☐ | Not Applicable ☐ |
| 13. Water - pH acceptable upon receipt? | Yes ☒ | No ☐ | Not Applicable ☐ |

SPL Representative:

Contact Date & Time:

Client Name Contacted:

Non Conformance
Issues:

Client Instructions:

CRA

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

SHIPPED TO (Laboratory Name):

SPL - Houston, TX

02010394

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17303

PROJECT NAME:

Former Willow Run Assembly Plant

SAMPLER'S

SIGNATURE:

Brian R. Nodolf

PRINTED

NAME: BRIAN R. NODOLF

NO. OF
CONTAINERS

PARAMETERS

VOCs
Chloride
K
Mn
Pb
H₂S

REMARKS

Standard TAT

SEQ:
No.

DATE

TIME

SAMPLE
TYPE

1	1/14/02	0910	GW-17303-011402-BN-111
2		1105	- - - - -112
3		1250	- - - - -113
4		1545	- - - - -114
5		1640	- - - - -115
6		1750	- - - - -116
7			TRIP BLANK

WATER

5

X X X

5

X X X

5

X X X

5

X X X

5

X X X

5

X X X

2

X

TOTAL NUMBER OF CONTAINERS

32

CRA CONTACT: PAUL WISEMAN

RELINQUISHED BY:

1. *Brian R. Nodolf*

DATE: 1/14/02

TIME: 1900

RECEIVED BY:

1. _____

DATE:

TIME:

RELINQUISHED BY:

2. _____

DATE:

TIME:

RECEIVED BY:

2. _____

DATE:

TIME:

RELINQUISHED BY:

3. _____

DATE:

TIME:

RECEIVED BY:

1. _____

DATE:

TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No.

(Signature)

White
Yellow

Fully Executed Copy
Receiving Laboratory Copy

Pink
Goldenrod

Shipper Copy
Sampler Copy

SAMPLE TEAM:

BRIAN R. NODOLF

RECEIVED FOR LABORATORY BY:

Dianne Steele

DATE: 1/15/02 TIME: 1000

20

18640

ORIGINAL ANALYTICAL REPORT

Project#: 17303-02 Lab#: 02030583

Name: Former Willow Run

Description

Event: GW Monitoring

Samples: 6 Water

Analysis: VOC, HPL, CL

TAT: 7 days not met

Lab: SPL

Checked Against Preliminary Data:

Date: 4/6/02 Init.: [Signature]

Date of Validation Memo: 4/8/02

Invoice Approval Date: _____

Comments: SDG: 7



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:
Conestoga-Rovers & Associates

Certificate of Analysis Number:

02030583

Report To: Conestoga-Rovers & Associates Paul Wiseman 14496 Sheldon Rd. Suite 200 Plymouth MI 48170- ph: (734) 453-5123 fax: (734) 453-5201	Project Name: #17303-02-WRC-Fomer Assembly Plan Site: #17303-02-WRC-Fomer Assembly Plan Site Address: PO Number: 40-0017478 State: Michigan State Cert. No.: Date Reported: 3/27/02
--	--

This report has been revised to correct the Volatile Organics compounds reported. Potassium has been included by SW846 Method 6010B. Please insert the chain of custody from your original report. SPL apologizes for any inconvenience this laboratory error may have caused you or your company.

Your sample "GW-17303-031402-TJ-117" (SPL ID: 02030583-01) was analyzed for the presence of Volatile Organics using Method 8260B. The concentrations of some target analytes in this sample required that multiple dilutions and analysis of the sample be performed. In order to provide the lowest possible reporting limits for other target analytes, the Toluene and trans-1,2-Dichloroethene concentrations on this sample are reported with an "E" qualifier indicating that the reported concentration is above the concentration of the highest point on the instrument calibration curve.

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Your sample ID "GW-17303-031402-TJ-119" (SPL ID: 02030583-03) was selected for use in SPL's quality control program for the Total Metals analysis by SW846 Method 6010B. The MS recovery was outside of the advisable quality control limits (Batch ID: 18741) due to matrix interference. A Post Digestion Spike (PDS) and Post Digestion Spike Duplicate (PDSD) was performed and all recoveries were outside quality control limits. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

Your sample ID "GW-17303-031402-TJ-119" (SPL ID: 02030583-03) was selected for use in SPL's quality control program for the Total Metals analysis by SW846 Method 6010B. Due to a dilution, a Post Digestion Spike (PDS) and Post Digestion Spike Duplicate (PDSD) was performed for Potassium (Batch ID: 18741B) and all recoveries were outside quality control limits. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

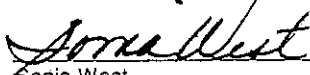
This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

APR - 2 2002

02030583 Page 1

4/1/02


Sonia West
Senior Project Manager

Date



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

Certificate of Analysis Number:

02030583

Report To: Conestoga-Rovers & Associates

Paul Wiseman
14496 Sheldon Rd.
Suite 200
Plymouth
MI

48170-

ph: (734) 453-5123 fax: (734) 453-5201

Project Name: #17303-02-WRC-Fomer Assembly Plan

Site: #17303-02-WRC-Fomer Assembly Plan

Site Address:

PO Number: 40-0017478

State: Michigan

State Cert. No.:

Date Reported: 3/27/02

Fax To:

Conestoga-Rovers & Associates

Paul Wiseman fax: (734) 453-5201

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
GW-17303-031402-TJ-117	02030583-01	Water	3/14/02 2:45:00 PM	3/16/02 10:00:00 AM	18193	☐
GW-17303-031402-TJ-118	02030583-02	Water	3/14/02 3:45:00 PM	3/16/02 10:00:00 AM	18193	☐
GW-17303-031402-TJ-119	02030583-03	Water	3/14/02 6:00:00 PM	3/16/02 10:00:00 AM	18193	☐
GW-17303-031402-TJ-120	02030583-04	Water	3/14/02 6:00:00 PM	3/16/02 10:00:00 AM	18193	☐
GW-17303-031402-TJ-121	02030583-05	Water	3/14/02 6:30:00 PM	3/16/02 10:00:00 AM	18193	☐
GW-17303-031402-TJ-122	02030583-06	Water	3/14/02 7:00:00 PM	3/16/02 10:00:00 AM	18193	☐
Trip Blank 12/10/01	02030583-07	Water	3/14/02	3/16/02 10:00:00 AM	18193	☐

Sonia West

Sonia West

Senior Project Manager

4/1/02

Date

Joel Grice
Laboratory Director

Ted Yen
Quality Assurance Officer

APR - 2 2002



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-117

Collected: 3/14/02 2:45:00

SPL Sample ID: 02030583-01

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L	
Chloride	698	10	10		03/18/02 14:30	CV	1064785
METALS BY METHOD 6010B, TOTAL				MCL	SW6010B	Units: mg/L	
Manganese	20	0.02	1		03/20/02 20:41	NS	1069116
Potassium	77.3	2	1		03/22/02 20:52	NS	1073345

Prep Method	Prep Date	Prep Initials
SW3010A	03/19/2002 7:00	MW

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-117

Collected: 3/14/02 2:45:00

SPL Sample ID: 02030583-01

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1	1		03/20/02 20:09	JC	1070073
1,1,1-Trichloroethane	ND	1	1		03/20/02 20:09	JC	1070073
1,1,2,2-Tetrachloroethane	ND	1	1		03/20/02 20:09	JC	1070073
1,1,2-Trichloroethane	ND	1	1		03/20/02 20:09	JC	1070073
1,1-Dichloroethane	ND	1	1		03/20/02 20:09	JC	1070073
1,1-Dichloroethene	12	1	1		03/20/02 20:09	JC	1070073
1,2,3-Trichloropropane	ND	1	1		03/20/02 20:09	JC	1070073
1,2,4-Trichlorobenzene	ND	5	1		03/20/02 20:09	JC	1070073
1,2,4-Trimethylbenzene	9	1	1		03/20/02 20:09	JC	1070073
1,2-Dibromo-3-chloropropane	ND	1	1		03/20/02 20:09	JC	1070073
1,2-Dichlorobenzene	ND	1	1		03/20/02 20:09	JC	1070073
1,2-Dichloroethane	ND	1	1		03/20/02 20:09	JC	1070073
1,2-Dichloropropane	ND	1	1		03/20/02 20:09	JC	1070073
1,3,5-Trimethylbenzene	3	1	1		03/20/02 20:09	JC	1070073
1,3-Dichlorobenzene	ND	1	1		03/20/02 20:09	JC	1070073
1,4-Dichlorobenzene	ND	1	1		03/20/02 20:09	JC	1070073
2-Butanone	ND	50	1		03/20/02 20:09	JC	1070073
2-Hexanone	ND	50	1		03/20/02 20:09	JC	1070073
4-Methyl-2-pentanone	ND	50	1		03/20/02 20:09	JC	1070073
Acetone	160	100	1		03/20/02 20:09	JC	1070073
Benzene	41	1	1		03/20/02 20:09	JC	1070073
Bromochloromethane	ND	1	1		03/20/02 20:09	JC	1070073
Bromodichloromethane	ND	1	1		03/20/02 20:09	JC	1070073
Bromoform	ND	1	1		03/20/02 20:09	JC	1070073
Bromomethane	ND	1	1		03/20/02 20:09	JC	1070073
Carbon disulfide	18	5	1		03/20/02 20:09	JC	1070073
Carbon tetrachloride	ND	1	1		03/20/02 20:09	JC	1070073
Chlorobenzene	ND	1	1		03/20/02 20:09	JC	1070073
Chloroethane	ND	1	1		03/20/02 20:09	JC	1070073
Chloroform	2	1	1		03/20/02 20:09	JC	1070073
Chloromethane	ND	1	1		03/20/02 20:09	JC	1070073
Dibromochloromethane	ND	1	1		03/20/02 20:09	JC	1070073
Dibromomethane	ND	1	1		03/20/02 20:09	JC	1070073
Dichlorodifluoromethane	ND	1	1		03/20/02 20:09	JC	1070073
Ethyl Ether	ND	20	1		03/20/02 20:09	JC	1070073
Ethylbenzene	150	1	1		03/20/02 20:09	JC	1070073
Iodomethane	ND	1	1		03/20/02 20:09	JC	1070073
Isopropylbenzene	28	1	1		03/20/02 20:09	JC	1070073
Methylene chloride	ND	5	1		03/20/02 20:09	JC	1070073
n-Propylbenzene	1	1	1		03/20/02 20:09	JC	1070073

Qualifiers: ND/U - Not Detected at the Reporting Limit
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J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-117

Collected: 3/14/02 2:45:00

SPL Sample ID: 02030583-01

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	50	5	1		03/20/02 20:09	JC	1070073
Styrene	ND	1	1		03/20/02 20:09	JC	1070073
Tetrachloroethene	ND	1	1		03/20/02 20:09	JC	1070073
Toluene	1100	1	1	E	03/20/02 20:09	JC	1070073
trans-1,4-Dichloro-2-Butene	ND	2	1		03/20/02 20:09	JC	1070073
Trichloroethene	160	1	1		03/20/02 20:09	JC	1070073
Vinyl chloride	42000	2000	2000		03/21/02 15:02	JC	1071502
cis-1,2-Dichloroethene	24000	2000	2000		03/21/02 15:02	JC	1071502
cis-1,3-Dichloropropene	ND	1	1		03/20/02 20:09	JC	1070073
trans-1,2-Dichloroethene	1000	1	1	E	03/20/02 20:09	JC	1070073
trans-1,3-Dichloropropene	ND	1	1		03/20/02 20:09	JC	1070073
Xylenes, Total	ND	6000	2000		03/21/02 15:02	JC	1071502
Surr: 1,2-Dichloroethane-d4	94.0	% 62-130	1		03/20/02 20:09	JC	1070073
Surr: 1,2-Dichloroethane-d4	82.0	% 62-130	2000		03/21/02 15:02	JC	1071502
Surr: 4-Bromofluorobenzene	100	% 70-130	1		03/20/02 20:09	JC	1070073
Surr: 4-Bromofluorobenzene	80.0	% 70-130	2000		03/21/02 15:02	JC	1071502
Surr: Toluene-d8	97.0	% 74-122	2000		03/21/02 15:02	JC	1071502
Surr: Toluene-d8	94.0	% 74-122	1		03/20/02 20:09	JC	1070073

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
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D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-118

Collected: 3/14/02 3:45:00

SPL Sample ID: 02030583-02

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	297	5	5		03/18/02 14:30	CV	1064786
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	8.43	0.02	1		03/20/02 20:47	NS	1069117
Potassium	1110	10	5		03/22/02 20:58	NS	1073346

Prep Method	Prep Date	Prep Initials
SW3010A	03/19/2002 7:00	MW

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-118

Collected: 3/14/02 3:45:00

SPL Sample ID: 02030583-02

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1	1		03/20/02 20:38	JC	1070074
1,1,1-Trichloroethane	ND	1	1		03/20/02 20:38	JC	1070074
1,1,2,2-Tetrachloroethane	ND	1	1		03/20/02 20:38	JC	1070074
1,1,2-Trichloroethane	ND	1	1		03/20/02 20:38	JC	1070074
1,1-Dichloroethane	ND	1	1		03/20/02 20:38	JC	1070074
1,1-Dichloroethene	1	1	1		03/20/02 20:38	JC	1070074
1,2,3-Trichloropropane	ND	1	1		03/20/02 20:38	JC	1070074
1,2,4-Trichlorobenzene	ND	5	1		03/20/02 20:38	JC	1070074
1,2,4-Trimethylbenzene	ND	1	1		03/20/02 20:38	JC	1070074
1,2-Dibromo-3-chloropropane	ND	1	1		03/20/02 20:38	JC	1070074
1,2-Dichlorobenzene	ND	1	1		03/20/02 20:38	JC	1070074
1,2-Dichloroethane	ND	1	1		03/20/02 20:38	JC	1070074
1,2-Dichloropropane	ND	1	1		03/20/02 20:38	JC	1070074
1,3,5-Trimethylbenzene	ND	1	1		03/20/02 20:38	JC	1070074
1,3-Dichlorobenzene	ND	1	1		03/20/02 20:38	JC	1070074
1,4-Dichlorobenzene	ND	1	1		03/20/02 20:38	JC	1070074
2-Butanone	70	50	1		03/20/02 20:38	JC	1070074
2-Hexanone	ND	50	1		03/20/02 20:38	JC	1070074
4-Methyl-2-pentanone	ND	50	1		03/20/02 20:38	JC	1070074
Acetone	280	100	1		03/20/02 20:38	JC	1070074
Benzene	42	1	1		03/20/02 20:38	JC	1070074
Bromochloromethane	ND	1	1		03/20/02 20:38	JC	1070074
Bromodichloromethane	ND	1	1		03/20/02 20:38	JC	1070074
Bromoform	ND	1	1		03/20/02 20:38	JC	1070074
Bromomethane	ND	1	1		03/20/02 20:38	JC	1070074
Carbon disulfide	7	5	1		03/20/02 20:38	JC	1070074
Carbon tetrachloride	ND	1	1		03/20/02 20:38	JC	1070074
Chlorobenzene	ND	1	1		03/20/02 20:38	JC	1070074
Chloroethane	ND	1	1		03/20/02 20:38	JC	1070074
Chloroform	4	1	1		03/20/02 20:38	JC	1070074
Chloromethane	ND	1	1		03/20/02 20:38	JC	1070074
Dibromochloromethane	ND	1	1		03/20/02 20:38	JC	1070074
Dibromomethane	ND	1	1		03/20/02 20:38	JC	1070074
Dichlorodifluoromethane	ND	1	1		03/20/02 20:38	JC	1070074
Ethyl Ether	ND	20	1		03/20/02 20:38	JC	1070074
Ethylbenzene	5	1	1		03/20/02 20:38	JC	1070074
Iodomethane	ND	1	1		03/20/02 20:38	JC	1070074
Isopropylbenzene	ND	1	1		03/20/02 20:38	JC	1070074
Methylene chloride	ND	5	1		03/20/02 20:38	JC	1070074
n-Propylbenzene	ND	1	1		03/20/02 20:38	JC	1070074

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
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J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-118

Collected: 3/14/02 3:45:00

SPL Sample ID: 02030583-02

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	6	5	1		03/20/02 20:38	JC	1070074
Styrene	ND	1	1		03/20/02 20:38	JC	1070074
Tetrachloroethene	ND	1	1		03/20/02 20:38	JC	1070074
Toluene	130	1	1		03/20/02 20:38	JC	1070074
trans-1,4-Dichloro-2-Butene	ND	2	1		03/20/02 20:38	JC	1070074
Trichloroethene	ND	1	1		03/20/02 20:38	JC	1070074
Vinyl chloride	210	10	10		03/21/02 16:29	JC	1071505
cis-1,2-Dichloroethene	1100	10	10		03/21/02 16:29	JC	1071505
cis-1,3-Dichloropropene	ND	1	1		03/20/02 20:38	JC	1070074
trans-1,2-Dichloroethene	100	10	10		03/21/02 16:29	JC	1071505
trans-1,3-Dichloropropene	ND	1	1		03/20/02 20:38	JC	1070074
Xylenes, Total	10	3	1		03/20/02 20:38	JC	1070074
Surr: 1,2-Dichloroethane-d4	92.0	% 62-130	1		03/20/02 20:38	JC	1070074
Surr: 1,2-Dichloroethane-d4	88.0	% 62-130	10		03/21/02 16:29	JC	1071505
Surr: 4-Bromofluorobenzene	88.0	% 70-130	1		03/20/02 20:38	JC	1070074
Surr: 4-Bromofluorobenzene	84.0	% 70-130	10		03/21/02 16:29	JC	1071505
Surr: Toluene-d8	98.0	% 74-122	10		03/21/02 16:29	JC	1071505
Surr: Toluene-d8	96.0	% 74-122	1		03/20/02 20:38	JC	1070074

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
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J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-119

Collected: 3/14/02 6:00:00

SPL Sample ID: 02030583-03

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	689	25	25		03/18/02 14:30	CV	1064787
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	21	0.02	1		03/20/02 20:04	NS	1069110
Potassium	926	10	5		03/22/02 20:27	NS	1073341

Prep Method	Prep Date	Prep Initials
SW3010A	03/19/2002 7:00	MW

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-119

Collected: 3/14/02 6:00:00

SPL Sample ID: 02030583-03

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1	1		03/20/02 21:07	JC	1070075
1,1,1-Trichloroethane	ND	1	1		03/20/02 21:07	JC	1070075
1,1,2,2-Tetrachloroethane	ND	1	1		03/20/02 21:07	JC	1070075
1,1,2-Trichloroethane	ND	1	1		03/20/02 21:07	JC	1070075
1,1-Dichloroethane	1	1	1		03/20/02 21:07	JC	1070075
1,1-Dichloroethene	ND	1	1		03/20/02 21:07	JC	1070075
1,2,3-Trichloropropane	ND	1	1		03/20/02 21:07	JC	1070075
1,2,4-Trichlorobenzene	ND	5	1		03/20/02 21:07	JC	1070075
1,2,4-Trimethylbenzene	ND	1	1		03/20/02 21:07	JC	1070075
1,2-Dibromo-3-chloropropane	ND	1	1		03/20/02 21:07	JC	1070075
1,2-Dichlorobenzene	ND	1	1		03/20/02 21:07	JC	1070075
1,2-Dichloroethane	1	1	1		03/20/02 21:07	JC	1070075
1,2-Dichloropropane	2	1	1		03/20/02 21:07	JC	1070075
1,3,5-Trimethylbenzene	ND	1	1		03/20/02 21:07	JC	1070075
1,3-Dichlorobenzene	ND	1	1		03/20/02 21:07	JC	1070075
1,4-Dichlorobenzene	ND	1	1		03/20/02 21:07	JC	1070075
2-Butanone	ND	50	1		03/20/02 21:07	JC	1070075
2-Hexanone	ND	50	1		03/20/02 21:07	JC	1070075
4-Methyl-2-pentanone	ND	50	1		03/20/02 21:07	JC	1070075
Acetone	240	100	1		03/20/02 21:07	JC	1070075
Benzene	68	1	1		03/20/02 21:07	JC	1070075
Bromochloromethane	ND	1	1		03/20/02 21:07	JC	1070075
Bromodichloromethane	2	1	1		03/20/02 21:07	JC	1070075
Bromoform	ND	1	1		03/20/02 21:07	JC	1070075
Bromomethane	ND	1	1		03/20/02 21:07	JC	1070075
Carbon disulfide	17	5	1		03/20/02 21:07	JC	1070075
Carbon tetrachloride	ND	1	1		03/20/02 21:07	JC	1070075
Chlorobenzene	ND	1	1		03/20/02 21:07	JC	1070075
Chloroethane	ND	1	1		03/20/02 21:07	JC	1070075
Chloroform	5	1	1		03/20/02 21:07	JC	1070075
Chloromethane	ND	1	1		03/20/02 21:07	JC	1070075
Dibromochloromethane	ND	1	1		03/20/02 21:07	JC	1070075
Dibromomethane	ND	1	1		03/20/02 21:07	JC	1070075
Dichlorodifluoromethane	ND	1	1		03/20/02 21:07	JC	1070075
Ethyl Ether	ND	20	1		03/20/02 21:07	JC	1070075
Ethylbenzene	1	1	1		03/20/02 21:07	JC	1070075
Iodomethane	ND	1	1		03/20/02 21:07	JC	1070075
Isopropylbenzene	ND	1	1		03/20/02 21:07	JC	1070075
Methylene chloride	ND	5	1		03/20/02 21:07	JC	1070075
n-Propylbenzene	ND	1	1		03/20/02 21:07	JC	1070075

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-119

Collected: 3/14/02 6:00:00

SPL Sample ID: 02030583-03

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5	1		03/20/02 21:07	JC	1070075
Styrene	ND	1	1		03/20/02 21:07	JC	1070075
Tetrachloroethene	ND	1	1		03/20/02 21:07	JC	1070075
Toluene	66	1	1		03/20/02 21:07	JC	1070075
trans-1,4-Dichloro-2-Butene	ND	2	1		03/20/02 21:07	JC	1070075
Trichloroethene	12	1	1		03/20/02 21:07	JC	1070075
Vinyl chloride	420	50	50		03/21/02 12:37	JC	1071497
cis-1,2-Dichloroethene	590	50	50		03/21/02 12:37	JC	1071497
cis-1,3-Dichloropropene	ND	1	1		03/20/02 21:07	JC	1070075
trans-1,2-Dichloroethene	6	1	1		03/20/02 21:07	JC	1070075
trans-1,3-Dichloropropene	ND	1	1		03/20/02 21:07	JC	1070075
Xylenes, Total	36	3	1		03/20/02 21:07	JC	1070075
Surr: 1,2-Dichloroethane-d4	94.0	% 62-130	1		03/20/02 21:07	JC	1070075
Surr: 1,2-Dichloroethane-d4	84.0	% 62-130	50		03/21/02 12:37	JC	1071497
Surr: 4-Bromofluorobenzene	90.0	% 70-130	1		03/20/02 21:07	JC	1070075
Surr: 4-Bromofluorobenzene	84.0	% 70-130	50		03/21/02 12:37	JC	1071497
Surr: Toluene-d8	96.0	% 74-122	50		03/21/02 12:37	JC	1071497
Surr: Toluene-d8	96.0	% 74-122	1		03/20/02 21:07	JC	1070075

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-120

Collected: 3/14/02 6:00:00

SPL Sample ID: 02030583-04

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL				E325.3	Units: mg/L		
Chloride	431	5	5		03/18/02 14:30	CV	1064790
METALS BY METHOD 6010B, TOTAL				SW6010B	Units: mg/L		
Manganese	13.4	0.02	1		03/20/02 21:13	NS	1069120
Potassium	154	2	1		03/22/02 21:04	NS	1073347

Prep Method	Prep Date	Prep Initials
SW3010A	03/19/2002 7:00	MW

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-120

Collected: 3/14/02 6:00:00

SPL Sample ID: 02030583-04

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1	1		03/20/02 21:36	JC	1070076
1,1,1-Trichloroethane	ND	1	1		03/20/02 21:36	JC	1070076
1,1,2,2-Tetrachloroethane	ND	1	1		03/20/02 21:36	JC	1070076
1,1,2-Trichloroethane	9	1	1		03/20/02 21:36	JC	1070076
1,1-Dichloroethane	ND	1	1		03/20/02 21:36	JC	1070076
1,1-Dichloroethene	6	1	1		03/20/02 21:36	JC	1070076
1,2,3-Trichloropropane	ND	1	1		03/20/02 21:36	JC	1070076
1,2,4-Trichlorobenzene	ND	5	1		03/20/02 21:36	JC	1070076
1,2,4-Trimethylbenzene	16	1	1		03/20/02 21:36	JC	1070076
1,2-Dibromo-3-chloropropane	ND	1	1		03/20/02 21:36	JC	1070076
1,2-Dichlorobenzene	ND	1	1		03/20/02 21:36	JC	1070076
1,2-Dichloroethane	16	1	1		03/20/02 21:36	JC	1070076
1,2-Dichloropropane	ND	1	1		03/20/02 21:36	JC	1070076
1,3,5-Trimethylbenzene	6	1	1		03/20/02 21:36	JC	1070076
1,3-Dichlorobenzene	ND	1	1		03/20/02 21:36	JC	1070076
1,4-Dichlorobenzene	ND	1	1		03/20/02 21:36	JC	1070076
2-Butanone	ND	50	1		03/20/02 21:36	JC	1070076
2-Hexanone	ND	50	1		03/20/02 21:36	JC	1070076
4-Methyl-2-pentanone	ND	50	1		03/20/02 21:36	JC	1070076
Acetone	ND	100	1		03/20/02 21:36	JC	1070076
Benzene	22	1	1		03/20/02 21:36	JC	1070076
Bromochloromethane	ND	1	1		03/20/02 21:36	JC	1070076
Bromodichloromethane	1	1	1		03/20/02 21:36	JC	1070076
Bromoform	ND	1	1		03/20/02 21:36	JC	1070076
Bromomethane	ND	1	1		03/20/02 21:36	JC	1070076
Carbon disulfide	ND	5	1		03/20/02 21:36	JC	1070076
Carbon tetrachloride	ND	1	1		03/20/02 21:36	JC	1070076
Chlorobenzene	ND	1	1		03/20/02 21:36	JC	1070076
Chloroethane	ND	1	1		03/20/02 21:36	JC	1070076
Chloroform	16	1	1		03/20/02 21:36	JC	1070076
Chloromethane	ND	1	1		03/20/02 21:36	JC	1070076
Dibromochloromethane	ND	1	1		03/20/02 21:36	JC	1070076
Dibromomethane	ND	1	1		03/20/02 21:36	JC	1070076
Dichlorodifluoromethane	ND	1	1		03/20/02 21:36	JC	1070076
Ethyl Ether	ND	20	1		03/20/02 21:36	JC	1070076
Ethylbenzene	61	1	1		03/20/02 21:36	JC	1070076
Iodomethane	ND	1	1		03/20/02 21:36	JC	1070076
Isopropylbenzene	3	1	1		03/20/02 21:36	JC	1070076
Methylene chloride	ND	5	1		03/20/02 21:36	JC	1070076
n-Propylbenzene	2	1	1		03/20/02 21:36	JC	1070076

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-120

Collected: 3/14/02 6:00:00

SPL Sample ID: 02030583-04

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	5	5	1		03/20/02 21:36	JC	1070076
Styrene	ND	1	1		03/20/02 21:36	JC	1070076
Tetrachloroethene	ND	1	1		03/20/02 21:36	JC	1070076
Toluene	88	1	1		03/20/02 21:36	JC	1070076
trans-1,4-Dichloro-2-Butene	ND	2	1		03/20/02 21:36	JC	1070076
Trichloroethene	350	100	100		03/21/02 15:31	JC	1071503
Vinyl chloride	1600	100	100		03/21/02 15:31	JC	1071503
cis-1,2-Dichloroethene	13000	100	100		03/21/02 15:31	JC	1071503
cis-1,3-Dichloropropene	ND	1	1		03/20/02 21:36	JC	1070076
trans-1,2-Dichloroethene	750	100	100		03/21/02 15:31	JC	1071503
trans-1,3-Dichloropropene	ND	1	1		03/20/02 21:36	JC	1070076
Xylenes, Total	440	3	1		03/20/02 21:36	JC	1070076
Surr: 1,2-Dichloroethane-d4	92.0	% 62-130	1		03/20/02 21:36	JC	1070076
Surr: 1,2-Dichloroethane-d4	88.0	% 62-130	100		03/21/02 15:31	JC	1071503
Surr: 4-Bromofluorobenzene	92.0	% 70-130	1		03/20/02 21:36	JC	1070076
Surr: 4-Bromofluorobenzene	84.0	% 70-130	100		03/21/02 15:31	JC	1071503
Surr: Toluene-d8	96.0	% 74-122	100		03/21/02 15:31	JC	1071503
Surr: Toluene-d8	96.0	% 74-122	1		03/20/02 21:36	JC	1070076

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-121

Collected: 3/14/02 6:30:00

SPL Sample ID: 02030583-05

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	431	5	5		03/18/02 14:30	CV	1064791
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	15.2	0.02	1		03/20/02 21:20	NS	1069121
Potassium	174	2	1		03/22/02 21:10	NS	1073348

Prep Method	Prep Date	Prep Initials
SW3010A	03/19/2002 7:00	MW

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-121

Collected: 3/14/02 6:30:00

SPL Sample ID: 02030583-05

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1	1		03/20/02 22:05	JC	1070077
1,1,1-Trichloroethane	ND	1	1		03/20/02 22:05	JC	1070077
1,1,2,2-Tetrachloroethane	ND	1	1		03/20/02 22:05	JC	1070077
1,1,2-Trichloroethane	8	1	1		03/20/02 22:05	JC	1070077
1,1-Dichloroethane	ND	1	1		03/20/02 22:05	JC	1070077
1,1-Dichloroethene	6	1	1		03/20/02 22:05	JC	1070077
1,2,3-Trichloropropane	ND	1	1		03/20/02 22:05	JC	1070077
1,2,4-Trichlorobenzene	ND	5	1		03/20/02 22:05	JC	1070077
1,2,4-Trimethylbenzene	ND	1	1		03/20/02 22:05	JC	1070077
1,2-Dibromo-3-chloropropane	ND	1	1		03/20/02 22:05	JC	1070077
1,2-Dichlorobenzene	ND	1	1		03/20/02 22:05	JC	1070077
1,2-Dichloroethane	16	1	1		03/20/02 22:05	JC	1070077
1,2-Dichloropropane	ND	1	1		03/20/02 22:05	JC	1070077
1,3,5-Trimethylbenzene	6	1	1		03/20/02 22:05	JC	1070077
1,3-Dichlorobenzene	ND	1	1		03/20/02 22:05	JC	1070077
1,4-Dichlorobenzene	ND	1	1		03/20/02 22:05	JC	1070077
2-Butanone	ND	50	1		03/20/02 22:05	JC	1070077
2-Hexanone	ND	50	1		03/20/02 22:05	JC	1070077
4-Methyl-2-pentanone	ND	50	1		03/20/02 22:05	JC	1070077
Acetone	ND	100	1		03/20/02 22:05	JC	1070077
Benzene	21	1	1		03/20/02 22:05	JC	1070077
Bromochloromethane	ND	1	1		03/20/02 22:05	JC	1070077
Bromodichloromethane	1	1	1		03/20/02 22:05	JC	1070077
Bromoform	ND	1	1		03/20/02 22:05	JC	1070077
Bromomethane	ND	1	1		03/20/02 22:05	JC	1070077
Carbon disulfide	ND	5	1		03/20/02 22:05	JC	1070077
Carbon tetrachloride	ND	1	1		03/20/02 22:05	JC	1070077
Chlorobenzene	ND	1	1		03/20/02 22:05	JC	1070077
Chloroethane	ND	1	1		03/20/02 22:05	JC	1070077
Chloroform	16	1	1		03/20/02 22:05	JC	1070077
Chloromethane	ND	1	1		03/20/02 22:05	JC	1070077
Dibromochloromethane	ND	1	1		03/20/02 22:05	JC	1070077
Dibromomethane	ND	1	1		03/20/02 22:05	JC	1070077
Dichlorodifluoromethane	ND	1	1		03/20/02 22:05	JC	1070077
Ethyl Ether	ND	20	1		03/20/02 22:05	JC	1070077
Ethylbenzene	61	1	1		03/20/02 22:05	JC	1070077
Iodomethane	ND	1	1		03/20/02 22:05	JC	1070077
Isopropylbenzene	3	1	1		03/20/02 22:05	JC	1070077
Methylene chloride	ND	5	1		03/20/02 22:05	JC	1070077
n-Propylbenzene	2	1	1		03/20/02 22:05	JC	1070077

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-121

Collected: 3/14/02 6:30:00

SPL Sample ID: 02030583-05

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	6	5	1		03/20/02 22:05	JC	1070077
Styrene	ND	1	1		03/20/02 22:05	JC	1070077
Tetrachloroethene	ND	1	1		03/20/02 22:05	JC	1070077
Toluene	83	1	1		03/20/02 22:05	JC	1070077
trans-1,4-Dichloro-2-Butene	ND	2	1		03/20/02 22:05	JC	1070077
Trichloroethene	360	100	100		03/21/02 16:00	JC	1071504
Vinyl chloride	1400	100	100		03/21/02 16:00	JC	1071504
cis-1,2-Dichloroethene	11000	100	100		03/21/02 16:00	JC	1071504
cis-1,3-Dichloropropene	ND	1	1		03/20/02 22:05	JC	1070077
trans-1,2-Dichloroethene	660	100	100		03/21/02 16:00	JC	1071504
trans-1,3-Dichloropropene	ND	1	1		03/20/02 22:05	JC	1070077
Xylenes, Total	430	3	1		03/20/02 22:05	JC	1070077
Surr: 1,2-Dichloroethane-d4	90.0 %	62-130	1		03/20/02 22:05	JC	1070077
Surr: 1,2-Dichloroethane-d4	88.0 %	62-130	100		03/21/02 16:00	JC	1071504
Surr: 4-Bromofluorobenzene	92.0 %	70-130	1		03/20/02 22:05	JC	1070077
Surr: 4-Bromofluorobenzene	84.0 %	70-130	100		03/21/02 16:00	JC	1071504
Surr: Toluene-d8	100 %	74-122	100		03/21/02 16:00	JC	1071504
Surr: Toluene-d8	96.0 %	74-122	1		03/20/02 22:05	JC	1070077

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-122

Collected: 3/14/02 7:00:00

SPL Sample ID: 02030583-06

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	345	5	5		03/18/02 14:30	CV	1064792
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	11.7	0.02	1		03/20/02 21:26	NS	1069122
Potassium	341	2	1		03/22/02 21:36	NS	1073351

Prep Method	Prep Date	Prep Initials
SW3010A	03/19/2002 7:00	MW

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-122

Collected: 3/14/02 7:00:00

SPL Sample ID: 02030583-06

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B		MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	1	1		03/21/02 17:07	JC	1071506
1,1,1-Trichloroethane	ND	1	1		03/21/02 17:07	JC	1071506
1,1,2,2-Tetrachloroethane	ND	1	1		03/21/02 17:07	JC	1071506
1,1,2-Trichloroethane	ND	1	1		03/21/02 17:07	JC	1071506
1,1-Dichloroethane	ND	1	1		03/21/02 17:07	JC	1071506
1,1-Dichloroethene	ND	1	1		03/21/02 17:07	JC	1071506
1,2,3-Trichloropropane	ND	1	1		03/21/02 17:07	JC	1071506
1,2,4-Trichlorobenzene	ND	5	1		03/21/02 17:07	JC	1071506
1,2,4-Trimethylbenzene	ND	1	1		03/21/02 17:07	JC	1071506
1,2-Dibromo-3-chloropropane	ND	1	1		03/21/02 17:07	JC	1071506
1,2-Dichlorobenzene	ND	1	1		03/21/02 17:07	JC	1071506
1,2-Dichloroethane	ND	1	1		03/21/02 17:07	JC	1071506
1,2-Dichloropropane	ND	1	1		03/21/02 17:07	JC	1071506
1,3,5-Trimethylbenzene	ND	1	1		03/21/02 17:07	JC	1071506
1,3-Dichlorobenzene	ND	1	1		03/21/02 17:07	JC	1071506
1,4-Dichlorobenzene	ND	1	1		03/21/02 17:07	JC	1071506
2-Butanone	ND	50	1		03/21/02 17:07	JC	1071506
2-Hexanone	ND	50	1		03/21/02 17:07	JC	1071506
4-Methyl-2-pentanone	ND	50	1		03/21/02 17:07	JC	1071506
Acetone	ND	100	1		03/21/02 17:07	JC	1071506
Benzene	3	1	1		03/21/02 17:07	JC	1071506
Bromochloromethane	ND	1	1		03/21/02 17:07	JC	1071506
Bromodichloromethane	2	1	1		03/21/02 17:07	JC	1071506
Bromoform	ND	1	1		03/21/02 17:07	JC	1071506
Bromomethane	ND	1	1		03/21/02 17:07	JC	1071506
Carbon disulfide	ND	5	1		03/21/02 17:07	JC	1071506
Carbon tetrachloride	ND	1	1		03/21/02 17:07	JC	1071506
Chlorobenzene	ND	1	1		03/21/02 17:07	JC	1071506
Chloroethane	ND	1	1		03/21/02 17:07	JC	1071506
Chloroform	16	1	1		03/21/02 17:07	JC	1071506
Chloromethane	ND	1	1		03/21/02 17:07	JC	1071506
Dibromochloromethane	ND	1	1		03/21/02 17:07	JC	1071506
Dibromomethane	ND	1	1		03/21/02 17:07	JC	1071506
Dichlorodifluoromethane	ND	1	1		03/21/02 17:07	JC	1071506
Ethyl Ether	ND	20	1		03/21/02 17:07	JC	1071506
Ethylbenzene	ND	1	1		03/21/02 17:07	JC	1071506
Iodomethane	ND	1	1		03/21/02 17:07	JC	1071506
Isopropylbenzene	ND	1	1		03/21/02 17:07	JC	1071506
Methylene chloride	ND	5	1		03/21/02 17:07	JC	1071506
n-Propylbenzene	ND	1	1		03/21/02 17:07	JC	1071506

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-031402-TJ-122

Collected: 3/14/02 7:00:00

SPL Sample ID: 02030583-06

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5	1		03/21/02 17:07	JC	1071506
Styrene	ND	1	1		03/21/02 17:07	JC	1071506
Tetrachloroethene	ND	1	1		03/21/02 17:07	JC	1071506
Toluene	1	1	1		03/21/02 17:07	JC	1071506
trans-1,4-Dichloro-2-Butene	ND	2	1		03/21/02 17:07	JC	1071506
Trichloroethene	8300	50	50		03/21/02 12:08	JC	1071496
Vinyl chloride	110	1	1		03/21/02 17:07	JC	1071506
cis-1,2-Dichloroethene	700	50	50		03/21/02 12:08	JC	1071496
cis-1,3-Dichloropropene	ND	1	1		03/21/02 17:07	JC	1071506
trans-1,2-Dichloroethene	ND	50	50		03/21/02 12:08	JC	1071496
trans-1,3-Dichloropropene	ND	1	1		03/21/02 17:07	JC	1071506
Xylenes, Total	ND	3	1		03/21/02 17:07	JC	1071506
Surr: 1,2-Dichloroethane-d4	84.0	% 62-130	1		03/21/02 17:07	JC	1071506
Surr: 1,2-Dichloroethane-d4	80.0	% 62-130	50		03/21/02 12:08	JC	1071496
Surr: 4-Bromofluorobenzene	82.0	% 70-130	1		03/21/02 17:07	JC	1071506
Surr: 4-Bromofluorobenzene	80.0	% 70-130	50		03/21/02 12:08	JC	1071496
Surr: Toluene-d8	96.0	% 74-122	50		03/21/02 12:08	JC	1071496
Surr: Toluene-d8	98.0	% 74-122	1		03/21/02 17:07	JC	1071506

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID Trip Blank 12/10/01

Collected: 3/14/02

SPL Sample ID: 02030583-07

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1	1		03/20/02 19:40	JC	1070072
1,1,1-Trichloroethane	ND	1	1		03/20/02 19:40	JC	1070072
1,1,2,2-Tetrachloroethane	ND	1	1		03/20/02 19:40	JC	1070072
1,1,2-Trichloroethane	ND	1	1		03/20/02 19:40	JC	1070072
1,1-Dichloroethane	ND	1	1		03/20/02 19:40	JC	1070072
1,1-Dichloroethene	ND	1	1		03/20/02 19:40	JC	1070072
1,2,3-Trichloropropane	ND	1	1		03/20/02 19:40	JC	1070072
1,2,4-Trichlorobenzene	ND	5	1		03/20/02 19:40	JC	1070072
1,2,4-Trimethylbenzene	ND	1	1		03/20/02 19:40	JC	1070072
1,2-Dibromo-3-chloropropane	ND	1	1		03/20/02 19:40	JC	1070072
1,2-Dichlorobenzene	ND	1	1		03/20/02 19:40	JC	1070072
1,2-Dichloroethane	ND	1	1		03/20/02 19:40	JC	1070072
1,2-Dichloropropane	ND	1	1		03/20/02 19:40	JC	1070072
1,3,5-Trimethylbenzene	ND	1	1		03/20/02 19:40	JC	1070072
1,3-Dichlorobenzene	ND	1	1		03/20/02 19:40	JC	1070072
1,4-Dichlorobenzene	ND	1	1		03/20/02 19:40	JC	1070072
2-Butanone	ND	50	1		03/20/02 19:40	JC	1070072
2-Hexanone	ND	50	1		03/20/02 19:40	JC	1070072
4-Methyl-2-pentanone	ND	50	1		03/20/02 19:40	JC	1070072
Acetone	ND	100	1		03/20/02 19:40	JC	1070072
Benzene	ND	1	1		03/20/02 19:40	JC	1070072
Bromochloromethane	ND	1	1		03/20/02 19:40	JC	1070072
Bromodichloromethane	ND	1	1		03/20/02 19:40	JC	1070072
Bromoform	ND	1	1		03/20/02 19:40	JC	1070072
Bromomethane	ND	1	1		03/20/02 19:40	JC	1070072
Carbon disulfide	ND	5	1		03/20/02 19:40	JC	1070072
Carbon tetrachloride	ND	1	1		03/20/02 19:40	JC	1070072
Chlorobenzene	ND	1	1		03/20/02 19:40	JC	1070072
Chloroethane	ND	1	1		03/20/02 19:40	JC	1070072
Chloroform	ND	1	1		03/20/02 19:40	JC	1070072
Chloromethane	ND	1	1		03/20/02 19:40	JC	1070072
Dibromochloromethane	ND	1	1		03/20/02 19:40	JC	1070072
Dibromomethane	ND	1	1		03/20/02 19:40	JC	1070072
Dichlorodifluoromethane	ND	1	1		03/20/02 19:40	JC	1070072
Ethyl Ether	ND	20	1		03/20/02 19:40	JC	1070072
Ethylbenzene	ND	1	1		03/20/02 19:40	JC	1070072
Iodomethane	ND	1	1		03/20/02 19:40	JC	1070072
Isopropylbenzene	ND	1	1		03/20/02 19:40	JC	1070072
Methylene chloride	ND	5	1		03/20/02 19:40	JC	1070072
n-Propylbenzene	ND	1	1		03/20/02 19:40	JC	1070072

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID Trip Blank 12/10/01

Collected: 3/14/02

SPL Sample ID: 02030583-07

Site: #17303-02-WRC-Fomer Assembly Plant GW

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5	1		03/20/02 19:40	JC	1070072
Styrene	ND	1	1		03/20/02 19:40	JC	1070072
Tetrachloroethene	ND	1	1		03/20/02 19:40	JC	1070072
Toluene	ND	1	1		03/20/02 19:40	JC	1070072
trans-1,4-Dichloro-2-Butene	ND	2	1		03/20/02 19:40	JC	1070072
Trichloroethene	ND	1	1		03/20/02 19:40	JC	1070072
Vinyl chloride	ND	1	1		03/20/02 19:40	JC	1070072
cis-1,2-Dichloroethene	ND	1	1		03/20/02 19:40	JC	1070072
cis-1,3-Dichloropropene	ND	1	1		03/20/02 19:40	JC	1070072
trans-1,2-Dichloroethene	ND	1	1		03/20/02 19:40	JC	1070072
trans-1,3-Dichloropropene	ND	1	1		03/20/02 19:40	JC	1070072
Xylenes, Total	ND	3	1		03/20/02 19:40	JC	1070072
Surr: 1,2-Dichloroethane-d4	96.0	% 62-130	1		03/20/02 19:40	JC	1070072
Surr: 4-Bromofluorobenzene	86.0	% 70-130	1		03/20/02 19:40	JC	1070072
Surr: Toluene-d8	94.0	% 74-122	1		03/20/02 19:40	JC	1070072

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

Quality Control Documentation



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates #17303-02-WRC-Fomer Assembly Plant GW

Analysis: Metals by Method 6010B, Total
Method: SW6010B

WorkOrder: 02030583
Lab Batch ID: 18741

Method Blank

RunID: TJA_020320D-1069108 Units: mg/L
Analysis Date: 03/20/2002 19:52 Analyst: NS
Preparation Date: 03/19/2002 7:00 Prep By: MW Method SW3010A

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02030583-01B	GW-17303-031402-TJ-117
02030583-02B	GW-17303-031402-TJ-118
02030583-03B	GW-17303-031402-TJ-119
02030583-04B	GW-17303-031402-TJ-120
02030583-05B	GW-17303-031402-TJ-121
02030583-06B	GW-17303-031402-TJ-122

Analyte	Result	Rep Limit
Manganese	ND	0.02

Laboratory Control Sample (LCS)

RunID: TJA_020320D-1069109 Units: mg/L
Analysis Date: 03/20/2002 19:58 Analyst: NS
Preparation Date: 03/19/2002 7:00 Prep By: MW Method SW3010A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Manganese	1	1.08	108	80	120

Post Digestion Spike (PDS) / Post Digestion Spike Duplicate (PDSD)

Sample Spiked: 02030583-03
RunID: TJA_020320D-1069114 Units: mg/L
Analysis Date: 03/20/2002 20:29 Analyst: NS
Preparation Date: 03/19/2002 7:00 Prep By: Method

Analyte	Sample Result	PDS Spike Added	PDS Result	PDS % Recovery	PDSD Spike Added	PDSD Result	PDSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Manganese	21	1	21.6	61.6 *	1	21.6	53.5 *	14.0	20	75	125

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02030583-03
RunID: TJA_020320D-1069111 Units: mg/L
Analysis Date: 03/20/2002 20:10 Analyst: NS
Preparation Date: 03/19/2002 7:00 Prep By: MW Method SW3010A

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Manganese	21	1	23.6	253 *	1	22.2	121	70.4 *	20	75	125

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates #17303-02-WRC-Fomer Assembly Plant GW

Analysis: Metals by Method 6010B, Total
Method: SW6010B

WorkOrder: 02030583
Lab Batch ID: 18741B

Method Blank

Samples in Analytical Batch:

RunID: TJA_020322E-1073339 Units: mg/L
Analysis Date: 03/22/2002 20:14 Analyst: NS
Preparation Date: 03/19/2002 7:00 Prep By: MW Method SW3010A

Lab Sample ID	Client Sample ID
02030583-01B	GW-17303-031402-TJ-117
02030583-02B	GW-17303-031402-TJ-118
02030583-03B	GW-17303-031402-TJ-119
02030583-04B	GW-17303-031402-TJ-120
02030583-05B	GW-17303-031402-TJ-121
02030583-06B	GW-17303-031402-TJ-122

Analyte	Result	Rep Limit
Potassium	ND	2

Laboratory Control Sample (LCS)

RunID: TJA_020322E-1073340 Units: mg/L
Analysis Date: 03/22/2002 20:21 Analyst: NS
Preparation Date: 03/19/2002 7:00 Prep By: MW Method SW3010A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Potassium	10	11.9	119	80	120

Post Digestion Spike (PDS) / Post Digestion Spike Duplicate (PDSD)

Sample Spiked: 02030583-03
RunID: TJA_020322E-1073342 Units: mg/L
Analysis Date: 03/22/2002 20:33 Analyst: NS
Preparation Date: 03/19/2002 7:00 Prep By: Method

Analyte	Sample Result	PDS Spike Added	PDS Result	PDS % Recovery	PDSD Spike Added	PDSD Result	PDSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Potassium	926	50	952	52.1 *	50	948	43.7 *	17.7	20	75	125

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

#17303-02-WRC-Fomer Assembly Plant GW

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02030583
Lab Batch ID: R55777

Method Blank

RunID: K_020320A-1070071 Units: ug/L
Analysis Date: 03/20/2002 19:11 Analyst: JC

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02030583-01A	GW-17303-031402-TJ-117
02030583-02A	GW-17303-031402-TJ-118
02030583-03A	GW-17303-031402-TJ-119
02030583-04A	GW-17303-031402-TJ-120
02030583-05A	GW-17303-031402-TJ-121
02030583-07A	Trip Blank 12/10/01

Analyte	Result	Rep Limit
1,1,1,2-Tetrachloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,1,2-Trichloroethane	ND	1.0
1,1-Dichloroethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,2,3-Trichloropropane	ND	1.0
1,2,4-Trichlorobenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	1.0
1,2-Dibromo-3-chloropropane	ND	1.0
1,2-Dichlorobenzene	ND	1.0
1,2-Dichloroethane	ND	1.0
1,2-Dichloropropane	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
2-Butanone	ND	50
2-Hexanone	ND	50
4-Methyl-2-pentanone	ND	50
Acetone	ND	100
Benzene	ND	1.0
Bromochloromethane	ND	1.0
Bromodichloromethane	ND	1.0
Bromoform	ND	1.0
Bromomethane	ND	1.0
Carbon disulfide	ND	5.0
Carbon tetrachloride	ND	1.0
Chlorobenzene	ND	1.0
Chloroethane	ND	1.0
Chloroform	ND	1.0
Chloromethane	ND	1.0
Dibromochloromethane	ND	1.0
Dibromomethane	ND	1.0
Dichlorodifluoromethane	ND	1.0
Ethyl Ether	ND	20
Ethylbenzene	ND	1.0
Iodomethane	ND	1.0
Isopropylbenzene	ND	1.0
Methylene chloride	ND	5.0
n-Propylbenzene	ND	1.0
Naphthalene	ND	5.0
Styrene	ND	1.0
Tetrachloroethene	ND	1.0
Toluene	ND	1.0
trans-1,4-Dichloro-2-Butene	ND	2.0
Trichloroethene	ND	1.0
Vinyl chloride	ND	1.0
cis-1,2-Dichloroethene	ND	1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates #17303-02-WRC-Fomer Assembly Plant GW

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02030583
Lab Batch ID: R55777

Method Blank

RunID: K_020320A-1070071 Units: ug/L
Analysis Date: 03/20/2002 19:11 Analyst: JC

Analyte	Result	Rep Limit
cis-1,3-Dichloropropene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Xylenes, Total	ND	3.0
Surr: 1,2-Dichloroethane-d4	100.0	62-130
Surr: 4-Bromofluorobenzene	86.0	70-130
Surr: Toluene-d8	94.0	74-122

Laboratory Control Sample (LCS)

RunID: K_020320A-1070070 Units: ug/L
Analysis Date: 03/20/2002 18:13 Analyst: JC

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	55	110	61	145
Benzene	50	50	100	76	127
Chlorobenzene	50	53	106	75	130
Toluene	50	51	102	76	125
Trichloroethene	50	50	100	71	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02030354-13
RunID: K_020320A-1070083 Units: ug/L
Analysis Date: 03/21/2002 1:00 Analyst: JC

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	10000	12000	120	10000	12000	120	0	14	38	172
Benzene	8800	10000	20000	112	10000	19000	102	9	11	66	134
Chlorobenzene	ND	10000	11000	110	10000	11000	110	0	13	67	115
Toluene	ND	10000	10000	100	10000	10000	100	0	13	59	125
Trichloroethene	ND	10000	10000	100	10000	10000	100	0	14	61	134

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates
#17303-02-WRC-Fomer Assembly Plant GW

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02030583
Lab Batch ID: R55777

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates
#17303-02-WRC-Fomer Assembly Plant GW

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02030583
Lab Batch ID: R55868

Method Blank

RunID: K_020320B-1071492 Units: ug/L
Analysis Date: 03/21/2002 10:12 Analyst: JC

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02030583-01A	GW-17303-031402-TJ-117
02030583-02A	GW-17303-031402-TJ-118
02030583-03A	GW-17303-031402-TJ-119
02030583-04A	GW-17303-031402-TJ-120
02030583-05A	GW-17303-031402-TJ-121
02030583-06A	GW-17303-031402-TJ-122

Analyte	Result	Rep Limit
1,1,1,2-Tetrachloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,1,2-Trichloroethane	ND	1.0
1,1-Dichloroethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,2,3-Trichloropropane	ND	1.0
1,2,4-Trichlorobenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	1.0
1,2-Dibromo-3-chloropropane	ND	1.0
1,2-Dichlorobenzene	ND	1.0
1,2-Dichloroethane	ND	1.0
1,2-Dichloropropane	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
2-Butanone	ND	50
2-Hexanone	ND	50
4-Methyl-2-pentanone	ND	50
Acetone	ND	100
Benzene	ND	1.0
Bromochloromethane	ND	1.0
Bromodichloromethane	ND	1.0
Bromoform	ND	1.0
Bromomethane	ND	1.0
Carbon disulfide	ND	5.0
Carbon tetrachloride	ND	1.0
Chlorobenzene	ND	1.0
Chloroethane	ND	1.0
Chloroform	ND	1.0
Chloromethane	ND	1.0
Dibromochloromethane	ND	1.0
Dibromomethane	ND	1.0
Dichlorodifluoromethane	ND	1.0
Ethyl Ether	ND	20
Ethylbenzene	ND	1.0
Iodomethane	ND	1.0
Isopropylbenzene	ND	1.0
Methylene chloride	ND	5.0
n-Propylbenzene	ND	1.0
Naphthalene	ND	5.0
Styrene	ND	1.0
Tetrachloroethene	ND	1.0
Toluene	ND	1.0
trans-1,4-Dichloro-2-Butene	ND	2.0
Trichloroethene	ND	1.0
Vinyl chloride	ND	1.0
cis-1,2-Dichloroethane	ND	1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

#17303-02-WRC-Fomer Assembly Plant GW

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02030583
Lab Batch ID: R55868

Method Blank

RunID: K_020320B-1071492 Units: ug/L
Analysis Date: 03/21/2002 10:12 Analyst: JC

Analyte	Result	Rep Limit
cis-1,3-Dichloropropene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Xylenes, Total	ND	3.0
Surr: 1,2-Dichloroethane-d4	96.0	62-130
Surr: 4-Bromofluorobenzene	88.0	70-130
Surr: Toluene-d8	94.0	74-122

Laboratory Control Sample (LCS)

RunID: K_020320B-1071491 Units: ug/L
Analysis Date: 03/21/2002 9:14 Analyst: JC

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	48	96	61	145
Benzene	50	44	88	76	127
Chlorobenzene	50	45	90	75	130
Toluene	50	43	86	76	125
Trichloroethene	50	43	86	71	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02030583-03
RunID: K_020320B-1071498 Units: ug/L
Analysis Date: 03/21/2002 13:06 Analyst: JC

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	2500	2900	116	2500	2900	116	0	14	38	172
Benzene	ND	2500	2500	97	2500	2500	97.3	0	11	66	134
Chlorobenzene	ND	2500	2600	104	2500	2600	104	0	13	67	115
Toluene	ND	2500	2600	101	2500	2600	101	0	13	59	125
Trichloroethene	ND	2500	2500	100	2500	2500	99.5	0	14	61	134

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates
#17303-02-WRC-Fomer Assembly Plant GW

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02030583
Lab Batch ID: R55868

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

#17303-02-WRC-Fomer Assembly Plant GW

Analysis: Chloride, Total
Method: E325.3

WorkOrder: 02030583
Lab Batch ID: R55542

Method Blank

RunID: WET_020318L-1064782 Units: mg/L
Analysis Date: 03/18/2002 14:30 Analyst: CV

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02030583-01C	GW-17303-031402-TJ-117
02030583-02C	GW-17303-031402-TJ-118
02030583-03C	GW-17303-031402-TJ-119
02030583-04C	GW-17303-031402-TJ-120
02030583-05C	GW-17303-031402-TJ-121
02030583-06C	GW-17303-031402-TJ-122

Analyte	Result	Rep Limit
Chloride	ND	1.0

Laboratory Control Sample (LCS)

RunID: WET_020318L-1064784 Units: mg/L
Analysis Date: 03/18/2002 14:30 Analyst: CV

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	143	141	99	90	110

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02030583-03
RunID: WET_020318L-1064788 Units: mg/L
Analysis Date: 03/18/2002 14:30 Analyst: CV

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	690	1250	1940	99.9	1250	1940	99.9	0	20	85	115

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

*Sample Receipt Checklist
And
Chain of Custody*



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	02030583	Received By:	RE
Date and Time Received:	3/16/02 10:00:00 AM	Carrier name:	FedEx
Temperature:	4	Chilled by:	Water Ice

- | | | | |
|--|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes ☒ | No ☐ | Not Present ☐ |
| 2. Custody seals intact on shipping container/cooler? | Yes ☒ | No ☐ | Not Present ☐ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☒ |
| 4. Chain of custody present? | Yes ☒ | No ☐ | |
| 5. Chain of custody signed when relinquished and received? | Yes ☒ | No ☐ | |
| 6. Chain of custody agrees with sample labels? | Yes ☒ | No ☐ | |
| 7. Samples in proper container/bottle? | Yes ☒ | No ☐ | |
| 8. Sample containers intact? | Yes ☒ | No ☐ | |
| 9. Sufficient sample volume for indicated test? | Yes ☒ | No ☐ | |
| 10. All samples received within holding time? | Yes ☒ | No ☐ | |
| 11. Container/Temp Blank temperature in compliance? | Yes ☒ | No ☐ | |
| 12. Water - VOA vials have zero headspace? | Yes ☒ | No ☐ | Not Applicable ☐ |
| 13. Water - pH acceptable upon receipt? | Yes ☒ | No ☐ | Not Applicable ☐ |

SPL Representative:

Contact Date & Time:

Client Name Contacted:

Non Conformance
Issues:

Client Instructions:

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.

14496 Sheldon Road, Suite 200

Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

SPH - HOUSTON

02030583

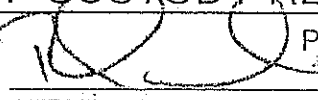
REFERENCE NUMBER:

17303-02

PROJECT NAME:

WRC - FORMER ASSEMBLY PLANT GW SAMPLING

CHAIN OF CUSTODY RECORD

SAMPLER'S
SIGNATURE: 

PRINTED

NAME: THOMAS JOHNSON

PARAMETERS

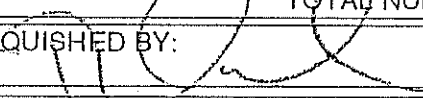
No. OF
CONTAINERS

SEQ. No.	DATE	TIME	SAMPLE TYPE	No. OF CONTAINERS	Vol. H ₂ O CHLORIDE	REMARKS
1	031402	14:45	GW-17303-031402-TJ-117	5	X X X	1 WK. T.A.T
2		15:45	-118	5	X X X	
3		18:00	-119*	10	X X X	CRA CONTACT.
4		18:00	-120	5	X X X	PAUL NIXON
5		18:30	-121	5	X X X	
6	031402		GW-17303-031402-TJ-122	5	X X X	H ₂ POISSON
7			TRIPBANK (1)	2	X	NO. NAWGUSE
						(1) LAB. PROVIDED w/ CONTAINERS
						*2XVOLUME FOR MS/MSD
						METALS IN PRESERVE
						(CONTAINER)

TOTAL NUMBER OF CONTAINERS

37

RELINQUISHED BY:

1. 

DATE: 031402

TIME: 19:30

RECEIVED BY:

1. _____

DATE:

TIME:

RELINQUISHED BY:

2. _____

DATE:

TIME:

RECEIVED BY:

2. _____

DATE:

TIME:

RELINQUISHED BY:

3. _____

DATE:

TIME:

RECEIVED BY:

1. _____

DATE:

TIME:

METHOD OF SHIPMENT: **FED EX**

AIR BILL No.

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

SAMPLE TEAM:

T. JOHNSON

RECEIVED FOR LABORATORY BY:

DATE: 3/16/02 TIME: 1000

PH 3/16/02 4C

18193



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

Certificate of Analysis Number:

02050169

Report To: Conestoga-Rovers & Associates Paul Wiseman 14496 Sheldon Rd. Suite 200 Plymouth MI 48170- ph: (734) 453-5123 fax: (734) 453-5201	Project Name: #17303-Willow Run Site: #17303-Willow Run/CVO Site Address: PO Number: 40-0017478 State: Michigan State Cert. No.: Date Reported: 5/9/02
--	---

This Report Contains A Total Of 35 Pages

Excluding This Page **ORIGINAL ANALYTICAL REPORT**

Project#: 17303 **Lab#:** 02050169

And

Name: FORMER WILLOW RUN

Chain Of Custody

Description

Event: GROUNDWATER SAMPLING

Samples: 5 (WATERS - 123-12B)

Analysis: VOC, CHLORIDE,
POTASSIUM, MANGANESE.

TAT: 1 DAY, 24 HR.

Lab: SPL-HOUSTON.

Checked Against Preliminary Data:

Date: 12/12/02 **Init.:** [Signature]

Date of Validation Memo: 12/13/02

Invoice Approval Date: _____

Comments: _____

MAY 13

CRA JDG # 0

5/9/02

Date



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:
Conestoga-Rovers & Associates

Certificate of Analysis Number:

02050169

Report To: Conestoga-Rovers & Associates Paul Wiseman 14496 Sheldon Rd. Suite 200 Plymouth MI 48170- ph: (734) 453-5123 fax: (734) 453-5201	Project Name: #17303-Willow Run Site: #17303-Willow Run/CVO Site Address: PO Number: 40-0017478 State: Michigan State Cert. No.: Date Reported: 5/9/02
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Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Your sample ID "GW-17303-050602-MM-127" (SPL ID: 02050169-05) was selected for use in SPL's quality control program for the Total Metals analysis by SW846 Method 6010B. The MS and MSD recoveries were outside of the advisable quality control limits for Manganese (Batch ID: 19809) due to matrix interference. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

Your sample ID "GW-17303-050602-MM-127" (SPL ID: 02050169-05) was selected for use in SPL's quality control program for the Total Metals analysis by SW846 Method 6010B. The MS and MSD recoveries were outside of the advisable quality control limits for Potassium (Batch ID: 19809A) due to matrix interference. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

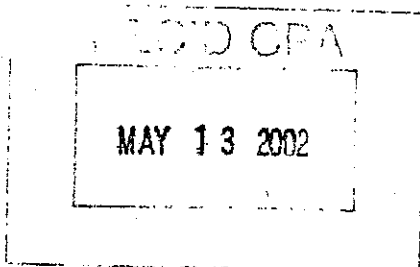
Your sample ID "GW-17303-050602-MM-127" (SPL ID: 02050169-05) was selected for use in SPL's quality control program for the Volatile Organics analysis by SW846 Method 8260B. The MS and MSD recoveries were outside of the advisable quality control limits for 1,1-Dichloroethene & Trichloroethene (Batch ID: R59002) due to matrix interference. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.



02050169 Page 1

5/9/02

Date

Sonia West
Sonia West
Senior Project Manager



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates

Certificate of Analysis Number:

02050169

Report To: Conestoga-Rovers & Associates

Paul Wiseman
14496 Sheldon Rd.
Suite 200
Plymouth
MI

48170-

ph: (734) 453-5123 fax: (734) 453-5201

Fax To:

Conestoga-Rovers & Associates

Paul Wiseman fax: (734) 453-5201

Project Name: #17303-Willow Run

Site: #17303-Willow Run/CVO

Site Address:

PO Number: 40-0017478

State: Michigan

State Cert. No.:

Date Reported: 5/9/02

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
------------------	---------------	--------	----------------	---------------	--------	------

GW-17303-050602-MM-123	02050169-01	Water	5/6/02 11:15:00 AM	5/7/02 10:00:00 AM	18457	☐
GW-17303-050602-MM-124	02050169-02	Water	5/6/02 12:35:00 PM	5/7/02 10:00:00 AM	18457	☐
GW-17303-050602-MM-125	02050169-03	Water	5/6/02 2:05:00 PM	5/7/02 10:00:00 AM	18457	☐
GW-17303-050602-MM-126	02050169-04	Water	5/6/02 2:10:00 PM	5/7/02 10:00:00 AM	18457	☐
GW-17303-050602-MM-127	02050169-05	Water	5/6/02 4:00:00 PM	5/7/02 10:00:00 AM	18457	☐
GW-17303-050602-MM-128	02050169-06	Water	5/6/02 5:40:00 PM	5/7/02 10:00:00 AM	18457	☐
TB-17303-050602-MM-129	02050169-07	Water	5/6/02	5/7/02 10:00:00 AM	18457	☐

Sonia West
Sonia West

Senior Project Manager

5/9/02

Date

Joel Grice
Laboratory Director

Ted Yen
Quality Assurance Officer



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-123

Collected: 05/06/2002 11:15

SPL Sample ID: 02050169-01

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL				E325.3	Units: mg/L		
Chloride	677	10	10		05/07/02 12:00	CV	1133247
METALS BY METHOD 6010B, TOTAL				SW6010B	Units: mg/L		
Manganese	6.51	0.02	1		05/07/02 20:52	NS	1134084
Potassium	619	4	2		05/08/02 12:10	NS	1135037

Prep Method	Prep Date	Prep Initials
SW3010A	05/07/2002 12:45	MME

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-123

Collected: 05/06/2002 11:15

SPL Sample ID: 02050169-01

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1.0	1		05/07/02 12:21	LT	1132844
1,1,1-Trichloroethane	ND	1.0	1		05/07/02 12:21	LT	1132844
1,1,2,2-Tetrachloroethane	ND	1.0	1		05/07/02 12:21	LT	1132844
1,1,2-Trichloroethane	ND	1.0	1		05/07/02 12:21	LT	1132844
1,1-Dichloroethane	ND	1.0	1		05/07/02 12:21	LT	1132844
1,1-Dichloroethene	4	1.0	1		05/07/02 12:21	LT	1132844
1,2,3-Trichloropropane	ND	1.0	1		05/07/02 12:21	LT	1132844
1,2,4-Trichlorobenzene	ND	5.0	1		05/07/02 12:21	LT	1132844
1,2,4-Trimethylbenzene	2	1.0	1		05/07/02 12:21	LT	1132844
1,2-Dibromo-3-chloropropane	ND	1.0	1		05/07/02 12:21	LT	1132844
1,2-Dichlorobenzene	ND	1.0	1		05/07/02 12:21	LT	1132844
1,2-Dichloroethane	ND	1.0	1		05/07/02 12:21	LT	1132844
1,2-Dichloropropane	ND	1.0	1		05/07/02 12:21	LT	1132844
1,3,5-Trimethylbenzene	ND	1.0	1		05/07/02 12:21	LT	1132844
1,3-Dichlorobenzene	ND	1.0	1		05/07/02 12:21	LT	1132844
1,4-Dichlorobenzene	ND	1.0	1		05/07/02 12:21	LT	1132844
2-Butanone	ND	50	1		05/07/02 12:21	LT	1132844
2-Hexanone	ND	50	1		05/07/02 12:21	LT	1132844
4-Methyl-2-pentanone	ND	50	1		05/07/02 12:21	LT	1132844
Acetone	ND	100	1		05/07/02 12:21	LT	1132844
Benzene	15	1.0	1		05/07/02 12:21	LT	1132844
Bromochloromethane	ND	1.0	1		05/07/02 12:21	LT	1132844
Bromodichloromethane	ND	1.0	1		05/07/02 12:21	LT	1132844
Bromoform	ND	1.0	1		05/07/02 12:21	LT	1132844
Bromomethane	ND	1.0	1		05/07/02 12:21	LT	1132844
Carbon disulfide	6	5.0	1		05/07/02 12:21	LT	1132844
Carbon tetrachloride	ND	1.0	1		05/07/02 12:21	LT	1132844
Chlorobenzene	ND	1.0	1		05/07/02 12:21	LT	1132844
Chloroethane	ND	1.0	1		05/07/02 12:21	LT	1132844
Chloroform	2	1.0	1		05/07/02 12:21	LT	1132844
Chloromethane	ND	1.0	1		05/07/02 12:21	LT	1132844
Dibromochloromethane	ND	1.0	1		05/07/02 12:21	LT	1132844
Dibromomethane	ND	1.0	1		05/07/02 12:21	LT	1132844
Dichlorodifluoromethane	ND	1.0	1		05/07/02 12:21	LT	1132844
Ethyl Ether	ND	20	1		05/07/02 12:21	LT	1132844
Ethylbenzene	40	1.0	1		05/07/02 12:21	LT	1132844
Iodomethane	ND	1.0	1		05/07/02 12:21	LT	1132844
Isopropylbenzene	10	1.0	1		05/07/02 12:21	LT	1132844
Methylene chloride	ND	5.0	1		05/07/02 12:21	LT	1132844
n-Propylbenzene	ND	1.0	1		05/07/02 12:21	LT	1132844

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

02050169 Page 4

5/9/02 3:43:52 PM



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-123

Collected: 05/06/2002 11:15

SPL Sample ID: 02050169-01

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	9	5.0	1		05/07/02 12:21	LT	1132844
Styrene	ND	1.0	1		05/07/02 12:21	LT	1132844
Tetrachloroethene	ND	1.0	1		05/07/02 12:21	LT	1132844
Toluene	220	50	50		05/07/02 20:44	LT	1134855
trans-1,4-Dichloro-2-Butene	ND	2.0	1		05/07/02 12:21	LT	1132844
Trichloroethene	150	1.0	1		05/07/02 12:21	LT	1132844
Vinyl chloride	4000	50	50		05/07/02 20:44	LT	1134855
cis-1,2-Dichloroethene	4800	50	50		05/07/02 20:44	LT	1134855
cis-1,3-Dichloropropene	ND	1.0	1		05/07/02 12:21	LT	1132844
trans-1,2-Dichloroethene	180	50	50		05/07/02 20:44	LT	1134855
trans-1,3-Dichloropropene	ND	1.0	1		05/07/02 12:21	LT	1132844
Xylenes, Total	167	3.0	1		05/07/02 12:21	LT	1132844
Surr: 1,2-Dichloroethane-d4	98.0	% 62-130	1		05/07/02 12:21	LT	1132844
Surr: 1,2-Dichloroethane-d4	96.0	% 62-130	50		05/07/02 20:44	LT	1134855
Surr: 4-Bromofluorobenzene	96.0	% 70-130	1		05/07/02 12:21	LT	1132844
Surr: 4-Bromofluorobenzene	88.0	% 70-130	50		05/07/02 20:44	LT	1134855
Surr: Toluene-d8	92.0	% 74-122	50		05/07/02 20:44	LT	1134855
Surr: Toluene-d8	94.0	% 74-122	1		05/07/02 12:21	LT	1132844

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-124

Collected: 05/06/2002 12:35

SPL Sample ID: 02050169-02

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	174	50	50		05/07/02 12:00	CV	1133248
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	160	0.04	2		05/08/02 9:48	NS	1134120
Potassium	1340	10	5		05/08/02 12:15	NS	1135038

Prep Method	Prep Date	Prep Initials
SW3010A	05/07/2002 12:45	MME

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-124

Collected: 05/06/2002 12:35

SPL Sample ID: 02050169-02

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B		MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	1.0	1		05/07/02 19:24	LT	1134852
1,1,1-Trichloroethane	ND	1.0	1		05/07/02 19:24	LT	1134852
1,1,2,2-Tetrachloroethane	ND	1.0	1		05/07/02 19:24	LT	1134852
1,1,2-Trichloroethane	ND	1.0	1		05/07/02 19:24	LT	1134852
1,1-Dichloroethane	ND	1.0	1		05/07/02 19:24	LT	1134852
1,1-Dichloroethene	ND	1.0	1		05/07/02 19:24	LT	1134852
1,2,3-Trichloropropane	ND	1.0	1		05/07/02 19:24	LT	1134852
1,2,4-Trichlorobenzene	ND	5.0	1		05/07/02 19:24	LT	1134852
1,2,4-Trimethylbenzene	ND	1.0	1		05/07/02 19:24	LT	1134852
1,2-Dibromo-3-chloropropane	ND	1.0	1		05/07/02 19:24	LT	1134852
1,2-Dichlorobenzene	ND	1.0	1		05/07/02 19:24	LT	1134852
1,2-Dichloroethane	ND	1.0	1		05/07/02 19:24	LT	1134852
1,2-Dichloropropane	ND	1.0	1		05/07/02 19:24	LT	1134852
1,3,5-Trimethylbenzene	ND	1.0	1		05/07/02 19:24	LT	1134852
1,3-Dichlorobenzene	ND	1.0	1		05/07/02 19:24	LT	1134852
1,4-Dichlorobenzene	ND	1.0	1		05/07/02 19:24	LT	1134852
2-Butanone	99	50	1		05/07/02 19:24	LT	1134852
2-Hexanone	ND	50	1		05/07/02 19:24	LT	1134852
4-Methyl-2-pentanone	ND	50	1		05/07/02 19:24	LT	1134852
Acetone	2600	500	5		05/08/02 13:00	LT	1134930
Benzene	88	1.0	1		05/07/02 19:24	LT	1134852
Bromochloromethane	ND	1.0	1		05/07/02 19:24	LT	1134852
Bromodichloromethane	1	1.0	1		05/07/02 19:24	LT	1134852
Bromoform	ND	1.0	1		05/07/02 19:24	LT	1134852
Bromomethane	ND	1.0	1		05/07/02 19:24	LT	1134852
Carbon disulfide	ND	5.0	1		05/07/02 19:24	LT	1134852
Carbon tetrachloride	ND	1.0	1		05/07/02 19:24	LT	1134852
Chlorobenzene	ND	1.0	1		05/07/02 19:24	LT	1134852
Chloroethane	ND	1.0	1		05/07/02 19:24	LT	1134852
Chloroform	4	1.0	1		05/07/02 19:24	LT	1134852
Chloromethane	ND	1.0	1		05/07/02 19:24	LT	1134852
Dibromochloromethane	3	1.0	1		05/07/02 19:24	LT	1134852
Dibromomethane	ND	1.0	1		05/07/02 19:24	LT	1134852
Dichlorodifluoromethane	ND	1.0	1		05/07/02 19:24	LT	1134852
Ethyl Ether	ND	20	1		05/07/02 19:24	LT	1134852
Ethylbenzene	ND	1.0	1		05/07/02 19:24	LT	1134852
Iodomethane	ND	1.0	1		05/07/02 19:24	LT	1134852
Isopropylbenzene	ND	1.0	1		05/07/02 19:24	LT	1134852
Methylene chloride	ND	5.0	1		05/07/02 19:24	LT	1134852
n-Propylbenzene	ND	1.0	1		05/07/02 19:24	LT	1134852

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-124

Collected: 05/06/2002 12:35

SPL Sample ID: 02050169-02

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5.0	1		05/07/02 19:24	LT	1134852
Styrene	ND	1.0	1		05/07/02 19:24	LT	1134852
Tetrachloroethene	ND	1.0	1		05/07/02 19:24	LT	1134852
Toluene	170	1.0	1		05/07/02 19:24	LT	1134852
trans-1,4-Dichloro-2-Butene	ND	2.0	1		05/07/02 19:24	LT	1134852
Trichloroethene	ND	1.0	1		05/07/02 19:24	LT	1134852
Vinyl chloride	ND	1.0	1		05/07/02 19:24	LT	1134852
cis-1,2-Dichloroethene	ND	1.0	1		05/07/02 19:24	LT	1134852
cis-1,3-Dichloropropene	ND	1.0	1		05/07/02 19:24	LT	1134852
trans-1,2-Dichloroethene	ND	1.0	1		05/07/02 19:24	LT	1134852
trans-1,3-Dichloropropene	ND	1.0	1		05/07/02 19:24	LT	1134852
Xylenes, Total	ND	3.0	1		05/07/02 19:24	LT	1134852
Surr: 1,2-Dichloroethane-d4	96.0	% 62-130	1		05/07/02 19:24	LT	1134852
Surr: 1,2-Dichloroethane-d4	96.0	% 62-130	5		05/08/02 13:00	LT	1134930
Surr: 4-Bromofluorobenzene	88.0	% 70-130	1		05/07/02 19:24	LT	1134852
Surr: 4-Bromofluorobenzene	84.0	% 70-130	5		05/08/02 13:00	LT	1134930
Surr: Toluene-d8	96.0	% 74-122	5		05/08/02 13:00	LT	1134930
Surr: Toluene-d8	92.0	% 74-122	1		05/07/02 19:24	LT	1134852

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-125

Collected: 05/06/2002 14:05

SPL Sample ID: 02050169-03

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	521	50	50		05/07/02 12:00 CV		1133250
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	20.6	0.02	1		05/07/02 21:22 NS		1134088
Potassium	826	4	2		05/08/02 12:20 NS		1135039

Prep Method	Prep Date	Prep Initials
SW3010A	05/07/2002 12:45	MME

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-125

Collected: 05/06/2002 14:05

SPL Sample ID: 02050169-03

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1.0	1		05/07/02 20:17	LT	1134853
1,1,1-Trichloroethane	ND	1.0	1		05/07/02 20:17	LT	1134853
1,1,2,2-Tetrachloroethane	ND	1.0	1		05/07/02 20:17	LT	1134853
1,1,2-Trichloroethane	ND	1.0	1		05/07/02 20:17	LT	1134853
1,1-Dichloroethane	ND	1.0	1		05/07/02 20:17	LT	1134853
1,1-Dichloroethene	ND	1.0	1		05/07/02 20:17	LT	1134853
1,2,3-Trichloropropane	ND	1.0	1		05/07/02 20:17	LT	1134853
1,2,4-Trichlorobenzene	ND	5.0	1		05/07/02 20:17	LT	1134853
1,2,4-Trimethylbenzene	ND	1.0	1		05/07/02 20:17	LT	1134853
1,2-Dibromo-3-chloropropane	ND	1.0	1		05/07/02 20:17	LT	1134853
1,2-Dichlorobenzene	ND	1.0	1		05/07/02 20:17	LT	1134853
1,2-Dichloroethane	1	1.0	1		05/07/02 20:17	LT	1134853
1,2-Dichloropropane	1	1.0	1		05/07/02 20:17	LT	1134853
1,3,5-Trimethylbenzene	ND	1.0	1		05/07/02 20:17	LT	1134853
1,3-Dichlorobenzene	ND	1.0	1		05/07/02 20:17	LT	1134853
1,4-Dichlorobenzene	ND	1.0	1		05/07/02 20:17	LT	1134853
2-Butanone	ND	50	1		05/07/02 20:17	LT	1134853
2-Hexanone	ND	50	1		05/07/02 20:17	LT	1134853
4-Methyl-2-pentanone	ND	50	1		05/07/02 20:17	LT	1134853
Acetone	400	100	1		05/07/02 20:17	LT	1134853
Benzene	58	1.0	1		05/07/02 20:17	LT	1134853
Bromochloromethane	ND	1.0	1		05/07/02 20:17	LT	1134853
Bromodichloromethane	2	1.0	1		05/07/02 20:17	LT	1134853
Bromoform	ND	1.0	1		05/07/02 20:17	LT	1134853
Bromomethane	ND	1.0	1		05/07/02 20:17	LT	1134853
Carbon disulfide	10	5.0	1		05/07/02 20:17	LT	1134853
Carbon tetrachloride	ND	1.0	1		05/07/02 20:17	LT	1134853
Chlorobenzene	ND	1.0	1		05/07/02 20:17	LT	1134853
Chloroethane	ND	1.0	1		05/07/02 20:17	LT	1134853
Chloroform	6	1.0	1		05/07/02 20:17	LT	1134853
Chloromethane	ND	1.0	1		05/07/02 20:17	LT	1134853
Dibromochloromethane	3	1.0	1		05/07/02 20:17	LT	1134853
Dibromomethane	ND	1.0	1		05/07/02 20:17	LT	1134853
Dichlorodifluoromethane	ND	1.0	1		05/07/02 20:17	LT	1134853
Ethyl Ether	ND	20	1		05/07/02 20:17	LT	1134853
Ethylbenzene	1	1.0	1		05/07/02 20:17	LT	1134853
Iodomethane	ND	1.0	1		05/07/02 20:17	LT	1134853
Isopropylbenzene	ND	1.0	1		05/07/02 20:17	LT	1134853
Methylene chloride	ND	5.0	1		05/07/02 20:17	LT	1134853
n-Propylbenzene	ND	1.0	1		05/07/02 20:17	LT	1134853

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-125

Collected: 05/06/2002 14:05

SPL Sample ID: 02050169-03

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5.0	1		05/07/02 20:17	LT	1134853
Styrene	ND	1.0	1		05/07/02 20:17	LT	1134853
Tetrachloroethene	ND	1.0	1		05/07/02 20:17	LT	1134853
Toluene	48	1.0	1		05/07/02 20:17	LT	1134853
trans-1,4-Dichloro-2-Butene	ND	2.0	1		05/07/02 20:17	LT	1134853
Trichloroethene	ND	1.0	1		05/07/02 20:17	LT	1134853
Vinyl chloride	ND	1.0	1		05/07/02 20:17	LT	1134853
cis-1,2-Dichloroethene	ND	1.0	1		05/07/02 20:17	LT	1134853
cis-1,3-Dichloropropene	ND	1.0	1		05/07/02 20:17	LT	1134853
trans-1,2-Dichloroethene	ND	1.0	1		05/07/02 20:17	LT	1134853
trans-1,3-Dichloropropene	ND	1.0	1		05/07/02 20:17	LT	1134853
Xylenes, Total	20	3.0	1		05/07/02 20:17	LT	1134853
Surr: 1,2-Dichloroethane-d4	96.0	% 62-130	1		05/07/02 20:17	LT	1134853
Surr: 4-Bromofluorobenzene	88.0	% 70-130	1		05/07/02 20:17	LT	1134853
Surr: Toluene-d8	92.0	% 74-122	1		05/07/02 20:17	LT	1134853

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-126

Collected: 05/06/2002 14:10 SPL Sample ID: 02050169-04

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	521	50	50		05/07/02 12:00 CV		1133252
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	24.2	0.02	1		05/07/02 21:28 NS		1134089
Potassium	857	4	2		05/08/02 12:25 NS		1135040

Prep Method	Prep Date	Prep Initials
SW3010A	05/07/2002 12:45	IMME

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-126

Collected: 05/06/2002 14:10 SPL Sample ID: 02050169-04

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B		MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	1.0	1		05/07/02 18:57	LT	1134850
1,1,1-Trichloroethane	ND	1.0	1		05/07/02 18:57	LT	1134850
1,1,2,2-Tetrachloroethane	ND	1.0	1		05/07/02 18:57	LT	1134850
1,1,2-Trichloroethane	ND	1.0	1		05/07/02 18:57	LT	1134850
1,1-Dichloroethane	ND	1.0	1		05/07/02 18:57	LT	1134850
1,1-Dichloroethene	ND	1.0	1		05/07/02 18:57	LT	1134850
1,2,3-Trichloropropane	ND	1.0	1		05/07/02 18:57	LT	1134850
1,2,4-Trichlorobenzene	ND	5.0	1		05/07/02 18:57	LT	1134850
1,2,4-Trimethylbenzene	ND	1.0	1		05/07/02 18:57	LT	1134850
1,2-Dibromo-3-chloropropane	ND	1.0	1		05/07/02 18:57	LT	1134850
1,2-Dichlorobenzene	ND	1.0	1		05/07/02 18:57	LT	1134850
1,2-Dichloroethane	1	1.0	1		05/07/02 18:57	LT	1134850
1,2-Dichloropropane	2	1.0	1		05/07/02 18:57	LT	1134850
1,3,5-Trimethylbenzene	ND	1.0	1		05/07/02 18:57	LT	1134850
1,3-Dichlorobenzene	ND	1.0	1		05/07/02 18:57	LT	1134850
1,4-Dichlorobenzene	ND	1.0	1		05/07/02 18:57	LT	1134850
2-Butanone	ND	50	1		05/07/02 18:57	LT	1134850
2-Hexanone	ND	50	1		05/07/02 18:57	LT	1134850
4-Methyl-2-pentanone	ND	50	1		05/07/02 18:57	LT	1134850
Acetone	380	100	1		05/07/02 18:57	LT	1134850
Benzene	62	1.0	1		05/07/02 18:57	LT	1134850
Bromochloromethane	ND	1.0	1		05/07/02 18:57	LT	1134850
Bromodichloromethane	2	1.0	1		05/07/02 18:57	LT	1134850
Bromoform	ND	1.0	1		05/07/02 18:57	LT	1134850
Bromomethane	ND	1.0	1		05/07/02 18:57	LT	1134850
Carbon disulfide	11	5.0	1		05/07/02 18:57	LT	1134850
Carbon tetrachloride	ND	1.0	1		05/07/02 18:57	LT	1134850
Chlorobenzene	ND	1.0	1		05/07/02 18:57	LT	1134850
Chloroethane	ND	1.0	1		05/07/02 18:57	LT	1134850
Chloroform	6	1.0	1		05/07/02 18:57	LT	1134850
Chloromethane	ND	1.0	1		05/07/02 18:57	LT	1134850
Dibromochloromethane	3	1.0	1		05/07/02 18:57	LT	1134850
Dibromomethane	ND	1.0	1		05/07/02 18:57	LT	1134850
Dichlorodifluoromethane	ND	1.0	1		05/07/02 18:57	LT	1134850
Ethyl Ether	ND	20	1		05/07/02 18:57	LT	1134850
Ethylbenzene	2	1.0	1		05/07/02 18:57	LT	1134850
Iodomethane	ND	1.0	1		05/07/02 18:57	LT	1134850
Isopropylbenzene	ND	1.0	1		05/07/02 18:57	LT	1134850
Methylene chloride	ND	5.0	1		05/07/02 18:57	LT	1134850
n-Propylbenzene	ND	1.0	1		05/07/02 18:57	LT	1134850

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-126

Collected: 05/06/2002 14:10

SPL Sample ID: 02050169-04

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5.0	1		05/07/02 18:57	LT	1134850
Styrene	ND	1.0	1		05/07/02 18:57	LT	1134850
Tetrachloroethene	ND	1.0	1		05/07/02 18:57	LT	1134850
Toluene	53	1.0	1		05/07/02 18:57	LT	1134850
trans-1,4-Dichloro-2-Butene	ND	2.0	1		05/07/02 18:57	LT	1134850
Trichloroethene	ND	1.0	1		05/07/02 18:57	LT	1134850
Vinyl chloride	ND	1.0	1		05/07/02 18:57	LT	1134850
cis-1,2-Dichloroethene	ND	1.0	1		05/07/02 18:57	LT	1134850
cis-1,3-Dichloropropene	ND	1.0	1		05/07/02 18:57	LT	1134850
trans-1,2-Dichloroethene	ND	1.0	1		05/07/02 18:57	LT	1134850
trans-1,3-Dichloropropene	ND	1.0	1		05/07/02 18:57	LT	1134850
Xylenes, Total	21	3.0	1		05/07/02 18:57	LT	1134850
Surr: 1,2-Dichloroethane-d4	92.0	% 62-130	1		05/07/02 18:57	LT	1134850
Surr: 4-Bromofluorobenzene	90.0	% 70-130	1		05/07/02 18:57	LT	1134850
Surr: Toluene-d8	94.0	% 74-122	1		05/07/02 18:57	LT	1134850

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-127

Collected: 05/06/2002 16:00

SPL Sample ID: 02050169-05

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL				E325.3	Units: mg/L		
Chloride	695	50	50		05/07/02 12:00	CV	1133253
METALS BY METHOD 6010B, TOTAL				SW6010B	Units: mg/L		
Manganese	6.64	0.02	1		05/07/02 20:14	NS	1134078
Potassium	496	2	1		05/07/02 20:14	NS	1134967

Prep Method	Prep Date	Prep Initials
SW3010A	05/07/2002 12:45	MME

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-127

Collected: 05/06/2002 16:00

SPL Sample ID: 02050169-05

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1.0	1		05/07/02 17:38	LT	1134844
1,1,1-Trichloroethane	ND	1.0	1		05/07/02 17:38	LT	1134844
1,1,2,2-Tetrachloroethane	ND	1.0	1		05/07/02 17:38	LT	1134844
1,1,2-Trichloroethane	4	1.0	1		05/07/02 17:38	LT	1134844
1,1-Dichloroethane	ND	1.0	1		05/07/02 17:38	LT	1134844
1,1-Dichloroethene	ND	1.0	1		05/07/02 17:38	LT	1134844
1,2,3-Trichloropropane	ND	1.0	1		05/07/02 17:38	LT	1134844
1,2,4-Trichlorobenzene	ND	5.0	1		05/07/02 17:38	LT	1134844
1,2,4-Trimethylbenzene	ND	1.0	1		05/07/02 17:38	LT	1134844
1,2-Dibromo-3-chloropropane	ND	1.0	1		05/07/02 17:38	LT	1134844
1,2-Dichlorobenzene	ND	1.0	1		05/07/02 17:38	LT	1134844
1,2-Dichloroethane	7	1.0	1		05/07/02 17:38	LT	1134844
1,2-Dichloropropane	ND	1.0	1		05/07/02 17:38	LT	1134844
1,3,5-Trimethylbenzene	ND	1.0	1		05/07/02 17:38	LT	1134844
1,3-Dichlorobenzene	ND	1.0	1		05/07/02 17:38	LT	1134844
1,4-Dichlorobenzene	ND	1.0	1		05/07/02 17:38	LT	1134844
2-Butanone	ND	50	1		05/07/02 17:38	LT	1134844
2-Hexanone	ND	50	1		05/07/02 17:38	LT	1134844
4-Methyl-2-pentanone	ND	50	1		05/07/02 17:38	LT	1134844
Acetone	250	100	1		05/07/02 17:38	LT	1134844
Benzene	10	1.0	1		05/07/02 17:38	LT	1134844
Bromochloromethane	ND	1.0	1		05/07/02 17:38	LT	1134844
Bromodichloromethane	ND	1.0	1		05/07/02 17:38	LT	1134844
Bromoform	ND	1.0	1		05/07/02 17:38	LT	1134844
Bromomethane	ND	1.0	1		05/07/02 17:38	LT	1134844
Carbon disulfide	ND	5.0	1		05/07/02 17:38	LT	1134844
Carbon tetrachloride	ND	1.0	1		05/07/02 17:38	LT	1134844
Chlorobenzene	ND	1.0	1		05/07/02 17:38	LT	1134844
Chloroethane	ND	1.0	1		05/07/02 17:38	LT	1134844
Chloroform	7	1.0	1		05/07/02 17:38	LT	1134844
Chloromethane	ND	1.0	1		05/07/02 17:38	LT	1134844
Dibromochloromethane	ND	1.0	1		05/07/02 17:38	LT	1134844
Dibromomethane	ND	1.0	1		05/07/02 17:38	LT	1134844
Dichlorodifluoromethane	ND	1.0	1		05/07/02 17:38	LT	1134844
Ethyl Ether	ND	20	1		05/07/02 17:38	LT	1134844
Ethylbenzene	34	1.0	1		05/07/02 17:38	LT	1134844
Iodomethane	ND	1.0	1		05/07/02 17:38	LT	1134844
Isopropylbenzene	2	1.0	1		05/07/02 17:38	LT	1134844
Methylene chloride	ND	5.0	1		05/07/02 17:38	LT	1134844
n-Propylbenzene	1	1.0	1		05/07/02 17:38	LT	1134844

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-127

Collected: 05/06/2002 16:00 SPL Sample ID: 02050169-05

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5.0	1		05/07/02 17:38	LT	1134844
Styrene	ND	1.0	1		05/07/02 17:38	LT	1134844
Tetrachloroethene	ND	1.0	1		05/07/02 17:38	LT	1134844
Toluene	44	1.0	1		05/07/02 17:38	LT	1134844
trans-1,4-Dichloro-2-Butene	ND	2.0	1		05/07/02 17:38	LT	1134844
Trichloroethene	ND	1.0	1		05/07/02 17:38	LT	1134844
Vinyl chloride	ND	1.0	1		05/07/02 17:38	LT	1134844
cis-1,2-Dichloroethene	ND	1.0	1		05/07/02 17:38	LT	1134844
cis-1,3-Dichloropropene	ND	1.0	1		05/07/02 17:38	LT	1134844
trans-1,2-Dichloroethene	ND	1.0	1		05/07/02 17:38	LT	1134844
trans-1,3-Dichloropropene	ND	1.0	1		05/07/02 17:38	LT	1134844
Xylenes, Total	104	3.0	1		05/07/02 17:38	LT	1134844
Surr: 1,2-Dichloroethane-d4	98.0	% 62-130	1		05/07/02 17:38	LT	1134844
Surr: 4-Bromofluorobenzene	90.0	% 70-130	1		05/07/02 17:38	LT	1134844
Surr: Toluene-d8	92.0	% 74-122	1		05/07/02 17:38	LT	1134844

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-128

Collected: 05/06/2002 17:40

SPL Sample ID: 02050169-06

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L		
Chloride	339	5	5		05/07/02 12:00	CV	1133258
METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/L		
Manganese	6.39	0.02	1		05/07/02 21:35	NS	1134090
Potassium	693	4	2		05/08/02 12:29	NS	1135041

Prep Method	Prep Date	Prep Initials
SW3010A	05/07/2002 12:45	MME

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-128

Collected: 05/06/2002 17:40 SPL Sample ID: 02050169-06

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B		MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	1.0	1		05/07/02 21:37	LT	1134861
1,1,1-Trichloroethane	ND	1.0	1		05/07/02 21:37	LT	1134861
1,1,2,2-Tetrachloroethane	ND	1.0	1		05/07/02 21:37	LT	1134861
1,1,2-Trichloroethane	ND	1.0	1		05/07/02 21:37	LT	1134861
1,1-Dichloroethane	ND	1.0	1		05/07/02 21:37	LT	1134861
1,1-Dichloroethene	ND	1.0	1		05/07/02 21:37	LT	1134861
1,2,3-Trichloropropane	ND	1.0	1		05/07/02 21:37	LT	1134861
1,2,4-Trichlorobenzene	ND	5.0	1		05/07/02 21:37	LT	1134861
1,2,4-Trimethylbenzene	ND	1.0	1		05/07/02 21:37	LT	1134861
1,2-Dibromo-3-chloropropane	ND	1.0	1		05/07/02 21:37	LT	1134861
1,2-Dichlorobenzene	ND	1.0	1		05/07/02 21:37	LT	1134861
1,2-Dichloroethane	ND	1.0	1		05/07/02 21:37	LT	1134861
1,2-Dichloropropane	ND	1.0	1		05/07/02 21:37	LT	1134861
1,3,5-Trimethylbenzene	ND	1.0	1		05/07/02 21:37	LT	1134861
1,3-Dichlorobenzene	ND	1.0	1		05/07/02 21:37	LT	1134861
1,4-Dichlorobenzene	ND	1.0	1		05/07/02 21:37	LT	1134861
2-Butanone	ND	50	1		05/07/02 21:37	LT	1134861
2-Hexanone	ND	50	1		05/07/02 21:37	LT	1134861
4-Methyl-2-pentanone	ND	50	1		05/07/02 21:37	LT	1134861
Acetone	140	100	1		05/07/02 21:37	LT	1134861
Benzene	2	1.0	1		05/07/02 21:37	LT	1134861
Bromochloromethane	ND	1.0	1		05/07/02 21:37	LT	1134861
Bromodichloromethane	2	1.0	1		05/07/02 21:37	LT	1134861
Bromoform	ND	1.0	1		05/07/02 21:37	LT	1134861
Bromomethane	ND	1.0	1		05/07/02 21:37	LT	1134861
Carbon disulfide	ND	5.0	1		05/07/02 21:37	LT	1134861
Carbon tetrachloride	ND	1.0	1		05/07/02 21:37	LT	1134861
Chlorobenzene	ND	1.0	1		05/07/02 21:37	LT	1134861
Chloroethane	ND	1.0	1		05/07/02 21:37	LT	1134861
Chloroform	11	1.0	1		05/07/02 21:37	LT	1134861
Chloromethane	ND	1.0	1		05/07/02 21:37	LT	1134861
Dibromochloromethane	3	1.0	1		05/07/02 21:37	LT	1134861
Dibromomethane	ND	1.0	1		05/07/02 21:37	LT	1134861
Dichlorodifluoromethane	ND	1.0	1		05/07/02 21:37	LT	1134861
Ethyl Ether	ND	20	1		05/07/02 21:37	LT	1134861
Ethylbenzene	ND	1.0	1		05/07/02 21:37	LT	1134861
Iodomethane	ND	1.0	1		05/07/02 21:37	LT	1134861
Isopropylbenzene	ND	1.0	1		05/07/02 21:37	LT	1134861
Methylene chloride	ND	5.0	1		05/07/02 21:37	LT	1134861
n-Propylbenzene	ND	1.0	1		05/07/02 21:37	LT	1134861

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: GW-17303-050602-MM-128

Collected: 05/06/2002 17:40

SPL Sample ID: 02050169-06

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5.0	1		05/07/02 21:37	LT	1134861
Styrene	ND	1.0	1		05/07/02 21:37	LT	1134861
Tetrachloroethene	ND	1.0	1		05/07/02 21:37	LT	1134861
Toluene	1	1.0	1		05/07/02 21:37	LT	1134861
trans-1,4-Dichloro-2-Butene	ND	2.0	1		05/07/02 21:37	LT	1134861
Trichloroethene	5800	50	50		05/07/02 21:10	LT	1134857
Vinyl chloride	19	1.0	1		05/07/02 21:37	LT	1134861
cis-1,2-Dichloroethene	360	50	50		05/07/02 21:10	LT	1134857
cis-1,3-Dichloropropene	ND	1.0	1		05/07/02 21:37	LT	1134861
trans-1,2-Dichloroethene	10	1.0	1		05/07/02 21:37	LT	1134861
trans-1,3-Dichloropropene	ND	1.0	1		05/07/02 21:37	LT	1134861
Xylenes, Total	ND	3.0	1		05/07/02 21:37	LT	1134861
Surr: 1,2-Dichloroethane-d4	96.0	% 62-130	1		05/07/02 21:37	LT	1134861
Surr: 1,2-Dichloroethane-d4	96.0	% 62-130	50		05/07/02 21:10	LT	1134857
Surr: 4-Bromofluorobenzene	86.0	% 70-130	1		05/07/02 21:37	LT	1134861
Surr: 4-Bromofluorobenzene	88.0	% 70-130	50		05/07/02 21:10	LT	1134857
Surr: Toluene-d8	96.0	% 74-122	50		05/07/02 21:10	LT	1134857
Surr: Toluene-d8	92.0	% 74-122	1		05/07/02 21:37	LT	1134861

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: TB-17303-050602-MM-129

Collected: 05/06/2002 0:00

SPL Sample ID: 02050169-07

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	1.0		1	05/07/02 11:55	LT	1132843
1,1,1-Trichloroethane	ND	1.0		1	05/07/02 11:55	LT	1132843
1,1,2,2-Tetrachloroethane	ND	1.0		1	05/07/02 11:55	LT	1132843
1,1,2-Trichloroethane	ND	1.0		1	05/07/02 11:55	LT	1132843
1,1-Dichloroethane	ND	1.0		1	05/07/02 11:55	LT	1132843
1,1-Dichloroethene	ND	1.0		1	05/07/02 11:55	LT	1132843
1,2,3-Trichloropropane	ND	1.0		1	05/07/02 11:55	LT	1132843
1,2,4-Trichlorobenzene	ND	5.0		1	05/07/02 11:55	LT	1132843
1,2,4-Trimethylbenzene	ND	1.0		1	05/07/02 11:55	LT	1132843
1,2-Dibromo-3-chloropropane	ND	1.0		1	05/07/02 11:55	LT	1132843
1,2-Dichlorobenzene	ND	1.0		1	05/07/02 11:55	LT	1132843
1,2-Dichloroethane	ND	1.0		1	05/07/02 11:55	LT	1132843
1,2-Dichloropropane	ND	1.0		1	05/07/02 11:55	LT	1132843
1,3,5-Trimethylbenzene	ND	1.0		1	05/07/02 11:55	LT	1132843
1,3-Dichlorobenzene	ND	1.0		1	05/07/02 11:55	LT	1132843
1,4-Dichlorobenzene	ND	1.0		1	05/07/02 11:55	LT	1132843
2-Butanone	ND	50		1	05/07/02 11:55	LT	1132843
2-Hexanone	ND	50		1	05/07/02 11:55	LT	1132843
4-Methyl-2-pentanone	ND	50		1	05/07/02 11:55	LT	1132843
Acetone	ND	100		1	05/07/02 11:55	LT	1132843
Benzene	ND	1.0		1	05/07/02 11:55	LT	1132843
Bromochloromethane	ND	1.0		1	05/07/02 11:55	LT	1132843
Bromodichloromethane	ND	1.0		1	05/07/02 11:55	LT	1132843
Bromoform	ND	1.0		1	05/07/02 11:55	LT	1132843
Bromomethane	ND	1.0		1	05/07/02 11:55	LT	1132843
Carbon disulfide	ND	5.0		1	05/07/02 11:55	LT	1132843
Carbon tetrachloride	ND	1.0		1	05/07/02 11:55	LT	1132843
Chlorobenzene	ND	1.0		1	05/07/02 11:55	LT	1132843
Chloroethane	ND	1.0		1	05/07/02 11:55	LT	1132843
Chloroform	ND	1.0		1	05/07/02 11:55	LT	1132843
Chloromethane	ND	1.0		1	05/07/02 11:55	LT	1132843
Dibromochloromethane	ND	1.0		1	05/07/02 11:55	LT	1132843
Dibromomethane	ND	1.0		1	05/07/02 11:55	LT	1132843
Dichlorodifluoromethane	ND	1.0		1	05/07/02 11:55	LT	1132843
Ethyl Ether	ND	20		1	05/07/02 11:55	LT	1132843
Ethylbenzene	ND	1.0		1	05/07/02 11:55	LT	1132843
Iodomethane	ND	1.0		1	05/07/02 11:55	LT	1132843
Isopropylbenzene	ND	1.0		1	05/07/02 11:55	LT	1132843
Methylene chloride	ND	5.0		1	05/07/02 11:55	LT	1132843
n-Propylbenzene	ND	1.0		1	05/07/02 11:55	LT	1132843

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: TB-17303-050602-MM-129

Collected: 05/06/2002 0:00

SPL Sample ID: 02050169-07

Site: #17303-Willow Run/CVO

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	5.0	1		05/07/02 11:55	LT	1132843
Styrene	ND	1.0	1		05/07/02 11:55	LT	1132843
Tetrachloroethene	ND	1.0	1		05/07/02 11:55	LT	1132843
Toluene	ND	1.0	1		05/07/02 11:55	LT	1132843
trans-1,4-Dichloro-2-Butene	ND	2.0	1		05/07/02 11:55	LT	1132843
Trichloroethene	ND	1.0	1		05/07/02 11:55	LT	1132843
Vinyl chloride	ND	1.0	1		05/07/02 11:55	LT	1132843
cis-1,2-Dichloroethene	ND	1.0	1		05/07/02 11:55	LT	1132843
cis-1,3-Dichloropropene	ND	1.0	1		05/07/02 11:55	LT	1132843
trans-1,2-Dichloroethene	ND	1.0	1		05/07/02 11:55	LT	1132843
trans-1,3-Dichloropropene	ND	1.0	1		05/07/02 11:55	LT	1132843
Xylenes, Total	ND	3.0	1		05/07/02 11:55	LT	1132843
Surr: 1,2-Dichloroethane-d4	100	% 62-130	1		05/07/02 11:55	LT	1132843
Surr: 4-Bromofluorobenzene	84.0	% 70-130	1		05/07/02 11:55	LT	1132843
Surr: Toluene-d8	94.0	% 74-122	1		05/07/02 11:55	LT	1132843

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates

#17303-Willow Run

Analysis: Metals by Method 6010B, Total
Method: SW6010B

WorkOrder: 02050169
Lab Batch ID: 19809A

Method Blank

Samples in Analytical Batch:

RunID: TJA_020507E-1134965 Units: mg/L

Analysis Date: 05/07/2002 20:02

Analyst: NS

Preparation Date: 05/07/2002 12:45

Prep By: MME Method SW3010A

Lab Sample ID

02050169-01C

02050169-02C

02050169-03C

02050169-04C

02050169-05C

02050169-06C

Client Sample ID

GW-17303-050602-MM-123

GW-17303-050602-MM-124

GW-17303-050602-MM-125

GW-17303-050602-MM-126

GW-17303-050602-MM-127

GW-17303-050602-MM-128

Analyte	Result	Rep Limit
Potassium	ND	2

Laboratory Control Sample (LCS)

RunID: TJA_020507E-1134966 Units: mg/L

Analysis Date: 05/07/2002 20:08

Analyst: NS

Preparation Date: 05/07/2002 12:45

Prep By: MME Method SW3010A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Potassium	10	10.1	101	80	120

Post Digestion Spike (PDS) / Post Digestion Spike Duplicate (PDSD)

Sample Spiked: 02050169-05

RunID: TJA_020507E-1134971 Units: mg/L

Analysis Date: 05/07/2002 20:39

Analyst: NS

Preparation Date: 05/07/2002 12:45

Prep By: Method

Analyte	Sample Result	PDS Spike Added	PDS Result	PDS % Recovery	PDSD Spike Added	PDSD Result	PDSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Potassium	496	10	487	-9.7 *	10	480	-16.0 *	50.9 *	20	75	125

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02050169-05

RunID: TJA_020507E-1134968 Units: mg/L

Analysis Date: 05/07/2002 20:21

Analyst: NS

Preparation Date: 05/07/2002 12:45

Prep By: MME Method SW3010A

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Potassium	500	10	495	-18.1 *	10	502	59.8 *	373 *	20	75	125

Qualifiers: ND/U - Not Detected at the Reporting Limit

MI - Matrix Interference

B - Analyte detected in the associated Method Blank

D - Recovery Unreportable due to Dilution

J - Estimated value between MDL and PQL

* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

02050169 Page 25

5/9/02 3:44:37 PM



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates

#17303-Willow Run

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02050169
Lab Batch ID: R58913

Method Blank

RunID: L_020506D-1132832 Units: ug/L
Analysis Date: 05/07/2002 6:35 Analyst: LT

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02050169-01A	GW-17303-050602-MM-123
02050169-07A	TB-17303-050602-MM-129

Analyte	Result	Rep Limit
1,1,1,2-Tetrachloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,1,2-Trichloroethane	ND	1.0
1,1-Dichloroethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,2,3-Trichloropropane	ND	1.0
1,2,4-Trichlorobenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	1.0
1,2-Dibromo-3-chloropropane	ND	1.0
1,2-Dichlorobenzene	ND	1.0
1,2-Dichloroethane	ND	1.0
1,2-Dichloropropane	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
2-Butanone	ND	50
2-Hexanone	ND	50
4-Methyl-2-pentanone	ND	50
Acetone	ND	100
Benzene	ND	1.0
Bromochloromethane	ND	1.0
Bromodichloromethane	ND	1.0
Bromoform	ND	1.0
Bromomethane	ND	1.0
Carbon disulfide	ND	5.0
Carbon tetrachloride	ND	1.0
Chlorobenzene	ND	1.0
Chloroethane	ND	1.0
Chloroform	ND	1.0
Chloromethane	ND	1.0
Dibromochloromethane	ND	1.0
Dibromomethane	ND	1.0
Dichlorodifluoromethane	ND	1.0
Ethyl Ether	ND	20
Ethylbenzene	ND	1.0
Iodomethane	ND	1.0
Isopropylbenzene	ND	1.0
Methylene chloride	ND	5.0
n-Propylbenzene	ND	1.0
Naphthalene	ND	5.0
Styrene	ND	1.0
Tetrachloroethene	ND	1.0
Toluene	ND	1.0
trans-1,4-Dichloro-2-Butene	ND	2.0
Trichloroethene	ND	1.0
Vinyl chloride	ND	1.0
cis-1,2-Dichloroethene	ND	1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates

#17303-Willow Run

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02050169
Lab Batch ID: R58913

Method Blank

RunID: L_020506D-1132832 Units: ug/L
Analysis Date: 05/07/2002 6:35 Analyst: LT

Analyte	Result	Rep Limit
cis-1,3-Dichloropropene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Xylenes, Total	ND	3.0
Surr: 1,2-Dichloroethane-d4	96.0	62-130
Surr: 4-Bromofluorobenzene	88.0	70-130
Surr: Toluene-d8	96.0	74-122

Laboratory Control Sample (LCS)

RunID: L_020506D-1132831 Units: ug/L
Analysis Date: 05/07/2002 5:42 Analyst: LT

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	51	102	61	145
Benzene	50	49	98	76	127
Chlorobenzene	50	46	92	75	130
Toluene	50	46	92	76	125
Trichloroethene	50	49	98	71	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02050067-03
RunID: L_020506D-1132841 Units: ug/L
Analysis Date: 05/07/2002 11:01 Analyst: LT

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	50	44	88	50	44	88.0	0	14	38	172
Benzene	ND	50	48	96	50	46	92.0	4	11	66	134
Chlorobenzene	ND	50	45	90	50	44	88.0	2	13	67	115
Toluene	ND	50	45	90	50	44	88.0	2	13	59	125
Trichloroethene	ND	50	45	90	50	45	90.0	0	14	61	134

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates

#17303-Willow Run

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02050169
Lab Batch ID: R58913

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
 B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
 J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates

#17303-Willow Run

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02050169
Lab Batch ID: R59002

Method Blank

RunID: L_020507A-1134842 Units: ug/L
Analysis Date: 05/07/2002 16:44 Analyst: LT

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02050169-01A	GW-17303-050602-MM-123
02050169-02A	GW-17303-050602-MM-124
02050169-03A	GW-17303-050602-MM-125
02050169-04A	GW-17303-050602-MM-126
02050169-05A	GW-17303-050602-MM-127
02050169-06A	GW-17303-050602-MM-128

Analyte	Result	Rep Limit
1,1,1,2-Tetrachloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,1,2-Trichloroethane	ND	1.0
1,1-Dichloroethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,2,3-Trichloropropane	ND	1.0
1,2,4-Trichlorobenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	1.0
1,2-Dibromo-3-chloropropane	ND	1.0
1,2-Dichlorobenzene	ND	1.0
1,2-Dichloroethane	ND	1.0
1,2-Dichloropropane	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
2-Butanone	ND	50
2-Hexanone	ND	50
4-Methyl-2-pentanone	ND	50
Acetone	ND	100
Benzene	ND	1.0
Bromochloromethane	ND	1.0
Bromodichloromethane	ND	1.0
Bromoform	ND	1.0
Bromomethane	ND	1.0
Carbon disulfide	ND	5.0
Carbon tetrachloride	ND	1.0
Chlorobenzene	ND	1.0
Chloroethane	ND	1.0
Chloroform	ND	1.0
Chloromethane	ND	1.0
Dibromochloromethane	ND	1.0
Dibromomethane	ND	1.0
Dichlorodifluoromethane	ND	1.0
Ethyl Ether	ND	20
Ethylbenzene	ND	1.0
Iodomethane	ND	1.0
Isopropylbenzene	ND	1.0
Methylene chloride	ND	5.0
n-Propylbenzene	ND	1.0
Naphthalene	ND	5.0
Styrene	ND	1.0
Tetrachloroethene	ND	1.0
Toluene	ND	1.0
trans-1,4-Dichloro-2-Butene	ND	2.0
Trichloroethene	ND	1.0
Vinyl chloride	ND	1.0
cis-1,2-Dichloroethene	ND	1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates

#17303-Willow Run

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02050169
Lab Batch ID: R59002

Method Blank

RunID: L_020507A-1134842 Units: ug/L
Analysis Date: 05/07/2002 16:44 Analyst: LT

Analyte	Result	Rep Limit
cis-1,3-Dichloropropene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Xylenes, Total	ND	3.0
Surr: 1,2-Dichloroethane-d4	98.0	62-130
Surr: 4-Bromofluorobenzene	88.0	70-130
Surr: Toluene-d8	92.0	74-122

Laboratory Control Sample (LCS)

RunID: L_020507A-1134840 Units: ug/L
Analysis Date: 05/07/2002 15:51 Analyst: LT

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	47	94	61	145
Benzene	50	53	106	76	127
Chlorobenzene	50	47	94	75	130
Toluene	50	47	94	76	125
Trichloroethene	50	54	108	71	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02050169-05
RunID: L_020507A-1134846 Units: ug/L
Analysis Date: 05/07/2002 18:05 Analyst: LT

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	50	0	0 *	50	0	0 *	0	14	38	172
Benzene	10	50	60	100	50	56	92.0	8	11	66	134
Chlorobenzene	ND	50	45	90	50	41	82.0	9	13	67	115
Toluene	44	50	94	100	50	85	82.0	20 *	13	59	125
Trichloroethene	ND	50	0	0 *	50	0	0 *	0	14	61	134

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
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Quality Control Report

Conestoga-Rovers & Associates

#17303-Willow Run

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02050169
Lab Batch ID: R59002

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates

#17303-Willow Run

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02050169
Lab Batch ID: R59006

Method Blank

RunID: L_020508A-1134929 Units: ug/L
Analysis Date: 05/08/2002 12:06 Analyst: LT

Samples in Analytical Batch:

Lab Sample ID Client Sample ID
02050169-02A GW-17303-050602-MM-124

Analyte	Result	Rep Limit
Acetone	ND	100
Surr: 1,2-Dichloroethane-d4	96.0	62-130
Surr: 4-Bromofluorobenzene	88.0	70-130
Surr: Toluene-d8	94.0	74-122

Laboratory Control Sample (LCS)

RunID: L_020508A-1134928 Units: ug/L
Analysis Date: 05/08/2002 11:02 Analyst: LT

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethane	50	51	102	61	145
Benzene	50	53	106	76	127
Chlorobenzene	50	48	96	75	130
Toluene	50	50	100	76	125
Trichloroethene	50	52	104	71	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02050201-01
RunID: L_020508A-1136235 Units: ug/L
Analysis Date: 05/08/2002 14:20 Analyst: LT

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethane	ND	50	57	114	50	54	108	5	14	38	172
Benzene	ND	50	53	106	50	52	104	2	11	66	134
Chlorobenzene	ND	50	49	98	50	49	98.0	0	13	67	115
Toluene	ND	50	51	102	50	49	98.0	4	13	59	125
Trichloroethene	ND	50	52	104	50	52	104	0	14	61	134

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates

#17303-Willow Run

Analysis: Chloride, Total
Method: E325.3

WorkOrder: 02050169
Lab Batch ID: R58927

Method Blank

RunID: WET_020507F-1133242 Units: mg/L
Analysis Date: 05/07/2002 12:00 Analyst: CV

Analyte	Result	Rep Limit
Chloride	ND	1.0

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02050169-01B	GW-17303-050602-MM-123
02050169-02B	GW-17303-050602-MM-124
02050169-03B	GW-17303-050602-MM-125
02050169-04B	GW-17303-050602-MM-126
02050169-05B	GW-17303-050602-MM-127
02050169-06B	GW-17303-050602-MM-128

Laboratory Control Sample (LCS)

RunID: WET_020507F-1133245 Units: mg/L
Analysis Date: 05/07/2002 12:00 Analyst: CV

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	143	141	98	90	110

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02050169-05
RunID: WET_020507F-1133255 Units: mg/L
Analysis Date: 05/07/2002 12:00 Analyst: CV

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	690	2500	3130	97.3	2500	3170	99.0	1.77	20	85	115

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

*Sample Receipt Checklist
And
Chain of Custody*



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	02050169	Received By:	DS
Date and Time Received:	5/7/02 10:00:00 AM	Carrier name:	FedEx
Temperature:	3	Chilled by:	Water Ice

- | | | | |
|--|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes ☒ | No ☐ | Not Present ☐ |
| 2. Custody seals intact on shipping container/cooler? | Yes ☒ | No ☐ | Not Present ☐ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☒ |
| 4. Chain of custody present? | Yes ☒ | No ☐ | |
| 5. Chain of custody signed when relinquished and received? | Yes ☒ | No ☐ | |
| 6. Chain of custody agrees with sample labels? | Yes ☒ | No ☐ | |
| 7. Samples in proper container/bottle? | Yes ☒ | No ☐ | |
| 8. Sample containers intact? | Yes ☒ | No ☐ | |
| 9. Sufficient sample volume for indicated test? | Yes ☒ | No ☐ | |
| 10. All samples received within holding time? | Yes ☒ | No ☐ | |
| 11. Container/Temp Blank temperature in compliance? | Yes ☒ | No ☐ | |
| 12. Water - VOA vials have zero headspace? | Yes ☒ | No ☐ | Not Applicable ☐ |
| 13. Water - pH acceptable upon receipt? | Yes ☒ | No ☐ | Not Applicable ☐ |

SPL Representative: _____

Contact Date & Time: _____

Client Name Contacted: _____

Non Conformance
Issues: _____

Client Instructions: _____

02050169 1 of 1

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.

14496 Sheldon Road, Suite 200

Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

SPL / HOUSTON

Cooler 01-45

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17303

PROJECT NAME:

WILLOW RUN / CVO

SAMPLER'S

SIGNATURE:

M. Mathe

PRINTED

NAME: MARIE MATHE

No. OF
CONTAINERS

PARAMETERS

VOL
CHLORIDE
K & Mn

REMARKS

SEQ. No.	DATE	TIME	SAMPLE TYPE	No. of CONTAINERS	VOL	CHLORIDE	K	Mn	REMARKS
1	6 May 02	1115	GW-17303-050602-MM-123	Water	5	X	X	X	24 hr TAT
2		1235	GW-17303-050602-MM-124		5	X	X	X	
3		1405	GW-17303-050602-MM-125		5	X	X	X	
4		1410	GW-17303-050602-MM-126		5	X	X	X	
5		1600	GW-17303-050602-MM-127		10	X	X	X	* 2x VOL FOR MS/MSD
6		1740	GW-17303-050602-MM-128		5	X	X	X	
7		-	TB-17303-050602-MM-129		1	X			TRAVEL BLANK

TOTAL NUMBER OF CONTAINERS

36

RELINQUISHED BY:

1. *M. Mathe*

DATE: 6-May-02

TIME: 1900

RECEIVED BY:

1. _____

DATE:

TIME:

RELINQUISHED BY:

2. _____

DATE:

TIME:

RECEIVED BY:

2. _____

DATE:

TIME:

RELINQUISHED BY:

3. _____

DATE:

TIME:

RECEIVED BY:

1. _____

DATE:

TIME:

METHOD OF SHIPMENT:

FedEx

AIR BILL No.

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

SAMPLE TEAM:

M. Mathe

RECEIVED FOR LABORATORY BY:

Dianne Steele

DATE: 5/7/02 TIME: 1000

30

18457



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates, Inc.

Certificate of Analysis Number:

02070802

Report To: Conestoga-Rovers & Associates, Inc. Paul Wiseman 14496 Sheldon Rd. Suite 200 Plymouth MI 48170- ph: (734) 453-5123 fax: (734) 453-5201	Project Name: #17303,WRC-Former Assembly Plant Site: #17303,WRC-Former Assembly Plant Site Address: PO Number: 40-0017478 State: Michigan State Cert. No.: Date Reported: 8/9/02
--	---

This Report Contains A Total Of 39 Pages

Excluding This Page

And

ORIGINAL ANALYTICAL REPORT

Project#: 17303 Lab#: 02070802

Chain Of Custody Name: FORMER WILLOW RUN.

Description

Event: _____

Samples: 7 waters (MM 130-136)
7-22-02

Analysis: Total K & Hn; Chloride;

TCL VOC;

TAT: 14 DAYS (STANDARD TAT)

Lab: SPL-HOUSTON;

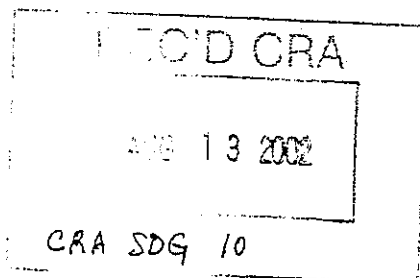
Checked Against Preliminary Data:

Date: 12/12/02 Init.: [Signature]

Date of Validation Memo: 12/13/02

Invoice Approval Date: _____

Comments: _____ Date: 8/9/02



[Signature]
Sonia West
Project Manager



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates, Inc.

Certificate of Analysis Number:

02070802

Report To:

Conestoga-Rovers & Associates, Inc.
Paul Wiseman
14496 Sheldon Rd.
Suite 200
Plymouth
MI
48170-
ph: (734) 453-5123 fax: (734) 453-5201

Project Name:

#17303,WRC-Former Assembly Plant

Site:

#17303,WRC-Former Assembly Plant

Site Address:

PO Number:

40-0017478

State:

Michigan

State Cert. No.:

Date Reported:

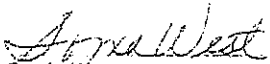
8/9/02

This Report Contains A Total Of 42 Pages

Excluding This Page

And

Chain Of Custody


Sonia West
Project Manager

12/17/02

Date



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:
Conestoga-Rovers & Associates, Inc.

Certificate of Analysis Number:

02070802

Report To:

Conestoga-Rovers & Associates, Inc.
Paul Wiseman
14496 Sheldon Rd.
Suite 200
Plymouth
MI
48170-
ph: (734) 453-5123 fax: (734) 453-5201

Project Name:

#17303,WRC-Former Assembly Plant

Site:

#17303,WRC-Former Assembly Plant

Site Address:

PO Number:

40-0017478

State:

Michigan

State Cert. No.:

Date Reported:

8/9/02

This report has been revised to include Potassium by SW8456 Method 6010B for your sample "GW-072202-MM-135". SPL apologizes for any inconvenience this error may have caused you or your company.

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Your sample ID "GW-072202-MM-132" (SPL ID: 02070802-03) was selected for use in SPL's quality control program for the Total Metals analysis by SW846 Method 6010B. The MS and MSD recoveries were outside of the advisable quality control limits for Potassium (Batch ID: 21564) due to matrix interference. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

Your sample ID "GW-072202-MM-132" (SPL ID: 02070802-03) was selected for use in SPL's quality control program for the Volatile Organics analysis by SW846 Method 8260B. The MS and MSD recoveries were outside of the advisable quality control limits for Toluene (Batch ID: R64969) due to matrix interference. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Sonia West
Senior Project Manager



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8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates, Inc.

Certificate of Analysis Number:

02070802

Report To: Conestoga-Rovers & Associates, Inc.

Paul Wiseman
14496 Sheldon Rd.
Suite 200
Plymouth
MI

48170-

ph: (734) 453-5123 fax: (734) 453-5201

Fax To: Conestoga-Rovers & Associates, Inc.

Paul Wiseman

fax: (734) 453-5201

Project Name: #17303,WRC-Former Assembly Plant

Site: #17303,WRC-Former Assembly Plant

Site Address:

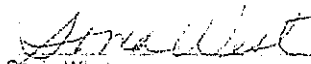
PO Number: 40-0017478

State: Michigan

State Cert. No.:

Date Reported: 8/9/02

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
GW-072202-MM-130	02070802-01	Water	7/22/02 10:25:00 AM	7/23/02 10:00:00 AM	21947	
GW-072202-MM-131	02070802-02	Water	7/22/02 10:30:00 AM	7/23/02 10:00:00 AM	21947	
GW-072202-MM-132	02070802-03	Water	7/22/02 10:40:00 AM	7/23/02 10:00:00 AM	21947	
GW-072202-MM-133	02070802-04	Water	7/22/02 1:00:00 PM	7/23/02 10:00:00 AM	21947	
GW-072202-MM-134	02070802-05	Water	7/22/02 1:05:00 PM	7/23/02 10:00:00 AM	21947	
GW-072202-MM-135	02070802-06	Water	7/22/02 2:20:00 PM	7/23/02 10:00:00 AM	21947	
TB-072202-MM-136	02070802-07	Water	7/22/02	7/23/02 10:00:00 AM	21947	


Sonia West
Senior Project Manager

12/17/02

Date

Joel Grace
Laboratory Director

Ted Yen
Quality Assurance Officer



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Method Summary
Conestoga-Rovers & Associates, Inc.

02070802

Client Sample ID	Lab Sample ID	Test Name	Test Number
GW-072202-MM-130	02070802-01	Acid Digestion-Aqueous, ICP Metals	SW3010A
		Acid Digestion-Aqueous, ICP-MS Metals	SW3010A
		Chloride, Total	E325.3
		Metals by Method 6010B, Total	SW6010B
		Metals by Method 6020A, Total	SW6020A
		Volatile Organics by Method 8260B	SW8260B
GW-072202-MM-131	02070802-02	Acid Digestion-Aqueous, ICP Metals	SW3010A
		Acid Digestion-Aqueous, ICP-MS Metals	SW3010A
		Chloride, Total	E325.3
		Metals by Method 6010B, Total	SW6010B
		Metals by Method 6020A, Total	SW6020A
		Volatile Organics by Method 8260B	SW8260B
GW-072202-MM-132	02070802-03	Acid Digestion-Aqueous, ICP Metals	SW3010A
		Acid Digestion-Aqueous, ICP-MS Metals	SW3010A
		Chloride, Total	E325.3
		Metals by Method 6010B, Total	SW6010B
		Metals by Method 6020A, Total	SW6020A
		Volatile Organics by Method 8260B	SW8260B
GW-072202-MM-133	02070802-04	Acid Digestion-Aqueous, ICP Metals	SW3010A
		Acid Digestion-Aqueous, ICP-MS Metals	SW3010A
		Chloride, Total	E325.3
		Metals by Method 6010B, Total	SW6010B
		Metals by Method 6020A, Total	SW6020A
		Volatile Organics by Method 8260B	SW8260B

12/17/02

Date

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Method Summary

Conestoga-Rovers & Associates, Inc.

02070802

Client Sample ID	Lab Sample ID	Test Name	Test Number
GW-072202-MM-134	02070802-05	Acid Digestion-Aqueous, ICP Metals	SW3010A
		Acid Digestion-Aqueous, ICP-MS Metals	SW3010A
		Chloride, Total	E325.3
		Metals by Method 6010B, Total	SW6010B
		Metals by Method 6020A, Total	SW6020A
		Volatile Organics by Method 8260B	SW8260B
GW-072202-MM-135	02070802-06	Acid Digestion-Aqueous, ICP Metals	SW3010A
		Acid Digestion-Aqueous, ICP-MS Metals	SW3010A
		Chloride, Total	E325.3
		Metals by Method 6010B, Total	SW6010B
		Metals by Method 6020A, Total	SW6020A
		Volatile Organics by Method 8260B	SW8260B
TB-072202-MM-136	02070802-07	Acid Digestion-Aqueous, ICP Metals	SW3010A
		Acid Digestion-Aqueous, ICP-MS Metals	SW3010A
		Chloride, Total	E325.3
		Metals by Method 6010B, Total	SW6010B
		Metals by Method 6020A, Total	SW6020A
		Volatile Organics by Method 8260B	SW8260B

12/17/02

Date

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12/17/02 3:39:05 PM



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-130

Collected: 07/22/2002 10:25 SPL Sample ID: 02070802-01

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6010B, TOTAL					SW6010B	Units: mg/L		
Manganese	2.2	0.0005	0.02	1		08/08/02 4:08	JS	1265082
Potassium	89	0.919	2	1		08/08/02 4:08	JS	1265082

<u>Prep Method</u>	<u>Prep Date</u>	<u>Prep Initials</u>
SW3010A	07/26/2002 8:00	MW

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-130

Collected: 07/22/2002 10:25

SPL Sample ID: 02070802-01

Site: #17303, WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		08/01/02 16:02	LT	1254167
1,1,1-Trichloroethane	ND	0.43	1.0	1		08/01/02 16:02	LT	1254167
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		08/01/02 16:02	LT	1254167
1,1,2-Trichloroethane	ND	0.84	1.0	1		08/01/02 16:02	LT	1254167
1,1-Dichloroethane	ND	0.6	1.0	1		08/01/02 16:02	LT	1254167
1,1-Dichloroethene	12	0.51	1.0	1		08/01/02 16:02	LT	1254167
1,2,3-Trichloropropane	ND	0.87	1.0	1		08/01/02 16:02	LT	1254167
1,2,4-Trichlorobenzene	ND	0.49	5.0	1		08/01/02 16:02	LT	1254167
1,2,4-Trimethylbenzene	5	0.28	1.0	1		08/01/02 16:02	LT	1254167
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		08/01/02 16:02	LT	1254167
1,2-Dichlorobenzene	ND	0.56	1.0	1		08/01/02 16:02	LT	1254167
1,2-Dichloroethane	ND	0.38	1.0	1		08/01/02 16:02	LT	1254167
1,2-Dichloropropane	ND	0.7	1.0	1		08/01/02 16:02	LT	1254167
1,3,5-Trimethylbenzene	2	0.3	1.0	1		08/01/02 16:02	LT	1254167
1,3-Dichlorobenzene	ND	0.31	1.0	1		08/01/02 16:02	LT	1254167
1,4-Dichlorobenzene	ND	0.56	1.0	1		08/01/02 16:02	LT	1254167
2-Butanone	ND	3.1	50	1		08/01/02 16:02	LT	1254167
2-Hexanone	ND	0.7	50	1		08/01/02 16:02	LT	1254167
4-Methyl-2-pentanone	ND	0.53	50	1		08/01/02 16:02	LT	1254167
Acetone	100	16	100	1		08/01/02 16:02	LT	1254167
Benzene	37	0.25	1.0	1		08/01/02 16:02	LT	1254167
Bromochloromethane	ND	0.54	1.0	1		08/01/02 16:02	LT	1254167
Bromodichloromethane	ND	0.31	1.0	1		08/01/02 16:02	LT	1254167
Bromoform	ND	0.56	1.0	1		08/01/02 16:02	LT	1254167
Bromomethane	ND	0.9	1.0	1		08/01/02 16:02	LT	1254167
Carbon disulfide	6	0.42	5.0	1		08/01/02 16:02	LT	1254167
Carbon tetrachloride	ND	0.42	1.0	1		08/01/02 16:02	LT	1254167
Chlorobenzene	ND	0.44	1.0	1		08/01/02 16:02	LT	1254167
Chloroethane	ND	0.76	1.0	1		08/01/02 16:02	LT	1254167
Chloroform	1	0.39	1.0	1		08/01/02 16:02	LT	1254167
Chloromethane	ND	0.7	1.0	1		08/01/02 16:02	LT	1254167
Dibromochloromethane	ND	0.65	1.0	1		08/01/02 16:02	LT	1254167
Dibromomethane	ND	0.88	1.0	1		08/01/02 16:02	LT	1254167
Dichlorodifluoromethane	ND	0.46	1.0	1		08/01/02 16:02	LT	1254167
Ethyl Ether	ND	1.5	20	1		08/01/02 16:02	LT	1254167
Ethylbenzene	110	0.34	1.0	1		08/01/02 16:02	LT	1254167
Iodomethane	ND	0.49	1.0	1		08/01/02 16:02	LT	1254167
Isopropylbenzene	ND	0.61	1.0	1		08/01/02 16:02	LT	1254167
Methylene chloride	ND	0.94	5.0	1		08/01/02 16:02	LT	1254167
n-Propylbenzene	ND	0.44	1.0	1		08/01/02 16:02	LT	1254167

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-130

Collected: 07/22/2002 10:25 SPL Sample ID: 02070802-01

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	33	0.24	5.0	1		08/01/02 16:02	LT	1254167
Styrene	ND	0.31	1.0	1		08/01/02 16:02	LT	1254167
Tetrachloroethene	ND	1	1.0	1		08/01/02 16:02	LT	1254167
Toluene	900	0.54	500	500		08/02/02 16:51	LT	1254715
trans-1,4-Dichloro-2-Butene	ND	2	2.0	1		08/01/02 16:02	LT	1254167
Trichloroethene	51	0.71	1.0	1		08/01/02 16:02	LT	1254167
Vinyl chloride	36000	0.75	500	500		08/02/02 16:51	LT	1254715
cis-1,2-Dichloroethene	20000	0.56	500	500		08/02/02 16:51	LT	1254715
cis-1,3-Dichloropropene	ND	0.48	1.0	1		08/01/02 16:02	LT	1254167
trans-1,2-Dichloroethene	810	0.62	500	500		08/02/02 16:51	LT	1254715
trans-1,3-Dichloropropene	ND	0.48	1.0	1		08/01/02 16:02	LT	1254167
Xylenes, Total	500	0.42	3.0	1		08/01/02 16:02	LT	1254167
Surr: 1,2-Dichloroethane-d4	94.0	0	% 62-130	1		08/01/02 16:02	LT	1254167
Surr: 1,2-Dichloroethane-d4	104	0	% 62-130	500		08/02/02 16:51	LT	1254715
Surr: 4-Bromofluorobenzene	118	0	% 70-130	1		08/01/02 16:02	LT	1254167
Surr: 4-Bromofluorobenzene	112	0	% 70-130	500		08/02/02 16:51	LT	1254715
Surr: Toluene-d8	108	0	% 74-122	500		08/02/02 16:51	LT	1254715
Surr: Toluene-d8	108	0	% 74-122	1		08/01/02 16:02	LT	1254167

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-130

Collected: 07/22/2002 10:25

SPL Sample ID: 02070802-01

Site: #17303, WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL					E325.3	Units: mg/L		
Chloride	478	0.66	10	10		08/02/02 16:00	CV	1255343

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-131

Collected: 07/22/2002 10:30

SPL Sample ID: 02070802-02

Site: #17303.WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6010B, TOTAL				MCL	SW6010B	Units: mg/L		
Manganese	2.04	0.0005	0.02	1		08/08/02 4:14	JS	1265083
Potassium	86	0.919	2	1		08/08/02 4:14	JS	1265083

<u>Prep Method</u>	<u>Prep Date</u>	<u>Prep Initials</u>
SW3010A	07/26/2002 8:00	MW

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-131

Collected: 07/22/2002 10:30

SPL Sample ID: 02070802-02

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		08/01/02 16:30	LT	1254168
1,1,1-Trichloroethane	ND	0.43	1.0	1		08/01/02 16:30	LT	1254168
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		08/01/02 16:30	LT	1254168
1,1,2-Trichloroethane	ND	0.84	1.0	1		08/01/02 16:30	LT	1254168
1,1-Dichloroethane	ND	0.6	1.0	1		08/01/02 16:30	LT	1254168
1,1-Dichloroethene	11	0.51	1.0	1		08/01/02 16:30	LT	1254168
1,2,3-Trichloropropane	ND	0.87	1.0	1		08/01/02 16:30	LT	1254168
1,2,4-Trichlorobenzene	ND	0.49	5.0	1		08/01/02 16:30	LT	1254168
1,2,4-Trimethylbenzene	4	0.28	1.0	1		08/01/02 16:30	LT	1254168
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		08/01/02 16:30	LT	1254168
1,2-Dichlorobenzene	ND	0.56	1.0	1		08/01/02 16:30	LT	1254168
1,2-Dichloroethane	ND	0.38	1.0	1		08/01/02 16:30	LT	1254168
1,2-Dichloropropane	ND	0.7	1.0	1		08/01/02 16:30	LT	1254168
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		08/01/02 16:30	LT	1254168
1,3-Dichlorobenzene	ND	0.31	1.0	1		08/01/02 16:30	LT	1254168
1,4-Dichlorobenzene	ND	0.56	1.0	1		08/01/02 16:30	LT	1254168
2-Butanone	ND	3.1	50	1		08/01/02 16:30	LT	1254168
2-Hexanone	ND	0.7	50	1		08/01/02 16:30	LT	1254168
4-Methyl-2-pentanone	ND	0.53	50	1		08/01/02 16:30	LT	1254168
Acetone	100	16	100	1		08/01/02 16:30	LT	1254168
Benzene	38	0.25	1.0	1		08/01/02 16:30	LT	1254168
Bromochloromethane	ND	0.54	1.0	1		08/01/02 16:30	LT	1254168
Bromodichloromethane	ND	0.31	1.0	1		08/01/02 16:30	LT	1254168
Bromoform	ND	0.56	1.0	1		08/01/02 16:30	LT	1254168
Bromomethane	ND	0.9	1.0	1		08/01/02 16:30	LT	1254168
Carbon disulfide	7	0.42	5.0	1		08/01/02 16:30	LT	1254168
Carbon tetrachloride	ND	0.42	1.0	1		08/01/02 16:30	LT	1254168
Chlorobenzene	ND	0.44	1.0	1		08/01/02 16:30	LT	1254168
Chloroethane	ND	0.76	1.0	1		08/01/02 16:30	LT	1254168
Chloroform	2	0.39	1.0	1		08/01/02 16:30	LT	1254168
Chloromethane	ND	0.7	1.0	1		08/01/02 16:30	LT	1254168
Dibromochloromethane	ND	0.65	1.0	1		08/01/02 16:30	LT	1254168
Dibromomethane	ND	0.88	1.0	1		08/01/02 16:30	LT	1254168
Dichlorodifluoromethane	ND	0.46	1.0	1		08/01/02 16:30	LT	1254168
Ethyl Ether	ND	1.5	20	1		08/01/02 16:30	LT	1254168
Ethylbenzene	120	0.34	1.0	1		08/01/02 16:30	LT	1254168
Iodomethane	ND	0.49	1.0	1		08/01/02 16:30	LT	1254168
Isopropylbenzene	25	0.61	1.0	1		08/01/02 16:30	LT	1254168
Methylene chloride	ND	0.94	5.0	1		08/01/02 16:30	LT	1254168
n-Propylbenzene	ND	0.44	1.0	1		08/01/02 16:30	LT	1254168

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-131

Collected: 07/22/2002 10:30 SPL Sample ID: 02070802-02

Site: #17303, WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	33	0.24	5.0	1		08/01/02 16:30	LT	1254168
Styrene	ND	0.31	1.0	1		08/01/02 16:30	LT	1254168
Tetrachloroethene	ND	1	1.0	1		08/01/02 16:30	LT	1254168
Toluene	1100	0.54	500	500		08/02/02 17:19	LT	1254716
trans-1,4-Dichloro-2-Butene	ND	2	2.0	1		08/01/02 16:30	LT	1254168
Trichloroethene	54	0.71	1.0	1		08/01/02 16:30	LT	1254168
Vinyl chloride	39000	0.75	500	500		08/02/02 17:19	LT	1254716
cis-1,2-Dichloroethene	20000	0.56	500	500		08/02/02 17:19	LT	1254716
cis-1,3-Dichloropropene	ND	0.48	1.0	1		08/01/02 16:30	LT	1254168
trans-1,2-Dichloroethene	860	0.62	500	500		08/02/02 17:19	LT	1254716
trans-1,3-Dichloropropene	ND	0.48	1.0	1		08/01/02 16:30	LT	1254168
Xylenes, Total	520	0.42	3.0	1		08/01/02 16:30	LT	1254168
Surr: 1,2-Dichloroethane-d4	98.0	0	% 62-130	1		08/01/02 16:30	LT	1254168
Surr: 1,2-Dichloroethane-d4	108	0	% 62-130	500		08/02/02 17:19	LT	1254716
Surr: 4-Bromofluorobenzene	120	0	% 70-130	1		08/01/02 16:30	LT	1254168
Surr: 4-Bromofluorobenzene	116	0	% 70-130	500		08/02/02 17:19	LT	1254716
Surr: Toluene-d8	112	0	% 74-122	500		08/02/02 17:19	LT	1254716
Surr: Toluene-d8	116	0	% 74-122	1		08/01/02 16:30	LT	1254168

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-131

Collected: 07/22/2002 10:30 SPL Sample ID: 02070802-02

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL					E325.3	Units: mg/L		
Chloride	496	0.66	10	10		08/02/02 16:00	CV	1255344

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-132

Collected: 07/22/2002 10:40

SPL Sample ID: 02070802-03

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6010B, TOTAL				MCL	SW6010B	Units: mg/L		
Manganese	2	0.0005	0.02	1		08/08/02 3:34	JS	1265075
Potassium	421	0.919	2	1		08/08/02 3:34	JS	1265075

<u>Prep Method</u>	<u>Prep Date</u>	<u>Prep Initials</u>
SW3010A	07/26/2002 8:00	MW

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-132

Collected: 07/22/2002 10:40

SPL Sample ID: 02070802-03

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		08/01/02 13:16	LT	1254163
1,1,1-Trichloroethane	ND	0.43	1.0	1		08/01/02 13:16	LT	1254163
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		08/01/02 13:16	LT	1254163
1,1,2-Trichloroethane	ND	0.84	1.0	1		08/01/02 13:16	LT	1254163
1,1-Dichloroethane	ND	0.6	1.0	1		08/01/02 13:16	LT	1254163
1,1-Dichloroethene	59	0.51	1.0	1		08/01/02 13:16	LT	1254163
1,2,3-Trichloropropane	ND	0.87	1.0	1		08/01/02 13:16	LT	1254163
1,2,4-Trichlorobenzene	ND	0.49	5.0	1		08/01/02 13:16	LT	1254163
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		08/01/02 13:16	LT	1254163
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		08/01/02 13:16	LT	1254163
1,2-Dichlorobenzene	ND	0.56	1.0	1		08/01/02 13:16	LT	1254163
1,2-Dichloroethane	ND	0.38	1.0	1		08/01/02 13:16	LT	1254163
1,2-Dichloropropane	ND	0.7	1.0	1		08/01/02 13:16	LT	1254163
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		08/01/02 13:16	LT	1254163
1,3-Dichlorobenzene	ND	0.31	1.0	1		08/01/02 13:16	LT	1254163
1,4-Dichlorobenzene	ND	0.56	1.0	1		08/01/02 13:16	LT	1254163
2-Butanone	ND	3.1	50	1		08/01/02 13:16	LT	1254163
2-Hexanone	ND	0.7	50	1		08/01/02 13:16	LT	1254163
4-Methyl-2-pentanone	ND	0.53	50	1		08/01/02 13:16	LT	1254163
Acetone	ND	16	100	1		08/01/02 13:16	LT	1254163
Benzene	85	0.25	1.0	1		08/01/02 13:16	LT	1254163
Bromochloromethane	ND	0.54	1.0	1		08/01/02 13:16	LT	1254163
Bromodichloromethane	2	0.31	1.0	1		08/01/02 13:16	LT	1254163
Bromoform	ND	0.56	1.0	1		08/01/02 13:16	LT	1254163
Bromomethane	ND	0.9	1.0	1		08/01/02 13:16	LT	1254163
Carbon disulfide	6	0.42	5.0	1		08/01/02 13:16	LT	1254163
Carbon tetrachloride	ND	0.42	1.0	1		08/01/02 13:16	LT	1254163
Chlorobenzene	ND	0.44	1.0	1		08/01/02 13:16	LT	1254163
Chloroethane	ND	0.76	1.0	1		08/01/02 13:16	LT	1254163
Chloroform	5	0.39	1.0	1		08/01/02 13:16	LT	1254163
Chloromethane	ND	0.7	1.0	1		08/01/02 13:16	LT	1254163
Dibromochloromethane	ND	0.65	1.0	1		08/01/02 13:16	LT	1254163
Dibromomethane	ND	0.88	1.0	1		08/01/02 13:16	LT	1254163
Dichlorodifluoromethane	ND	0.46	1.0	1		08/01/02 13:16	LT	1254163
Ethyl Ether	ND	1.5	20	1		08/01/02 13:16	LT	1254163
Ethylbenzene	11	0.34	1.0	1		08/01/02 13:16	LT	1254163
Iodomethane	ND	0.49	1.0	1		08/01/02 13:16	LT	1254163
Isopropylbenzene	ND	0.61	1.0	1		08/01/02 13:16	LT	1254163
Methylene chloride	ND	0.94	5.0	1		08/01/02 13:16	LT	1254163
n-Propylbenzene	ND	0.44	1.0	1		08/01/02 13:16	LT	1254163

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-132

Collected: 07/22/2002 10:40

SPL Sample ID: 02070802-03

Site: #17303, WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		08/01/02 13:16	LT	1254163
Styrene	ND	0.31	1.0	1		08/01/02 13:16	LT	1254163
Tetrachloroethene	ND	1	1.0	1		08/01/02 13:16	LT	1254163
Toluene	200	0.54	100	100		08/02/02 16:23	LT	1254714
trans-1,4-Dichloro-2-Butene	ND	2	2.0	1		08/01/02 13:16	LT	1254163
Trichloroethene	ND	0.71	1.0	1		08/01/02 13:16	LT	1254163
Vinyl chloride	14000	0.75	100	100		08/02/02 16:23	LT	1254714
cis-1,2-Dichloroethene	16000	0.56	100	100		08/02/02 16:23	LT	1254714
cis-1,3-Dichloropropene	ND	0.48	1.0	1		08/01/02 13:16	LT	1254163
trans-1,2-Dichloroethene	950	0.62	100	100		08/02/02 16:23	LT	1254714
trans-1,3-Dichloropropene	ND	0.48	1.0	1		08/01/02 13:16	LT	1254163
Xylenes, Total	39	0.42	3.0	1		08/01/02 13:16	LT	1254163
Surr: 1,2-Dichloroethane-d4	94.0	0	% 62-130	1		08/01/02 13:16	LT	1254163
Surr: 1,2-Dichloroethane-d4	100	0	% 62-130	100		08/02/02 16:23	LT	1254714
Surr: 4-Bromofluorobenzene	114	0	% 70-130	1		08/01/02 13:16	LT	1254163
Surr: 4-Bromofluorobenzene	112	0	% 70-130	100		08/02/02 16:23	LT	1254714
Surr: Toluene-d8	106	0	% 74-122	100		08/02/02 16:23	LT	1254714
Surr: Toluene-d8	112	0	% 74-122	1		08/01/02 13:16	LT	1254163

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-132

Collected: 07/22/2002 10:40

SPL Sample ID: 02070802-03

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L		
Chloride	496	0.66	10	10		08/02/02 16:00	CV	1255345

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and POL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-133

Collected: 07/22/2002 13:00 SPL Sample ID: 02070802-04

Site: #17303.WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6010B, TOTAL				MCL	SW6010B	Units: mg/L		
Manganese	68	0.0005	0.02	1		08/08/02 4:34	JS	1265086
Potassium	257	0.919	2	1		08/08/02 4:34	JS	1265086

Prep Method	Prep Date	Prep Initials
SW3010A	07/26/2002 8:00	MW

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-133

Collected: 07/22/2002 13:00

SPL Sample ID: 02070802-04

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		08/01/02 15:06	LT	1254166
1,1,1-Trichloroethane	ND	0.43	1.0	1		08/01/02 15:06	LT	1254166
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		08/01/02 15:06	LT	1254166
1,1,2-Trichloroethane	ND	0.84	1.0	1		08/01/02 15:06	LT	1254166
1,1-Dichloroethane	ND	0.6	1.0	1		08/01/02 15:06	LT	1254166
1,1-Dichloroethene	ND	0.51	1.0	1		08/01/02 15:06	LT	1254166
1,2,3-Trichloropropane	ND	0.87	1.0	1		08/01/02 15:06	LT	1254166
1,2,4-Trichlorobenzene	ND	0.49	5.0	1		08/01/02 15:06	LT	1254166
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		08/01/02 15:06	LT	1254166
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		08/01/02 15:06	LT	1254166
1,2-Dichlorobenzene	ND	0.56	1.0	1		08/01/02 15:06	LT	1254166
1,2-Dichloroethane	9	0.38	1.0	1		08/01/02 15:06	LT	1254166
1,2-Dichloropropane	ND	0.7	1.0	1		08/01/02 15:06	LT	1254166
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		08/01/02 15:06	LT	1254166
1,3-Dichlorobenzene	ND	0.31	1.0	1		08/01/02 15:06	LT	1254166
1,4-Dichlorobenzene	ND	0.56	1.0	1		08/01/02 15:06	LT	1254166
2-Butanone	ND	3.1	50	1		08/01/02 15:06	LT	1254166
2-Hexanone	ND	0.7	50	1		08/01/02 15:06	LT	1254166
4-Methyl-2-pentanone	ND	0.53	50	1		08/01/02 15:06	LT	1254166
Acetone	820	16	100	1		08/01/02 15:06	LT	1254166
Benzene	8	0.25	1.0	1		08/01/02 15:06	LT	1254166
Bromochloromethane	ND	0.54	1.0	1		08/01/02 15:06	LT	1254166
Bromodichloromethane	ND	0.31	1.0	1		08/01/02 15:06	LT	1254166
Bromoform	ND	0.56	1.0	1		08/01/02 15:06	LT	1254166
Bromomethane	ND	0.9	1.0	1		08/01/02 15:06	LT	1254166
Carbon disulfide	ND	0.42	5.0	1		08/01/02 15:06	LT	1254166
Carbon tetrachloride	ND	0.42	1.0	1		08/01/02 15:06	LT	1254166
Chlorobenzene	ND	0.44	1.0	1		08/01/02 15:06	LT	1254166
Chloroethane	ND	0.76	1.0	1		08/01/02 15:06	LT	1254166
Chloroform	4	0.39	1.0	1		08/01/02 15:06	LT	1254166
Chloromethane	ND	0.7	1.0	1		08/01/02 15:06	LT	1254166
Dibromochloromethane	ND	0.65	1.0	1		08/01/02 15:06	LT	1254166
Dibromomethane	ND	0.88	1.0	1		08/01/02 15:06	LT	1254166
Dichlorodifluoromethane	ND	0.46	1.0	1		08/01/02 15:06	LT	1254166
Ethyl Ether	ND	1.5	20	1		08/01/02 15:06	LT	1254166
Ethylbenzene	ND	0.34	1.0	1		08/01/02 15:06	LT	1254166
Iodomethane	ND	0.49	1.0	1		08/01/02 15:06	LT	1254166
Isopropylbenzene	ND	0.61	1.0	1		08/01/02 15:06	LT	1254166
Methylene chloride	ND	0.94	5.0	1		08/01/02 15:06	LT	1254166
n-Propylbenzene	ND	0.44	1.0	1		08/01/02 15:06	LT	1254166

Qualifiers: ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

- Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference

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12/17/02 3:39:12 PM



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-133

Collected: 07/22/2002 13:00 SPL Sample ID: 02070802-04

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		08/01/02 15:06	LT	1254166
Styrene	ND	0.31	1.0	1		08/01/02 15:06	LT	1254166
Tetrachloroethene	ND	1	1.0	1		08/01/02 15:06	LT	1254166
Toluene	4	0.54	1.0	1		08/01/02 15:06	LT	1254166
trans-1,4-Dichloro-2-Butene	ND	2	2.0	1		08/01/02 15:06	LT	1254166
Trichloroethene	ND	0.71	1.0	1		08/01/02 15:06	LT	1254166
Vinyl chloride	ND	0.75	1.0	1		08/01/02 15:06	LT	1254166
cis-1,2-Dichloroethene	ND	0.56	1.0	1		08/01/02 15:06	LT	1254166
cis-1,3-Dichloropropene	ND	0.46	1.0	1		08/01/02 15:06	LT	1254166
trans-1,2-Dichloroethene	ND	0.62	1.0	1		08/01/02 15:06	LT	1254166
trans-1,3-Dichloropropene	ND	0.48	1.0	1		08/01/02 15:06	LT	1254166
Xylenes, Total	ND	0.42	3.0	1		08/01/02 15:06	LT	1254166
Surr: 1,2-Dichloroethane-d4	102	0	% 62-130	1		08/01/02 15:06	LT	1254166
Surr: 4-Bromofluorobenzene	108	0	% 70-130	1		08/01/02 15:06	LT	1254166
Surr: Toluene-d8	106	0	% 74-122	1		08/01/02 15:06	LT	1254166

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-133

Collected: 07/22/2002 13:00

SPL Sample ID: 02070802-04

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL								
Chloride	513	0.66	50	50	E325.3	08/02/02 16:00	CV	1255348

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-134

Collected: 07/22/2002 13:05 SPL Sample ID: 02070802-05

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6010B, TOTAL				MCL	SW6010B	Units: mg/L		
Manganese	2.27	0.0005	0.02	1		08/08/02 4:39	JS	1265087
Potassium	256	0.919	2	1		08/08/02 4:39	JS	1265087

<u>Prep Method</u>	<u>Prep Date</u>	<u>Prep Initials</u>
SW3010A	07/26/2002 8:00	MW

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-134

Collected: 07/22/2002 13:05

SPL Sample ID: 02070802-05

Site: #17303.WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		08/02/02 18:42	LT	1254719
1,1,1-Trichloroethane	ND	0.43	1.0	1		08/02/02 18:42	LT	1254719
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		08/02/02 18:42	LT	1254719
1,1,2-Trichloroethane	ND	0.84	1.0	1		08/02/02 18:42	LT	1254719
1,1-Dichloroethane	ND	0.6	1.0	1		08/02/02 18:42	LT	1254719
1,1-Dichloroethene	ND	0.51	1.0	1		08/02/02 18:42	LT	1254719
1,2,3-Trichloropropane	ND	0.87	1.0	1		08/02/02 18:42	LT	1254719
1,2,4-Trichlorobenzene	ND	0.49	5.0	1		08/02/02 18:42	LT	1254719
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		08/02/02 18:42	LT	1254719
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		08/02/02 18:42	LT	1254719
1,2-Dichlorobenzene	ND	0.56	1.0	1		08/02/02 18:42	LT	1254719
1,2-Dichloroethane	ND	0.38	1.0	1		08/02/02 18:42	LT	1254719
1,2-Dichloropropane	ND	0.7	1.0	1		08/02/02 18:42	LT	1254719
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		08/02/02 18:42	LT	1254719
1,3-Dichlorobenzene	ND	0.31	1.0	1		08/02/02 18:42	LT	1254719
1,4-Dichlorobenzene	ND	0.56	1.0	1		08/02/02 18:42	LT	1254719
2-Butanone	ND	3.1	50	1		08/02/02 18:42	LT	1254719
2-Hexanone	ND	0.7	50	1		08/02/02 18:42	LT	1254719
4-Methyl-2-pentanone	ND	0.53	50	1		08/02/02 18:42	LT	1254719
Acetone	ND	16	100	1		08/02/02 18:42	LT	1254719
Benzene	1	0.25	1.0	1		08/02/02 18:42	LT	1254719
Bromochloromethane	ND	0.54	1.0	1		08/02/02 18:42	LT	1254719
Bromodichloromethane	ND	0.31	1.0	1		08/02/02 18:42	LT	1254719
Bromoform	ND	0.56	1.0	1		08/02/02 18:42	LT	1254719
Bromomethane	ND	0.9	1.0	1		08/02/02 18:42	LT	1254719
Carbon disulfide	ND	0.42	5.0	1		08/02/02 18:42	LT	1254719
Carbon tetrachloride	ND	0.42	1.0	1		08/02/02 18:42	LT	1254719
Chlorobenzene	ND	0.44	1.0	1		08/02/02 18:42	LT	1254719
Chloroethane	ND	0.76	1.0	1		08/02/02 18:42	LT	1254719
Chloroform	4	0.39	1.0	1		08/02/02 18:42	LT	1254719
Chloromethane	ND	0.7	1.0	1		08/02/02 18:42	LT	1254719
Dibromochloromethane	ND	0.65	1.0	1		08/02/02 18:42	LT	1254719
Dibromomethane	ND	0.88	1.0	1		08/02/02 18:42	LT	1254719
Dichlorodifluoromethane	ND	0.46	1.0	1		08/02/02 18:42	LT	1254719
Ethyl Ether	ND	1.5	20	1		08/02/02 18:42	LT	1254719
Ethylbenzene	ND	0.34	1.0	1		08/02/02 18:42	LT	1254719
Iodomethane	ND	0.49	1.0	1		08/02/02 18:42	LT	1254719
Isopropylbenzene	ND	0.61	1.0	1		08/02/02 18:42	LT	1254719
Methylene chloride	ND	0.94	5.0	1		08/02/02 18:42	LT	1254719
n-Propylbenzene	ND	0.44	1.0	1		08/02/02 18:42	LT	1254719

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-134

Collected: 07/22/2002 13:05

SPL Sample ID: 02070802-05

Site: #17303, WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		08/02/02 18:42	LT	1254719
Styrene	ND	0.31	1.0	1		08/02/02 18:42	LT	1254719
Tetrachloroethene	ND	1	1.0	1		08/02/02 18:42	LT	1254719
Toluene	ND	0.54	1.0	1		08/02/02 18:42	LT	1254719
trans-1,4-Dichloro-2-Butene	ND	2	2.0	1		08/02/02 18:42	LT	1254719
Trichloroethene	1700	0.71	20	20		08/02/02 17:47	LT	1254717
Vinyl chloride	40	0.75	1.0	1		08/02/02 18:42	LT	1254719
cis-1,2-Dichloroethene	180	0.56	1.0	1		08/02/02 18:42	LT	1254719
cis-1,3-Dichloropropene	ND	0.48	1.0	1		08/02/02 18:42	LT	1254719
trans-1,2-Dichloroethene	45	0.62	1.0	1		08/02/02 18:42	LT	1254719
trans-1,3-Dichloropropene	ND	0.48	1.0	1		08/02/02 18:42	LT	1254719
Xylenes, Total	ND	0.42	3.0	1		08/02/02 18:42	LT	1254719
Surr: 1,2-Dichloroethane-d4	102	0	% 62-130	1		08/02/02 18:42	LT	1254719
Surr: 1,2-Dichloroethane-d4	98.0	0	% 62-130	20		08/02/02 17:47	LT	1254717
Surr: 4-Bromofluorobenzene	110	0	% 70-130	1		08/02/02 18:42	LT	1254719
Surr: 4-Bromofluorobenzene	120	0	% 70-130	20		08/02/02 17:47	LT	1254717
Surr: Toluene-d8	110	0	% 74-122	20		08/02/02 17:47	LT	1254717
Surr: Toluene-d8	110	0	% 74-122	1		08/02/02 18:42	LT	1254719

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-134

Collected: 07/22/2002 13:05

SPL Sample ID: 02070802-05

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL					E325.3	Units: mg/L		
Chloride	299	0.66	5	5		08/02/02 16:00	CV	1255349

Qualifiers:

ND/U - Not Detected at the Reporting Limit

>MCL - Result Over Maximum Contamination Limit(MCL)

B - Analyte detected in the associated Method Blank

D - Surrogate Recovery Unreportable due to Dilution

* - Surrogate Recovery Outside Advisable QC Limits

MI - Matrix Interference

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
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(713) 660-0901

Client Sample ID GW-072202-MM-135

Collected: 07/22/2002 14:20 SPL Sample ID: 02070802-06

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6010B, TOTAL								
						Units: mg/L		
Manganese	9.44	0.0005	0.02	1		08/08/02 4:45	JS	1265088
Potassium	1270	4.59	10	5		08/08/02 20:11	JS	1266633

<u>Prep Method</u>	<u>Prep Date</u>	<u>Prep Initials</u>
SW3010A	07/26/2002 8:00	MW

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-135

Collected: 07/22/2002 14:20

SPL Sample ID: 02070802-06

Site: #17303, WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		08/01/02 17:25	LT	1254169
1,1,1-Trichloroethane	ND	0.43	1.0	1		08/01/02 17:25	LT	1254169
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		08/01/02 17:25	LT	1254169
1,1,2-Trichloroethane	2	0.84	1.0	1		08/01/02 17:25	LT	1254169
1,1-Dichloroethane	2	0.6	1.0	1		08/01/02 17:25	LT	1254169
1,1-Dichloroethene	3	0.51	1.0	1		08/01/02 17:25	LT	1254169
1,2,3-Trichloropropane	ND	0.87	1.0	1		08/01/02 17:25	LT	1254169
1,2,4-Trichlorobenzene	ND	0.49	5.0	1		08/01/02 17:25	LT	1254169
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		08/01/02 17:25	LT	1254169
1,2-Dibromo-3-chloropropane	ND	0.88	1.0	1		08/01/02 17:25	LT	1254169
1,2-Dichlorobenzene	ND	0.56	1.0	1		08/01/02 17:25	LT	1254169
1,2-Dichloroethane	3	0.38	1.0	1		08/01/02 17:25	LT	1254169
1,2-Dichloropropane	ND	0.7	1.0	1		08/01/02 17:25	LT	1254169
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		08/01/02 17:25	LT	1254169
1,3-Dichlorobenzene	ND	0.31	1.0	1		08/01/02 17:25	LT	1254169
1,4-Dichlorobenzene	ND	0.56	1.0	1		08/01/02 17:25	LT	1254169
2-Butanone	ND	3.1	50	1		08/01/02 17:25	LT	1254169
2-Hexanone	ND	0.7	50	1		08/01/02 17:25	LT	1254169
4-Methyl-2-pentanone	ND	0.53	50	1		08/01/02 17:25	LT	1254169
Acetone	ND	16	100	1		08/01/02 17:25	LT	1254169
Benzene	110	0.25	1.0	1		08/01/02 17:25	LT	1254169
Bromochloromethane	ND	0.54	1.0	1		08/01/02 17:25	LT	1254169
Bromodichloromethane	ND	0.31	1.0	1		08/01/02 17:25	LT	1254169
Bromoform	ND	0.56	1.0	1		08/01/02 17:25	LT	1254169
Bromomethane	ND	0.9	1.0	1		08/01/02 17:25	LT	1254169
Carbon disulfide	19	0.42	5.0	1		08/01/02 17:25	LT	1254169
Carbon tetrachloride	ND	0.42	1.0	1		08/01/02 17:25	LT	1254169
Chlorobenzene	ND	0.44	1.0	1		08/01/02 17:25	LT	1254169
Chloroethane	ND	0.76	1.0	1		08/01/02 17:25	LT	1254169
Chloroform	6	0.39	1.0	1		08/01/02 17:25	LT	1254169
Chloromethane	ND	0.7	1.0	1		08/01/02 17:25	LT	1254169
Dibromochloromethane	ND	0.65	1.0	1		08/01/02 17:25	LT	1254169
Dibromomethane	ND	0.88	1.0	1		08/01/02 17:25	LT	1254169
Dichlorodifluoromethane	ND	0.46	1.0	1		08/01/02 17:25	LT	1254169
Ethyl Ether	ND	1.5	20	1		08/01/02 17:25	LT	1254169
Ethylbenzene	ND	0.34	1.0	1		08/01/02 17:25	LT	1254169
Iodomethane	ND	0.49	1.0	1		08/01/02 17:25	LT	1254169
Isopropylbenzene	ND	0.61	1.0	1		08/01/02 17:25	LT	1254169
Methylene chloride	ND	0.94	5.0	1		08/01/02 17:25	LT	1254169
n-Propylbenzene	ND	0.44	1.0	1		08/01/02 17:25	LT	1254169

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-135

Collected: 07/22/2002 14:20 SPL Sample ID: 02070802-06

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		08/01/02 17:25	LT	1254169
Styrene	ND	0.31	1.0	1		08/01/02 17:25	LT	1254169
Tetrachloroethene	ND	1	1.0	1		08/01/02 17:25	LT	1254169
Toluene	120	0.54	1.0	1		08/01/02 17:25	LT	1254169
trans-1,4-Dichloro-2-Butene	ND	2	2.0	1		08/01/02 17:25	LT	1254169
Trichloroethene	65	0.71	1.0	1		08/01/02 17:25	LT	1254169
Vinyl chloride	27000	0.75	500	500		08/02/02 18:14	LT	1254718
cis-1,2-Dichloroethene	1500	0.56	500	500		08/02/02 18:14	LT	1254718
cis-1,3-Dichloropropene	ND	0.48	1.0	1		08/01/02 17:25	LT	1254169
trans-1,2-Dichloroethene	150	0.62	1.0	1		08/01/02 17:25	LT	1254169
trans-1,3-Dichloropropene	ND	0.48	1.0	1		08/01/02 17:25	LT	1254169
Xylenes, Total	93	0.42	3.0	1		08/01/02 17:25	LT	1254169
Surr: 1,2-Dichloroethane-d4	96.0	0	% 62-130	1		08/01/02 17:25	LT	1254169
Surr: 1,2-Dichloroethane-d4	92.0	0	% 62-130	500		08/02/02 18:14	LT	1254718
Surr: 4-Bromofluorobenzene	116	0	% 70-130	1		08/01/02 17:25	LT	1254169
Surr: 4-Bromofluorobenzene	112	0	% 70-130	500		08/02/02 18:14	LT	1254718
Surr: Toluene-d8	108	0	% 74-122	500		08/02/02 18:14	LT	1254718
Surr: Toluene-d8	114	0	% 74-122	1		08/01/02 17:25	LT	1254169

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-072202-MM-135

Collected: 07/22/2002 14:20

SPL Sample ID: 02070802-06

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL					E325.3	Units: mg/L		
Chloride	1790	0.66	25	25		08/02/02 16:00	CV	1255350

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID TB-072202-MM-136

Collected: 07/22/2002 0:00

SPL Sample ID: 02070802-07

Site: #17303,WRC-Former Assembly Plant

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		08/02/02 15:28	LT	1254713
1,1,1-Trichloroethane	ND	0.43	1.0	1		08/02/02 15:28	LT	1254713
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		08/02/02 15:28	LT	1254713
1,1,2-Trichloroethane	ND	0.84	1.0	1		08/02/02 15:28	LT	1254713
1,1-Dichloroethane	ND	0.6	1.0	1		08/02/02 15:28	LT	1254713
1,1-Dichloroethene	ND	0.51	1.0	1		08/02/02 15:28	LT	1254713
1,2,3-Trichloropropane	ND	0.87	1.0	1		08/02/02 15:28	LT	1254713
1,2,4-Trichlorobenzene	ND	0.49	5.0	1		08/02/02 15:28	LT	1254713
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		08/02/02 15:28	LT	1254713
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		08/02/02 15:28	LT	1254713
1,2-Dichlorobenzene	ND	0.56	1.0	1		08/02/02 15:28	LT	1254713
1,2-Dichloroethane	ND	0.38	1.0	1		08/02/02 15:28	LT	1254713
1,2-Dichloropropane	ND	0.7	1.0	1		08/02/02 15:28	LT	1254713
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		08/02/02 15:28	LT	1254713
1,3-Dichlorobenzene	ND	0.31	1.0	1		08/02/02 15:28	LT	1254713
1,4-Dichlorobenzene	ND	0.56	1.0	1		08/02/02 15:28	LT	1254713
2-Butanone	ND	3.1	50	1		08/02/02 15:28	LT	1254713
2-Hexanone	ND	0.7	50	1		08/02/02 15:28	LT	1254713
4-Methyl-2-pentanone	ND	0.53	50	1		08/02/02 15:28	LT	1254713
Acetone	ND	16	100	1		08/02/02 15:28	LT	1254713
Benzene	ND	0.25	1.0	1		08/02/02 15:28	LT	1254713
Bromochloromethane	ND	0.54	1.0	1		08/02/02 15:28	LT	1254713
Bromodichloromethane	ND	0.31	1.0	1		08/02/02 15:28	LT	1254713
Bromoform	ND	0.56	1.0	1		08/02/02 15:28	LT	1254713
Bromomethane	ND	0.9	1.0	1		08/02/02 15:28	LT	1254713
Carbon disulfide	ND	0.42	5.0	1		08/02/02 15:28	LT	1254713
Carbon tetrachloride	ND	0.42	1.0	1		08/02/02 15:28	LT	1254713
Chlorobenzene	ND	0.44	1.0	1		08/02/02 15:28	LT	1254713
Chloroethane	ND	0.76	1.0	1		08/02/02 15:28	LT	1254713
Chloroform	ND	0.39	1.0	1		08/02/02 15:28	LT	1254713
Chloromethane	ND	0.7	1.0	1		08/02/02 15:28	LT	1254713
Dibromochloromethane	ND	0.65	1.0	1		08/02/02 15:28	LT	1254713
Dibromomethane	ND	0.88	1.0	1		08/02/02 15:28	LT	1254713
Dichlorodifluoromethane	ND	0.46	1.0	1		08/02/02 15:28	LT	1254713
Ethyl Ether	ND	1.5	20	1		08/02/02 15:28	LT	1254713
Ethylbenzene	ND	0.34	1.0	1		08/02/02 15:28	LT	1254713
Iodomethane	ND	0.49	1.0	1		08/02/02 15:28	LT	1254713
Isopropylbenzene	ND	0.61	1.0	1		08/02/02 15:28	LT	1254713
Methylene chloride	ND	0.94	5.0	1		08/02/02 15:28	LT	1254713
n-Propylbenzene	ND	0.44	1.0	1		08/02/02 15:28	LT	1254713

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303.WRC-Former Assembly Plant

Analysis: Metals by Method 6010B, Total
Method: SW6010B

WorkOrder: 02070802
Lab Batch ID: 21564

Method Blank		Samples in Analytical Batch:			
RunID:	TJA_020808A-1266625	Units:	mg/L	Lab Sample ID	Client Sample ID
Analysis Date:	08/08/2002 19:26	Analyst:	JS	02070802-06A	GW-072202-MM-135
Preparation Date:	07/26/2002 8:00	Prep By:	MW	Method SW3010A	

Analyte	Result	Qual	Rep Limit
Potassium	ND		2

Laboratory Control Sample (LCS)

RunID: TJA_020808A-1266626 Units: mg/L
Analysis Date: 08/08/2002 19:31 Analyst: JS
Preparation Date: 07/26/2002 8:00 Prep By: MW Method SW3010A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Potassium	10	10	104	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02070802-03
RunID: TJA_020808A-1266628 Units: mg/L
Analysis Date: 08/08/2002 19:43 Analyst: JS
Preparation Date: 07/26/2002 8:00 Prep By: Method

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Manganese	1.969	1	2.746	77.72	1	2.931	96.19	21.25	20	75	125
Potassium	449.4	10	445.5	N/C	10	460.6	N/C	N/C	20	75	125

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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12/17/02 3:39:18 PM



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates, Inc.
#17303, WRC-Former Assembly Plant

Analysis: Metals by Method 6010B, Total
Method: SW6010B

WorkOrder: 02070802
Lab Batch ID: 21554

Method Blank

Samples in Analytical Batch:

RunID:	TJA_020807B-1265073	Units:	mg/L	Lab Sample ID	Client Sample ID
Analysis Date:	08/08/2002 3:22	Analyst:	JS	02070802-01A	GW-072202-MM-130
Preparation Date:	07/26/2002 8:00	Prep By:	MW Method SW3010A	02070802-02A	GW-072202-MM-131
				02070802-03A	GW-072202-MM-132
				02070802-04A	GW-072202-MM-133
				02070802-05A	GW-072202-MM-134
				02070802-06A	GW-072202-MM-135

Analyte	Result	Qual	Rep Limit
Manganese	ND		0.02
Potassium	1.5	BJ	2

Laboratory Control Sample (LCS)

RunID: TJA_020807B-1265074 Units: mg/L
Analysis Date: 08/08/2002 3:27 Analyst: JS
Preparation Date: 07/26/2002 8:00 Prep By: MW Method SW3010A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Manganese	1	0.9483	95	80	120
Potassium	10	10	105	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02070802-03
RunID: TJA_020807B-1265077 Units: mg/L
Analysis Date: 08/08/2002 3:39 Analyst: JS
Preparation Date: 07/26/2002 8:00 Prep By: MW Method SW3010A

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Manganese	1.978	1	2.89	91.20	1	2.955	97.66	6.847	20	75	125
Potassium	420.5	10	427.1	N/C	10	443.3	N/C	N/C	20	75	125

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303, WRC-Former Assembly Plant

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02070802
Lab Batch ID: R64969

Method Blank

Samples in Analytical Batch:

RunID: L_020801A-1254158 Units: ug/L
Analysis Date: 08/01/2002 11:26 Analyst: LT

Lab Sample ID	Client Sample ID
02070802-01C	GW-072202-MM-130
02070802-02C	GW-072202-MM-131
02070802-03C	GW-072202-MM-132
02070802-04C	GW-072202-MM-133
02070802-06C	GW-072202-MM-135

Analyte	Result	Qual	Rep Limit
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-chloropropane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Butanone	ND		50
2-Hexanone	ND		50
4-Methyl-2-pentanone	ND		50
Acetone	ND		100
Benzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoflorm	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethyl Ether	ND		20
Ethylbenzene	ND		1.0
Iodomethane	ND		1.0
Isopropylbenzene	ND		1.0
Methylene chloride	ND		5.0
n-Propylbenzene	ND		1.0
Naphthalene	ND		5.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,4-Dichloro-2-Butene	ND		2.0
Trichloroethene	ND		1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303, WRC-Former Assembly Plant

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02070802
Lab Batch ID: R64969

Method Blank

RunID: L_020801A-1254159 Units: ug/L
Analysis Date: 08/01/2002 11:26 Analyst: LT

Analyte	Result	Qual	Rep Limit
Vinyl chloride	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Xylenes, Total	ND		3.0
Surr: 1,2-Dichloroethane-d4	100.0		62-130
Surr: 4-Bromofluorobenzene	108.0		70-130
Surr: Toluene-d8	108.0		74-122

Laboratory Control Sample (LCS)

RunID: L_020801A-1254158 Units: ug/L
Analysis Date: 08/01/2002 10:30 Analyst: LT

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	47	94	61	145
Benzene	50	45	90	76	127
Chlorobenzene	50	46	92	70	130
Toluene	50	47	94	70	129
Trichloroethene	50	43	86	71	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02070802-03
RunID: L_020801A-1254164 Units: ug/L
Analysis Date: 08/01/2002 13:43 Analyst: LT

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	59	50	100	82	50	100	82	0	14	61	145
Benzene	85	50	130	90	50	140	110	20	11	76	127
Chlorobenzene	ND	50	46	92	50	48	96	4	13	70	130

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates, Inc.
#17303,WRC-Former Assembly Plant

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02070802
Lab Batch ID: R64969

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02070802-03
RunID: L_020801A-1254164 Units: ug/L
Analysis Date: 08/01/2002 13:43 Analyst: LT

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Toluene	280	50	360	N/C	50	370	N/C	N/C	13	70	129
Trichloroethene	ND	50	45	90	50	48	96	6	14	71	120

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL E - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303,WRC-Former Assembly Plant

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02070802
Lab Batch ID: R64990

Method Blank

RunID: L_020802A-1254709 Units: ug/L
Analysis Date: 08/02/2002 12:14 Analyst: LT

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02070802-01C	GW-072202-MM-130
02070802-02C	GW-072202-MM-131
02070802-03C	GW-072202-MM-132
02070802-05C	GW-072202-MM-134
02070802-06C	GW-072202-MM-135
02070802-07C	TB-072202-MM-136

Analyte	Result	Qual	Rep Limit
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-chloropropane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Butanone	ND		50
2-Hexanone	ND		50
4-Methyl-2-pentanone	ND		50
Acetone	ND		100
Benzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethyl Ether	ND		20
Ethylbenzene	ND		1.0
Iodomethane	ND		1.0
Isopropylbenzene	ND		1.0
Methylene chloride	ND		5.0
n-Propylbenzene	ND		1.0
Naphthalene	ND		5.0
Styrene	ND		1.0
Tetrachloroethane	ND		1.0
Toluene	ND		1.0
trans-1,4-Dichloro-2-Butene	ND		2.0
Trichloroethene	ND		1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303, WRC-Former Assembly Plant

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02070802
Lab Batch ID: R64990

Method Blank

RunID: L_020802A-1254709 Units: ug/L
Analysis Date: 08/02/2002 12:14 Analyst: LT

Analyte	Result	Qual	Rep Limit
Vinyl chloride	ND		1.0
cis-1,2-Dichloroethane	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
trans-1,2-Dichloroethane	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Xylenes, Total	ND		3.0
Surr: 1,2-Dichloroethane-d4	94.0		62-130
Surr: 4-Bromofluorobenzene	116.0		70-130
Surr: Toluene-d8	112.0		74-122

Laboratory Control Sample (LCS)

RunID: L_020802A-1254708 Units: ug/L
Analysis Date: 08/02/2002 11:11 Analyst: LT

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	41	82	61	145
Benzene	50	43	86	76	127
Chlorobenzene	50	42	84	70	130
Toluene	50	44	88	70	129
Trichloroethene	50	43	86	71	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02080037-05
RunID: L_020802A-1254711 Units: ug/L
Analysis Date: 08/02/2002 14:05 Analyst: LT

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	50	44	88	50	44	88	0	14	61	145
Benzene	ND	50	44	88	50	43	86	2	11	76	127
Chlorobenzene	ND	50	45	90	50	43	86	5	13	70	130

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303, WRC-Former Assembly Plant

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02070802
Lab Batch ID: R64990

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02080037-05
RunID: L_020802A-1254711 Units: ug/L
Analysis Date: 08/02/2002 14:05 Analyst: LT

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Toluene	ND	50	45	90	50	43	86	5	13	70	129
Trichloroethane	ND	50	45	90	50	45	90	0	14	71	120

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates, Inc.
#17303, WRC-Former Assembly Plant

Analysis: Chloride, Total
Method: E325.3

WorkOrder: 02070802
Lab Batch ID: R65011

Method Blank				Samples in Analytical Batch:	
RunID:	WET_020802N-1255340	Units:	mg/L	Lab Sample ID	Client Sample ID
Analysis Date:	08/02/2002 16:00	Analyst:	CV	02070802-01B	GW-072202-MM-130
				02070802-02B	GW-072202-MM-131
				02070802-03B	GW-072202-MM-132
				02070802-04B	GW-072202-MM-133
				02070802-05B	GW-072202-MM-134
				02070802-06B	GW-072202-MM-135
Analyte	Result	Qual	Rep Limit		
Chloride	ND		1.0		

Laboratory Control Sample (LCS)

RunID: WET_020802N-1255342 Units: mg/L
Analysis Date: 08/02/2002 16:00 Analyst: CV

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	99.1	95.7	97	90	110

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02070802-03
RunID: WET_020802N-1255346 Units: mg/L
Analysis Date: 08/02/2002 16:00 Analyst: CV

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	496	500	982	97.4	500	991	99.1	1.74	20	85	115

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

*Sample Receipt Checklist
And
Chain of Custody*



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder: 02070802

Date and Time Received: 7/23/02 10:00:00 AM

Temperature: 2

Received By: NB

Carrier name: FedEx

Chilled by: Water Ice

- | | | | |
|--|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes ☒ | No ☐ | Not Present ☐ |
| 2. Custody seals intact on shipping container/cooler? | Yes ☒ | No ☐ | Not Present ☐ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☒ |
| 4. Chain of custody present? | Yes ☒ | No ☐ | |
| 5. Chain of custody signed when relinquished and received? | Yes ☒ | No ☐ | |
| 6. Chain of custody agrees with sample labels? | Yes ☒ | No ☐ | |
| 7. Samples in proper container/bottle? | Yes ☒ | No ☐ | |
| 8. Sample containers intact? | Yes ☒ | No ☐ | |
| 9. Sufficient sample volume for indicated test? | Yes ☒ | No ☐ | |
| 10. All samples received within holding time? | Yes ☒ | No ☐ | |
| 11. Container/Temp Blank temperature in compliance? | Yes ☒ | No ☐ | |
| 12. Water - VOA vials have zero headspace? | Yes ☒ | No ☐ | Not Applicable ☐ |
| 13. Water - pH acceptable upon receipt? | Yes ☒ | No ☐ | Not Applicable ☐ |

SPL Representative:

Client Name Contacted:

Non Conformance
Issues:

Client Instructions:

Contact Date & Time:

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.

14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

SPL - Houston

02070802

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17303-02

PROJECT NAME:

WRC - FORMER ASSEMBLY PLANT

SAMPLER'S SIGNATURE: M. Mathé PRINTED NAME: M. Mathé

PARAMETERS

TOT. K+M
Chloride
TCL VOC

REMARKS

24 hr TAT

SEQ. No.	DATE	TIME	SAMPLE TYPE
1	7/22/02	1025	GW-072202-MM-130 H ₂ O
2		1030	-131
3		1040	-132X
4		1300	-133
5		1305	-134
6		1420	-135
-	7/22/02	-	TB-072202 MM -136 H ₂ O

No. OF CONTAINERS

5	X	X	X
5	X	X	X
10	X	X	X
5	X	X	X
5	X	X	X
5	X	X	X
1			X

* 2x VOLUME FOR MS/MSD

CRA CONTACT:
PAUL WISEMAN

RUSH

7/23/02 per R. Hasen
Need 14 Day TAT

TOTAL NUMBER OF CONTAINERS

36

RELINQUISHED BY: 1. M. Mathé

DATE: 7/22/02
TIME: 1800

RECEIVED BY:

1. 2L

DATE:

TIME:

RELINQUISHED BY: 2. _____

DATE: _____
TIME: _____

RECEIVED BY:

2. _____

DATE:

TIME:

RELINQUISHED BY: 3. _____

DATE: _____
TIME: _____

RECEIVED BY:

1. _____

DATE:

TIME:

METHOD OF SHIPMENT: FED EX

AIR BILL No.

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy

Pink - Shipper Copy
Goldenrod - Sampler Copy

SAMPLE TEAM:

M. MATHÉ

RECEIVED FOR LABORATORY BY:

Amey Ramera

DATE: 7/23/02 TIME: 1000

21947



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates, Inc.

Certificate of Analysis Number:

02110768

Report To: Conestoga-Rovers & Associates, Inc. Paul Wiseman 14496 Sheldon Rd. Suite 200 Plymouth MI 48170- ph: (734) 453-5123 fax: (734) 453-5201	Project Name: #17303-20 WRC Site: #17303-20 WRC Site Address: PO Number: 40-0017478 State: Michigan State Cert. No.: Date Reported: 12/11/2002
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This Report Contains A Total Of 79 Pages

Excluding This Page

And

Chain Of Custody

ORIGINAL ANALYTICAL REPORT
Project#: 17303-20 Lab#: 02110768
Name: FORMER WILLOW RUN.

Description
Event: GW Monitoring
Samples: 11 waters (MM 137-147; 11-25-02)
Analysis: Select VOCs; DRO; Chloride;
COD; GRO;
TAT: STANDARD TAT (14 DAYS)
Lab: SPL HOUSTON.

CRA SDG 12.

Checked Against Preliminary Data:
Date: 2/26/03 Init.: [Signature]
Date of Validation Memo: 2/27/03
Invoice Approval Date: 12/11/2002
Comments: _____ Date: _____

[Signature]
Sonia West
Project Manager



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:
Conestoga-Rovers & Associates, Inc.

Certificate of Analysis Number:
02110768

Report To: Conestoga-Rovers & Associates, Inc. Paul Wiseman 14496 Sheldon Rd. Suite 200 Plymouth MI 48170- ph: (734) 453-5123 fax: (734) 453-5201	Project Name: #17303-20 WRC Site: #17303-20 WRC Site Address: PO Number: 40-0017478 State: Michigan State Cert. No.: Date Reported: 12/11/2002
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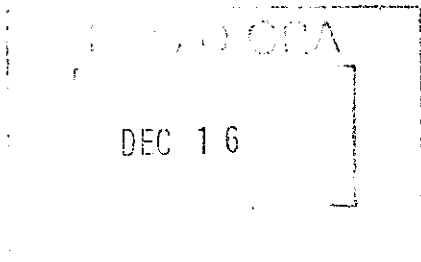
Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.



Sonia West
Senior Project Manager



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates, Inc.

Certificate of Analysis Number:

02110768

Report To: Conestoga-Rovers & Associates, Inc.

Paul Wiseman
14496 Sheldon Rd.
Suite 200
Plymouth
MI

48170-
ph: (734) 453-5123 fax: (734) 453-5201

Fax To:

Conestoga-Rovers & Associates, Inc.
Paul Wiseman fax: (734) 453-5201

Project Name: #17303-20 WRC

Site: #17303-20 WRC

Site Address:

PO Number: 40-0017478

State: Michigan

State Cert. No.:

Date Reported: 12/11/2002

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
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3W-17303-112502-MM-138	02110768-01	Water	11/25/2002	11/26/2002 9:30:00 AM	22310	☐
I-17303-112502-MM-139	02110768-02	Water	11/25/2002	11/26/2002 9:30:00 AM	22310	☐
I-17303-112502-MM-140	02110768-03	Water	11/25/2002	11/26/2002 9:30:00 AM	22310	☐
3W-17303-112502-MM-140	02110768-03	Water	11/25/2002	11/26/2002 9:30:00 AM	22311	☐
W-17303-112502-MM-141	02110768-04	Water	11/25/2002	11/26/2002 9:30:00 AM	22310	☐
I-17303-112502-MM-141	02110768-04	Water	11/25/2002	11/26/2002 9:30:00 AM	22311	☐
3W-17303-112502-MM-137	02110768-05	Water	11/25/2002	11/26/2002 9:30:00 AM	22310	☐
FB-17303-112502-MM-146	02110768-06	Water	11/25/2002	11/26/2002 9:30:00 AM	22310	☐
I-17303-112502-MM-142	02110768-07	Water	11/25/2002	11/26/2002 9:30:00 AM	22313	☐
I-17303-112502-MM-143	02110768-08	Water	11/25/2002	11/26/2002 9:30:00 AM	22313	☐
3W-17303-112502-MM-145	02110768-09	Water	11/25/2002	11/26/2002 9:30:00 AM	22312	☐
I-17303-112502-MM-145	02110768-09	Water	11/25/2002	11/26/2002 9:30:00 AM	22313	☐
I-17303-112502-MM-144	02110768-10	Water	11/25/2002	11/26/2002 9:30:00 AM	22312	☐
3W-17303-112502-MM-144	02110768-10	Water	11/25/2002	11/26/2002 9:30:00 AM	22313	☐
FB-17303-112502-MM-147	02110768-11	Water	11/25/2002	11/26/2002 9:30:00 AM	22313	☐

12/11/2002

via West

Date

Senior Project Manager

Joel Grice
Laboratory Director

Ted Yen
Quality Assurance Officer



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Method Summary

Conestoga-Rovers & Associates, Inc.

02110768

Client Sample ID	Lab Sample ID	Test Name	Test Number
GW-17303-112502-MM-137	02110768-05	Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
GW-17303-112502-MM-138	02110768-01	Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
GW-17303-112502-MM-139	02110768-02	Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
GW-17303-112502-MM-140	02110768-03	Chemical Oxygen Demand	E410.1
		Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Diesel Range Organics	OK_DRO

12/11/2002

Date



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Method Summary

Conestoga-Rovers & Associates, Inc.

02110768

Client Sample ID	Lab Sample ID	Test Name	Test Number
GW-17303-112502-MM-141	02110768-04	Gasoline Range Organics	OK_GRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
		Volatile Organics by Method 8260B	SW8260B
		Chemical Oxygen Demand	E410.1
		Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
		Volatile Organics by Method 8260B	SW8260B
GW-17303-112502-MM-142	02110768-07	Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
GW-17303-112502-MM-143	02110768-08	Chemical Oxygen Demand	E410.1

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Date

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Method Summary

Conestoga-Rovers & Associates, Inc.

02110768

Client Sample ID	Lab Sample ID	Test Name	Test Number
GW-17303-112502-MM-144	02110768-10	Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
		Chemical Oxygen Demand	E410.1
		Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
GW-17303-112502-MM-145	02110768-09	Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
		Volatile Organics by Method 8260B	SW8260B
		Chemical Oxygen Demand	E410.1
		Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C

12/11/2002

Date

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Method Summary

Conestoga-Rovers & Associates, Inc.

02110768

Client Sample ID	Lab Sample ID	Test Name	Test Number
TB-17303-112502-MM-146	02110768-06	Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
		Volatile Organics by Method 8260B	SW8260B
		Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
TB-17303-112502-MM-147	02110768-11	Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B

12/11/2002

Date



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-138 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-01

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	OK_DRO	Units: mg/L			
Diesel Range Organics	ND	0.15	0.1	1		12/03/02 16:05	AR	1421975
Surr: n-Pentacosane	67.6	0	% 20-131	1		12/03/02 16:05	AR	1421975

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-138

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-01

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS				MCL	OK_GRO	Units: ug/L		
Gasoline Range Organics	ND	0.019	20	1		12/07/02 8:03	D_R	1420329
Surr: 1,4-Difluorobenzene	99.5	0	% 62-144	1		12/07/02 8:03	D_R	1420329
Surr: 4-Bromofluorobenzene	101	0	% 44-153	1		12/07/02 8:03	D_R	1420329

Qualifiers:

ND/U - Not Detected at the Reporting Limit

>MCL - Result Over Maximum Contamination Limit(MCL)

B - Analyte detected in the associated Method Blank

D - Surrogate Recovery Unreportable due to Dilution

* - Surrogate Recovery Outside Advisable QC Limits

MI - Matrix Interference

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-138

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-01

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 21:33	TL	1414499
1,1,1-Trichloroethane	ND	0.43	1.0	1		11/29/02 21:33	TL	1414499
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 21:33	TL	1414499
1,1,2-Trichloroethane	ND	0.84	1.0	1		11/29/02 21:33	TL	1414499
1,1-Dichloroethane	ND	0.6	1.0	1		11/29/02 21:33	TL	1414499
1,1-Dichloroethene	ND	0.51	1.0	1		11/29/02 21:33	TL	1414499
1,2,3-Trichloropropane	ND	0.87	1.0	1		11/29/02 21:33	TL	1414499
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		11/29/02 21:33	TL	1414499
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		11/29/02 21:33	TL	1414499
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		11/29/02 21:33	TL	1414499
1,2-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 21:33	TL	1414499
1,2-Dichloroethane	ND	0.38	1.0	1		11/29/02 21:33	TL	1414499
1,2-Dichloropropane	ND	0.7	1.0	1		11/29/02 21:33	TL	1414499
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		11/29/02 21:33	TL	1414499
1,3-Dichlorobenzene	ND	0.31	1.0	1		11/29/02 21:33	TL	1414499
1,4-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 21:33	TL	1414499
2-Butanone	ND	3.1	25	1		11/29/02 21:33	TL	1414499
2-Hexanone	ND	0.7	50	1		11/29/02 21:33	TL	1414499
4-Methyl-2-pentanone	ND	0.53	50	1		11/29/02 21:33	TL	1414499
Acetone	ND	16	25	1		11/29/02 21:33	TL	1414499
Benzene	ND	0.25	1.0	1		11/29/02 21:33	TL	1414499
Bromochloromethane	ND	0.54	1.0	1		11/29/02 21:33	TL	1414499
Bromodichloromethane	ND	0.31	1.0	1		11/29/02 21:33	TL	1414499
Bromoform	ND	0.56	1.0	1		11/29/02 21:33	TL	1414499
Bromomethane	ND	0.9	1.0	1		11/29/02 21:33	TL	1414499
Carbon disulfide	ND	0.42	5.0	1		11/29/02 21:33	TL	1414499
Carbon tetrachloride	ND	0.42	1.0	1		11/29/02 21:33	TL	1414499
Chlorobenzene	ND	0.44	1.0	1		11/29/02 21:33	TL	1414499
Chloroethane	ND	0.76	1.0	1		11/29/02 21:33	TL	1414499
Chloroform	ND	0.39	1.0	1		11/29/02 21:33	TL	1414499
Chloromethane	ND	0.7	1.0	1		11/29/02 21:33	TL	1414499
Dibromochloromethane	ND	0.65	1.0	1		11/29/02 21:33	TL	1414499
Dibromomethane	ND	0.88	1.0	1		11/29/02 21:33	TL	1414499
Dichlorodifluoromethane	ND	0.46	1.0	1		11/29/02 21:33	TL	1414499
Ethyl Ether	ND	1.5	20	1		11/29/02 21:33	TL	1414499
Ethylbenzene	ND	0.34	1.0	1		11/29/02 21:33	TL	1414499
Iodomethane	ND	0.49	10	1		11/29/02 21:33	TL	1414499
Isopropylbenzene	ND	0.61	5.0	1		11/29/02 21:33	TL	1414499
Methylene chloride	ND	0.94	5.0	1		11/29/02 21:33	TL	1414499
n-Propylbenzene	ND	0.44	5.0	1		11/29/02 21:33	TL	1414499

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-138

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-01

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		11/29/02 21:33	TL	1414499
Styrene	ND	0.31	1.0	1		11/29/02 21:33	TL	1414499
Tetrachloroethene	ND	1	1.0	1		11/29/02 21:33	TL	1414499
Toluene	ND	0.54	1.0	1		11/29/02 21:33	TL	1414499
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		11/29/02 21:33	TL	1414499
Trichloroethene	ND	0.71	1.0	1		11/29/02 21:33	TL	1414499
Vinyl chloride	ND	0.75	1.0	1		11/29/02 21:33	TL	1414499
cis-1,2-Dichloroethene	ND	0.56	1.0	1		11/29/02 21:33	TL	1414499
cis-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 21:33	TL	1414499
trans-1,2-Dichloroethene	ND	0.62	1.0	1		11/29/02 21:33	TL	1414499
trans-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 21:33	TL	1414499
Xylenes, Total	ND	0.42	3.0	1		11/29/02 21:33	TL	1414499
Surr: 1,2-Dichloroethane-d4	100	0	% 62-130	1		11/29/02 21:33	TL	1414499
Surr: 4-Bromofluorobenzene	86.0	0	% 70-130	1		11/29/02 21:33	TL	1414499
Surr: Toluene-d8	104	0	% 74-122	1		11/29/02 21:33	TL	1414499

Qualifiers:

ND/U - Not Detected at the Reporting Limit

>MCL - Result Over Maximum Contamination Limit(MCL)

B - Analyte detected in the associated Method Blank

D - Surrogate Recovery Unreportable due to Dilution

* - Surrogate Recovery Outside Advisable QC Limits

MI - Matrix Interference

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-138 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-01

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND				MCL	E410.1	Units: mg/L		
Chemical Oxygen Demand	ND	2.1	3.0	1		12/07/02 14:35	CV	1422386
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L		
Chloride	162	3.3	5	5		12/09/02 11:45	CV	1423388

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-139 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-02

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				MCL	OK_DRO	Units: mg/L		
Diesel Range Organics	ND	0.15	0.1	1		12/03/02 16:43	AR	1421976
Surr: n-Pentacosane	68.6	0	% 20-131	1		12/03/02 16:43	AR	1421976

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-139

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-02

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS				MCL	OK_GRO	Units: ug/L		
Gasoline Range Organics	ND	0.019	20	1		12/07/02 8:30	D_R	1420330
Surr: 1,4-Difluorobenzene	99.8	0	% 62-144	1		12/07/02 8:30	D_R	1420330
Surr: 4-Bromofluorobenzene	97.4	0	% 44-153	1		12/07/02 8:30	D_R	1420330

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-139 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-02

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 22:00	TL	1414501
1,1,1-Trichloroethane	ND	0.43	1.0	1		11/29/02 22:00	TL	1414501
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 22:00	TL	1414501
1,1,2-Trichloroethane	ND	0.84	1.0	1		11/29/02 22:00	TL	1414501
1,1-Dichloroethane	ND	0.6	1.0	1		11/29/02 22:00	TL	1414501
1,1-Dichloroethene	ND	0.51	1.0	1		11/29/02 22:00	TL	1414501
1,2,3-Trichloropropane	ND	0.87	1.0	1		11/29/02 22:00	TL	1414501
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		11/29/02 22:00	TL	1414501
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		11/29/02 22:00	TL	1414501
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		11/29/02 22:00	TL	1414501
1,2-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 22:00	TL	1414501
1,2-Dichloroethane	ND	0.38	1.0	1		11/29/02 22:00	TL	1414501
1,2-Dichloropropane	ND	0.7	1.0	1		11/29/02 22:00	TL	1414501
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		11/29/02 22:00	TL	1414501
1,3-Dichlorobenzene	ND	0.31	1.0	1		11/29/02 22:00	TL	1414501
1,4-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 22:00	TL	1414501
2-Butanone	ND	3.1	25	1		11/29/02 22:00	TL	1414501
2-Hexanone	ND	0.7	50	1		11/29/02 22:00	TL	1414501
4-Methyl-2-pentanone	ND	0.53	50	1		11/29/02 22:00	TL	1414501
Acetone	ND	16	25	1		11/29/02 22:00	TL	1414501
Benzene	ND	0.25	1.0	1		11/29/02 22:00	TL	1414501
Bromochloromethane	ND	0.54	1.0	1		11/29/02 22:00	TL	1414501
Bromodichloromethane	ND	0.31	1.0	1		11/29/02 22:00	TL	1414501
Bromoform	ND	0.56	1.0	1		11/29/02 22:00	TL	1414501
Bromomethane	ND	0.9	1.0	1		11/29/02 22:00	TL	1414501
Carbon disulfide	ND	0.42	5.0	1		11/29/02 22:00	TL	1414501
Carbon tetrachloride	ND	0.42	1.0	1		11/29/02 22:00	TL	1414501
Chlorobenzene	ND	0.44	1.0	1		11/29/02 22:00	TL	1414501
Chloroethane	ND	0.76	1.0	1		11/29/02 22:00	TL	1414501
Chloroform	ND	0.39	1.0	1		11/29/02 22:00	TL	1414501
Chloromethane	ND	0.7	1.0	1		11/29/02 22:00	TL	1414501
Dibromochloromethane	ND	0.65	1.0	1		11/29/02 22:00	TL	1414501
Dibromomethane	ND	0.88	1.0	1		11/29/02 22:00	TL	1414501
Dichlorodifluoromethane	ND	0.46	1.0	1		11/29/02 22:00	TL	1414501
Ethyl Ether	ND	1.5	20	1		11/29/02 22:00	TL	1414501
Ethylbenzene	ND	0.34	1.0	1		11/29/02 22:00	TL	1414501
Iodomethane	ND	0.49	10	1		11/29/02 22:00	TL	1414501
Isopropylbenzene	ND	0.61	5.0	1		11/29/02 22:00	TL	1414501
Methylene chloride	ND	0.94	5.0	1		11/29/02 22:00	TL	1414501
n-Propylbenzene	ND	0.44	5.0	1		11/29/02 22:00	TL	1414501

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-139

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-02

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		11/29/02 22:00	TL	1414501
Styrene	ND	0.31	1.0	1		11/29/02 22:00	TL	1414501
Tetrachloroethene	ND	1	1.0	1		11/29/02 22:00	TL	1414501
Toluene	ND	0.54	1.0	1		11/29/02 22:00	TL	1414501
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		11/29/02 22:00	TL	1414501
Trichloroethene	ND	0.71	1.0	1		11/29/02 22:00	TL	1414501
Vinyl chloride	ND	0.75	1.0	1		11/29/02 22:00	TL	1414501
cis-1,2-Dichloroethene	ND	0.56	1.0	1		11/29/02 22:00	TL	1414501
cis-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 22:00	TL	1414501
trans-1,2-Dichloroethene	ND	0.62	1.0	1		11/29/02 22:00	TL	1414501
trans-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 22:00	TL	1414501
Xylenes, Total	ND	0.42	3.0	1		11/29/02 22:00	TL	1414501
Surr: 1,2-Dichloroethane-d4	106	0	% 62-130	1		11/29/02 22:00	TL	1414501
Surr: 4-Bromofluorobenzene	90.0	0	% 70-130	1		11/29/02 22:00	TL	1414501
Surr: Toluene-d8	106	0	% 74-122	1		11/29/02 22:00	TL	1414501

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-139

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-02

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND				MCL	E410.1	Units: mg/L		
Chemical Oxygen Demand	ND	2.1	3.0	1		12/07/02 14:35	CV	1422390
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L		
Chloride	151	1.3	2	2		12/09/02 11:45	CV	1423392

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-140

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-03

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				MCL	OK_DRO	Units: mg/L		
Diesel Range Organics	0.47	0.15	0.1	1		12/03/02 17:22	AR	1421977
Surr: n-Pentacosane	75.4	0	% 20-131	1		12/03/02 17:22	AR	1421977

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-140 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-03

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS				MCL	OK_GRO	Units: ug/L		
Gasoline Range Organics	350	0.019	20	1		12/07/02 8:58	D_R	1420331
Surr: 1,4-Difluorobenzene	100	0	% 62-144	1		12/07/02 8:58	D_R	1420331
Surr: 4-Bromofluorobenzene	106	0	% 44-153	1		12/07/02 8:58	D_R	1420331

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-140

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-03

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		11/30/02 22:15	TL	1414646
1,1,1-Trichloroethane	ND	0.43	1.0	1		11/30/02 22:15	TL	1414646
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		11/30/02 22:15	TL	1414646
1,1,2-Trichloroethane	ND	0.84	1.0	1		11/30/02 22:15	TL	1414646
1,1-Dichloroethane	ND	0.6	1.0	1		11/30/02 22:15	TL	1414646
1,1-Dichloroethene	ND	0.51	1.0	1		11/30/02 22:15	TL	1414646
1,2,3-Trichloropropane	ND	0.87	1.0	1		11/30/02 22:15	TL	1414646
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		11/30/02 22:15	TL	1414646
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		11/30/02 22:15	TL	1414646
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		11/30/02 22:15	TL	1414646
1,2-Dichlorobenzene	ND	0.56	1.0	1		11/30/02 22:15	TL	1414646
1,2-Dichloroethane	ND	0.38	1.0	1		11/30/02 22:15	TL	1414646
1,2-Dichloropropane	ND	0.7	1.0	1		11/30/02 22:15	TL	1414646
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		11/30/02 22:15	TL	1414646
1,3-Dichlorobenzene	ND	0.31	1.0	1		11/30/02 22:15	TL	1414646
1,4-Dichlorobenzene	ND	0.56	1.0	1		11/30/02 22:15	TL	1414646
2-Butanone	ND	3.1	25	1		11/30/02 22:15	TL	1414646
2-Hexanone	ND	0.7	50	1		11/30/02 22:15	TL	1414646
4-Methyl-2-pentanone	ND	0.53	50	1		11/30/02 22:15	TL	1414646
Acetone	ND	16	25	1		11/30/02 22:15	TL	1414646
Benzene	ND	0.25	1.0	1		11/30/02 22:15	TL	1414646
Bromochloromethane	ND	0.54	1.0	1		11/30/02 22:15	TL	1414646
Bromodichloromethane	ND	0.31	1.0	1		11/30/02 22:15	TL	1414646
Bromoform	ND	0.56	1.0	1		11/30/02 22:15	TL	1414646
Bromomethane	ND	0.9	1.0	1		11/30/02 22:15	TL	1414646
Carbon disulfide	ND	0.42	5.0	1		11/30/02 22:15	TL	1414646
Carbon tetrachloride	ND	0.42	1.0	1		11/30/02 22:15	TL	1414646
Chlorobenzene	ND	0.44	1.0	1		11/30/02 22:15	TL	1414646
Chloroethane	ND	0.76	1.0	1		11/30/02 22:15	TL	1414646
Chloroform	ND	0.39	1.0	1		11/30/02 22:15	TL	1414646
Chloromethane	ND	0.7	1.0	1		11/30/02 22:15	TL	1414646
Dibromochloromethane	ND	0.65	1.0	1		11/30/02 22:15	TL	1414646
Dibromomethane	ND	0.88	1.0	1		11/30/02 22:15	TL	1414646
Dichlorodifluoromethane	ND	0.46	1.0	1		11/30/02 22:15	TL	1414646
Ethyl Ether	ND	1.5	20	1		11/30/02 22:15	TL	1414646
Ethylbenzene	ND	0.34	1.0	1		11/30/02 22:15	TL	1414646
Iodomethane	ND	0.49	10	1		11/30/02 22:15	TL	1414646
Isopropylbenzene	ND	0.61	5.0	1		11/30/02 22:15	TL	1414646
Methylene chloride	ND	0.94	5.0	1		11/30/02 22:15	TL	1414646
n-Propylbenzene	ND	0.44	5.0	1		11/30/02 22:15	TL	1414646

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-140

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-03

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		11/30/02 22:15	TL	1414646
Styrene	ND	0.31	1.0	1		11/30/02 22:15	TL	1414646
Tetrachloroethene	ND	1	1.0	1		11/30/02 22:15	TL	1414646
Toluene	ND	0.54	1.0	1		11/30/02 22:15	TL	1414646
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		11/30/02 22:15	TL	1414646
Trichloroethene	560	7.1	10	10		12/02/02 21:49	TL	1416574
Vinyl chloride	32	0.75	1.0	1		11/30/02 22:15	TL	1414646
cis-1,2-Dichloroethene	480	5.6	10	10		12/02/02 21:49	TL	1416574
cis-1,3-Dichloropropene	ND	0.48	1.0	1		11/30/02 22:15	TL	1414646
trans-1,2-Dichloroethene	ND	0.62	1.0	1		11/30/02 22:15	TL	1414646
trans-1,3-Dichloropropene	ND	0.48	1.0	1		11/30/02 22:15	TL	1414646
Xylenes, Total	ND	0.42	3.0	1		11/30/02 22:15	TL	1414646
Surr: 1,2-Dichloroethane-d4	108	0	% 62-130	1		11/30/02 22:15	TL	1414646
Surr: 1,2-Dichloroethane-d4	108	0	% 62-130	10		12/02/02 21:49	TL	1416574
Surr: 4-Bromofluorobenzene	90.0	0	% 70-130	1		11/30/02 22:15	TL	1414646
Surr: 4-Bromofluorobenzene	88.0	0	% 70-130	10		12/02/02 21:49	TL	1416574
Surr: Toluene-d8	108	0	% 74-122	10		12/02/02 21:49	TL	1416574
Surr: Toluene-d8	106	0	% 74-122	1		11/30/02 22:15	TL	1414646

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-140

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-03

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND				MCL	E410.1	Units: mg/L		
Chemical Oxygen Demand	55	2.1	3.0	1		12/07/02 14:35	CV	1422391
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L		
Chloride	359	3.3	5	5		12/09/02 11:45	CV	1423393

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-141 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-04

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	OK_DRO	Units: mg/L			
Diesel Range Organics	ND	0.15	0.1	1		12/03/02 18:01	AR	1421978
Surr: n-Pentacosane	76.8	0	% 20-131	1		12/03/02 18:01	AR	1421978

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-141 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-04

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			MCL	OK_GRO	Units: ug/L			
Gasoline Range Organics	140	0.019	20	1		12/07/02 11:04	D_R	1420332
Surr: 1,4-Difluorobenzene	100	0	% 62-144	1		12/07/02 11:04	D_R	1420332
Surr: 4-Bromofluorobenzene	99.6	0	% 44-153	1		12/07/02 11:04	D_R	1420332

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-141

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-04

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		11/30/02 21:48	TL	1414645
1,1,1-Trichloroethane	ND	0.43	1.0	1		11/30/02 21:48	TL	1414645
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		11/30/02 21:48	TL	1414645
1,1,2-Trichloroethane	ND	0.84	1.0	1		11/30/02 21:48	TL	1414645
1,1-Dichloroethane	ND	0.6	1.0	1		11/30/02 21:48	TL	1414645
1,1-Dichloroethene	ND	0.51	1.0	1		11/30/02 21:48	TL	1414645
1,2,3-Trichloropropane	ND	0.87	1.0	1		11/30/02 21:48	TL	1414645
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		11/30/02 21:48	TL	1414645
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		11/30/02 21:48	TL	1414645
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		11/30/02 21:48	TL	1414645
1,2-Dichlorobenzene	ND	0.56	1.0	1		11/30/02 21:48	TL	1414645
1,2-Dichloroethane	ND	0.38	1.0	1		11/30/02 21:48	TL	1414645
1,2-Dichloropropane	ND	0.7	1.0	1		11/30/02 21:48	TL	1414645
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		11/30/02 21:48	TL	1414645
1,3-Dichlorobenzene	ND	0.31	1.0	1		11/30/02 21:48	TL	1414645
1,4-Dichlorobenzene	ND	0.56	1.0	1		11/30/02 21:48	TL	1414645
2-Butanone	ND	3.1	25	1		11/30/02 21:48	TL	1414645
2-Hexanone	ND	0.7	50	1		11/30/02 21:48	TL	1414645
4-Methyl-2-pentanone	ND	0.53	50	1		11/30/02 21:48	TL	1414645
Acetone	ND	16	25	1		11/30/02 21:48	TL	1414645
Benzene	ND	0.25	1.0	1		11/30/02 21:48	TL	1414645
Bromochloromethane	ND	0.54	1.0	1		11/30/02 21:48	TL	1414645
Bromodichloromethane	ND	0.31	1.0	1		11/30/02 21:48	TL	1414645
Bromoform	ND	0.56	1.0	1		11/30/02 21:48	TL	1414645
Bromomethane	ND	0.9	1.0	1		11/30/02 21:48	TL	1414645
Carbon disulfide	ND	0.42	5.0	1		11/30/02 21:48	TL	1414645
Carbon tetrachloride	ND	0.42	1.0	1		11/30/02 21:48	TL	1414645
Chlorobenzene	ND	0.44	1.0	1		11/30/02 21:48	TL	1414645
Chloroethane	ND	0.76	1.0	1		11/30/02 21:48	TL	1414645
Chloroform	ND	0.39	1.0	1		11/30/02 21:48	TL	1414645
Chloromethane	ND	0.7	1.0	1		11/30/02 21:48	TL	1414645
Dibromochloromethane	ND	0.65	1.0	1		11/30/02 21:48	TL	1414645
Dibromomethane	ND	0.88	1.0	1		11/30/02 21:48	TL	1414645
Dichlorodifluoromethane	ND	0.46	1.0	1		11/30/02 21:48	TL	1414645
Ethyl Ether	ND	1.5	20	1		11/30/02 21:48	TL	1414645
Ethylbenzene	ND	0.34	1.0	1		11/30/02 21:48	TL	1414645
Iodomethane	ND	0.49	10	1		11/30/02 21:48	TL	1414645
Isopropylbenzene	ND	0.61	5.0	1		11/30/02 21:48	TL	1414645
Methylene chloride	ND	0.94	5.0	1		11/30/02 21:48	TL	1414645
n-Propylbenzene	ND	0.44	5.0	1		11/30/02 21:48	TL	1414645

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-141

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-04

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		11/30/02 21:48	TL	1414645
Styrene	ND	0.31	1.0	1		11/30/02 21:48	TL	1414645
Tetrachloroethene	ND	1	1.0	1		11/30/02 21:48	TL	1414645
Toluene	ND	0.54	1.0	1		11/30/02 21:48	TL	1414645
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		11/30/02 21:48	TL	1414645
Trichloroethene	140	0.71	1.0	1		11/30/02 21:48	TL	1414645
Vinyl chloride	ND	0.75	1.0	1		11/30/02 21:48	TL	1414645
cis-1,2-Dichloroethene	14	0.56	1.0	1		11/30/02 21:48	TL	1414645
cis-1,3-Dichloropropene	ND	0.48	1.0	1		11/30/02 21:48	TL	1414645
trans-1,2-Dichloroethene	ND	0.62	1.0	1		11/30/02 21:48	TL	1414645
trans-1,3-Dichloropropene	ND	0.48	1.0	1		11/30/02 21:48	TL	1414645
Xylenes, Total	ND	0.42	3.0	1		11/30/02 21:48	TL	1414645
Surr: 1,2-Dichloroethane-d4	112	0	% 62-130	1		11/30/02 21:48	TL	1414645
Surr: 4-Bromofluorobenzene	88.0	0	% 70-130	1		11/30/02 21:48	TL	1414645
Surr: Toluene-d8	106	0	% 74-122	1		11/30/02 21:48	TL	1414645

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-141 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-04

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND				MCL	E410.1	Units: mg/L		
Chemical Oxygen Demand	5	2.1	3.0	1		12/07/02 14:35	CV	1422392
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L		
Chloride	280	3.3	5	5		12/09/02 11:45	CV	1423394

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-137 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-05

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	OK_DRO	Units: mg/L			
Diesel Range Organics	ND	0.15	0.1	1		12/03/02 18:40	AR	1421979
Surr: n-Pentacosane	61.4	0	% 20-131	1		12/03/02 18:40	AR	1421979

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-137

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-05

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS				MCL	OK_GRO	Units: ug/L		
Gasoline Range Organics	ND	0.019	20	1		12/07/02 11:32	D_R	1420343
Surr: 1,4-Difluorobenzene	97.6	0	% 62-144	1		12/07/02 11:32	D_R	1420343
Surr: 4-Bromofluorobenzene	105	0	% 44-153	1		12/07/02 11:32	D_R	1420343

Qualifiers:

ND/U - Not Detected at the Reporting Limit

>MCL - Result Over Maximum Contamination Limit(MCL)

B - Analyte detected in the associated Method Blank

D - Surrogate Recovery Unreportable due to Dilution

* - Surrogate Recovery Outside Advisable QC Limits

MI - Matrix Interference

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-137

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-05

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		11/30/02 21:21	TL	1414644
1,1,1-Trichloroethane	ND	0.43	1.0	1		11/30/02 21:21	TL	1414644
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		11/30/02 21:21	TL	1414644
1,1,2-Trichloroethane	ND	0.84	1.0	1		11/30/02 21:21	TL	1414644
1,1-Dichloroethane	ND	0.6	1.0	1		11/30/02 21:21	TL	1414644
1,1-Dichloroethene	ND	0.51	1.0	1		11/30/02 21:21	TL	1414644
1,2,3-Trichloropropane	ND	0.87	1.0	1		11/30/02 21:21	TL	1414644
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		11/30/02 21:21	TL	1414644
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		11/30/02 21:21	TL	1414644
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		11/30/02 21:21	TL	1414644
1,2-Dichlorobenzene	ND	0.56	1.0	1		11/30/02 21:21	TL	1414644
1,2-Dichloroethane	ND	0.38	1.0	1		11/30/02 21:21	TL	1414644
1,2-Dichloropropane	ND	0.7	1.0	1		11/30/02 21:21	TL	1414644
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		11/30/02 21:21	TL	1414644
1,3-Dichlorobenzene	ND	0.31	1.0	1		11/30/02 21:21	TL	1414644
1,4-Dichlorobenzene	ND	0.56	1.0	1		11/30/02 21:21	TL	1414644
2-Butanone	ND	3.1	25	1		11/30/02 21:21	TL	1414644
2-Hexanone	ND	0.7	50	1		11/30/02 21:21	TL	1414644
4-Methyl-2-pentanone	ND	0.53	50	1		11/30/02 21:21	TL	1414644
Acetone	ND	16	25	1		11/30/02 21:21	TL	1414644
Benzene	ND	0.25	1.0	1		11/30/02 21:21	TL	1414644
Bromochloromethane	ND	0.54	1.0	1		11/30/02 21:21	TL	1414644
Bromodichloromethane	ND	0.31	1.0	1		11/30/02 21:21	TL	1414644
Bromoform	ND	0.56	1.0	1		11/30/02 21:21	TL	1414644
Bromomethane	ND	0.9	1.0	1		11/30/02 21:21	TL	1414644
Carbon disulfide	ND	0.42	5.0	1		11/30/02 21:21	TL	1414644
Carbon tetrachloride	ND	0.42	1.0	1		11/30/02 21:21	TL	1414644
Chlorobenzene	ND	0.44	1.0	1		11/30/02 21:21	TL	1414644
Chloroethane	ND	0.76	1.0	1		11/30/02 21:21	TL	1414644
Chloroform	ND	0.39	1.0	1		11/30/02 21:21	TL	1414644
Chloromethane	ND	0.7	1.0	1		11/30/02 21:21	TL	1414644
Dibromochloromethane	ND	0.65	1.0	1		11/30/02 21:21	TL	1414644
Dibromomethane	ND	0.88	1.0	1		11/30/02 21:21	TL	1414644
Dichlorodifluoromethane	ND	0.46	1.0	1		11/30/02 21:21	TL	1414644
Ethyl Ether	ND	1.5	20	1		11/30/02 21:21	TL	1414644
Ethylbenzene	ND	0.34	1.0	1		11/30/02 21:21	TL	1414644
Iodomethane	ND	0.49	10	1		11/30/02 21:21	TL	1414644
Isopropylbenzene	ND	0.61	5.0	1		11/30/02 21:21	TL	1414644
Methylene chloride	ND	0.94	5.0	1		11/30/02 21:21	TL	1414644
n-Propylbenzene	ND	0.44	5.0	1		11/30/02 21:21	TL	1414644

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-137

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-05

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		11/30/02 21:21	TL	1414644
Styrene	ND	0.31	1.0	1		11/30/02 21:21	TL	1414644
Tetrachloroethene	ND	1	1.0	1		11/30/02 21:21	TL	1414644
Toluene	ND	0.54	1.0	1		11/30/02 21:21	TL	1414644
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		11/30/02 21:21	TL	1414644
Trichloroethene	ND	0.71	1.0	1		11/30/02 21:21	TL	1414644
Vinyl chloride	ND	0.75	1.0	1		11/30/02 21:21	TL	1414644
cis-1,2-Dichloroethene	ND	0.56	1.0	1		11/30/02 21:21	TL	1414644
cis-1,3-Dichloropropene	ND	0.48	1.0	1		11/30/02 21:21	TL	1414644
trans-1,2-Dichloroethene	ND	0.62	1.0	1		11/30/02 21:21	TL	1414644
trans-1,3-Dichloropropene	ND	0.48	1.0	1		11/30/02 21:21	TL	1414644
Xylenes, Total	ND	0.42	3.0	1		11/30/02 21:21	TL	1414644
Surr: 1,2-Dichloroethane-d4	112	0	% 62-130	1		11/30/02 21:21	TL	1414644
Surr: 4-Bromofluorobenzene	88.0	0	% 70-130	1		11/30/02 21:21	TL	1414644
Surr: Toluene-d8	104	0	% 74-122	1		11/30/02 21:21	TL	1414644

Qualifiers:

ND/U - Not Detected at the Reporting Limit

>MCL - Result Over Maximum Contamination Limit(MCL)

B - Analyte detected in the associated Method Blank

D - Surrogate Recovery Unreportable due to Dilution

* - Surrogate Recovery Outside Advisable QC Limits

MI - Matrix Interference

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

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12/11/2002 2:06:30 PM



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-137 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-05

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND				MCL	E410.1	Units: mg/L		
Chemical Oxygen Demand	ND	2.1	3.0	1		12/07/02 14:35	CV	1422393
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L		
Chloride	186	1.3	2	2		12/09/02 11:45	CV	1423396

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID TB-17303-112502-MM-146

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-06

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		11/30/02 17:47	TL	1414636
1,1,1-Trichloroethane	ND	0.43	1.0	1		11/30/02 17:47	TL	1414636
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		11/30/02 17:47	TL	1414636
1,1,2-Trichloroethane	ND	0.84	1.0	1		11/30/02 17:47	TL	1414636
1,1-Dichloroethane	ND	0.6	1.0	1		11/30/02 17:47	TL	1414636
1,1-Dichloroethene	ND	0.51	1.0	1		11/30/02 17:47	TL	1414636
1,2,3-Trichloropropane	ND	0.87	1.0	1		11/30/02 17:47	TL	1414636
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		11/30/02 17:47	TL	1414636
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		11/30/02 17:47	TL	1414636
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		11/30/02 17:47	TL	1414636
1,2-Dichlorobenzene	ND	0.56	1.0	1		11/30/02 17:47	TL	1414636
1,2-Dichloroethane	ND	0.38	1.0	1		11/30/02 17:47	TL	1414636
1,2-Dichloropropane	ND	0.7	1.0	1		11/30/02 17:47	TL	1414636
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		11/30/02 17:47	TL	1414636
1,3-Dichlorobenzene	ND	0.31	1.0	1		11/30/02 17:47	TL	1414636
1,4-Dichlorobenzene	ND	0.56	1.0	1		11/30/02 17:47	TL	1414636
2-Butanone	ND	3.1	25	1		11/30/02 17:47	TL	1414636
2-Hexanone	ND	0.7	50	1		11/30/02 17:47	TL	1414636
4-Methyl-2-pentanone	ND	0.53	50	1		11/30/02 17:47	TL	1414636
Acetone	ND	16	25	1		11/30/02 17:47	TL	1414636
Benzene	ND	0.25	1.0	1		11/30/02 17:47	TL	1414636
Bromochloromethane	ND	0.54	1.0	1		11/30/02 17:47	TL	1414636
Bromodichloromethane	ND	0.31	1.0	1		11/30/02 17:47	TL	1414636
Bromoform	ND	0.56	1.0	1		11/30/02 17:47	TL	1414636
Bromomethane	ND	0.9	1.0	1		11/30/02 17:47	TL	1414636
Carbon disulfide	ND	0.42	5.0	1		11/30/02 17:47	TL	1414636
Carbon tetrachloride	ND	0.42	1.0	1		11/30/02 17:47	TL	1414636
Chlorobenzene	ND	0.44	1.0	1		11/30/02 17:47	TL	1414636
Chloroethane	ND	0.76	1.0	1		11/30/02 17:47	TL	1414636
Chloroform	ND	0.39	1.0	1		11/30/02 17:47	TL	1414636
Chloromethane	ND	0.7	1.0	1		11/30/02 17:47	TL	1414636
Dibromochloromethane	ND	0.65	1.0	1		11/30/02 17:47	TL	1414636
Dibromomethane	ND	0.88	1.0	1		11/30/02 17:47	TL	1414636
Dichlorodifluoromethane	ND	0.46	1.0	1		11/30/02 17:47	TL	1414636
Ethyl Ether	ND	1.5	20	1		11/30/02 17:47	TL	1414636
Ethylbenzene	ND	0.34	1.0	1		11/30/02 17:47	TL	1414636
Iodomethane	ND	0.49	10	1		11/30/02 17:47	TL	1414636
Isopropylbenzene	ND	0.61	5.0	1		11/30/02 17:47	TL	1414636
Methylene chloride	ND	0.94	5.0	1		11/30/02 17:47	TL	1414636
n-Propylbenzene	ND	0.44	5.0	1		11/30/02 17:47	TL	1414636

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID TB-17303-112502-MM-146

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-06

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		11/30/02 17:47	TL	1414636
Styrene	ND	0.31	1.0	1		11/30/02 17:47	TL	1414636
Tetrachloroethene	ND	1	1.0	1		11/30/02 17:47	TL	1414636
Toluene	ND	0.54	1.0	1		11/30/02 17:47	TL	1414636
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		11/30/02 17:47	TL	1414636
Trichloroethene	ND	0.71	1.0	1		11/30/02 17:47	TL	1414636
Vinyl chloride	ND	0.75	1.0	1		11/30/02 17:47	TL	1414636
cis-1,2-Dichloroethene	ND	0.56	1.0	1		11/30/02 17:47	TL	1414636
cis-1,3-Dichloropropene	ND	0.48	1.0	1		11/30/02 17:47	TL	1414636
trans-1,2-Dichloroethene	ND	0.62	1.0	1		11/30/02 17:47	TL	1414636
trans-1,3-Dichloropropene	ND	0.48	1.0	1		11/30/02 17:47	TL	1414636
Xylenes, Total	ND	0.42	3.0	1		11/30/02 17:47	TL	1414636
Surr: 1,2-Dichloroethane-d4	106	0	% 62-130	1		11/30/02 17:47	TL	1414636
Surr: 4-Bromofluorobenzene	90.0	0	% 70-130	1		11/30/02 17:47	TL	1414636
Surr: Toluene-d8	104	0	% 74-122	1		11/30/02 17:47	TL	1414636

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-142 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-07

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	OK_DRO	Units: mg/L			
Diesel Range Organics	0.2	0.15	0.1	1		12/03/02 19:19	AR	1421980
Surr: n-Pentacosane	80.8	0	% 20-131	1		12/03/02 19:19	AR	1421980

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-142

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-07

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS								
				MCL	OK_GRO	Units: ug/L		
Gasoline Range Organics	480	0.019	20	1		12/07/02 17:07	D_R	1420356
Surr: 1,4-Difluorobenzene	100	0	% 62-144	1		12/07/02 17:07	D_R	1420356
Surr: 4-Bromofluorobenzene	106	0	% 44-153	1		12/07/02 17:07	D_R	1420356

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



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8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-142

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-07

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		12/04/02 3:24	TL	1416772
1,1,1-Trichloroethane	ND	0.43	1.0	1		12/04/02 3:24	TL	1416772
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		12/04/02 3:24	TL	1416772
1,1,2-Trichloroethane	ND	0.84	1.0	1		12/04/02 3:24	TL	1416772
1,1-Dichloroethane	ND	0.6	1.0	1		12/04/02 3:24	TL	1416772
1,1-Dichloroethene	ND	0.51	1.0	1		12/04/02 3:24	TL	1416772
1,2,3-Trichloropropane	ND	0.87	1.0	1		12/04/02 3:24	TL	1416772
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		12/04/02 3:24	TL	1416772
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		12/04/02 3:24	TL	1416772
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		12/04/02 3:24	TL	1416772
1,2-Dichlorobenzene	ND	0.56	1.0	1		12/04/02 3:24	TL	1416772
1,2-Dichloroethane	ND	0.38	1.0	1		12/04/02 3:24	TL	1416772
1,2-Dichloropropane	ND	0.7	1.0	1		12/04/02 3:24	TL	1416772
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		12/04/02 3:24	TL	1416772
1,3-Dichlorobenzene	ND	0.31	1.0	1		12/04/02 3:24	TL	1416772
1,4-Dichlorobenzene	ND	0.56	1.0	1		12/04/02 3:24	TL	1416772
2-Butanone	ND	3.1	25	1		12/04/02 3:24	TL	1416772
2-Hexanone	ND	0.7	50	1		12/04/02 3:24	TL	1416772
4-Methyl-2-pentanone	ND	0.53	50	1		12/04/02 3:24	TL	1416772
Acetone	ND	16	25	1		12/04/02 3:24	TL	1416772
Benzene	ND	0.25	1.0	1		12/04/02 3:24	TL	1416772
Bromochloromethane	ND	0.54	1.0	1		12/04/02 3:24	TL	1416772
Bromodichloromethane	ND	0.31	1.0	1		12/04/02 3:24	TL	1416772
Bromoform	ND	0.56	1.0	1		12/04/02 3:24	TL	1416772
Bromomethane	ND	0.9	1.0	1		12/04/02 3:24	TL	1416772
Carbon disulfide	ND	0.42	5.0	1		12/04/02 3:24	TL	1416772
Carbon tetrachloride	ND	0.42	1.0	1		12/04/02 3:24	TL	1416772
Chlorobenzene	ND	0.44	1.0	1		12/04/02 3:24	TL	1416772
Chloroethane	ND	0.76	1.0	1		12/04/02 3:24	TL	1416772
Chloroform	2	0.39	1.0	1		12/04/02 3:24	TL	1416772
Chloromethane	ND	0.7	1.0	1		12/04/02 3:24	TL	1416772
Dibromochloromethane	ND	0.65	1.0	1		12/04/02 3:24	TL	1416772
Dibromomethane	ND	0.88	1.0	1		12/04/02 3:24	TL	1416772
Dichlorodifluoromethane	ND	0.46	1.0	1		12/04/02 3:24	TL	1416772
Ethyl Ether	ND	1.5	20	1		12/04/02 3:24	TL	1416772
Ethylbenzene	ND	0.34	1.0	1		12/04/02 3:24	TL	1416772
Iodomethane	ND	0.49	10	1		12/04/02 3:24	TL	1416772
Isopropylbenzene	ND	0.61	5.0	1		12/04/02 3:24	TL	1416772
Methylene chloride	ND	0.94	5.0	1		12/04/02 3:24	TL	1416772
n-Propylbenzene	ND	0.44	5.0	1		12/04/02 3:24	TL	1416772

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-142

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-07

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		12/04/02 3:24	TL	1416772
Styrene	ND	0.31	1.0	1		12/04/02 3:24	TL	1416772
Tetrachloroethene	ND	1	1.0	1		12/04/02 3:24	TL	1416772
Toluene	1	0.54	1.0	1		12/04/02 3:24	TL	1416772
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		12/04/02 3:24	TL	1416772
Trichloroethene	1400	36	50	50		12/03/02 22:28	TL	1416760
Vinyl chloride	86	0.75	1.0	1		12/04/02 3:24	TL	1416772
cis-1,2-Dichloroethene	570	28	50	50		12/03/02 22:28	TL	1416760
cis-1,3-Dichloropropene	ND	0.48	1.0	1		12/04/02 3:24	TL	1416772
trans-1,2-Dichloroethene	27	0.62	1.0	1		12/04/02 3:24	TL	1416772
trans-1,3-Dichloropropene	ND	0.48	1.0	1		12/04/02 3:24	TL	1416772
Xylenes, Total	ND	0.42	3.0	1		12/04/02 3:24	TL	1416772
Surr: 1,2-Dichloroethane-d4	110	0	% 62-130	1		12/04/02 3:24	TL	1416772
Surr: 1,2-Dichloroethane-d4	112	0	% 62-130	50		12/03/02 22:28	TL	1416760
Surr: 4-Bromofluorobenzene	88.0	0	% 70-130	1		12/04/02 3:24	TL	1416772
Surr: 4-Bromofluorobenzene	88.0	0	% 70-130	50		12/03/02 22:28	TL	1416760
Surr: Toluene-d8	104	0	% 74-122	50		12/03/02 22:28	TL	1416760
Surr: Toluene-d8	108	0	% 74-122	1		12/04/02 3:24	TL	1416772

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-142 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-07

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND			MCL	E410.1	Units: mg/L			
Chemical Oxygen Demand	42.5	2.1	3.0	1		12/07/02 14:35	CV	1422395
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L			
Chloride	613	6.6	10	10		12/09/02 11:45	CV	1423397

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-143 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-08

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				MCL	OK_DRO	Units: mg/L		
Diesel Range Organics	0.26	0.15	0.1	1		12/03/02 22:33	AR	1421984
Surr: n-Pentacosane	81.4	0	% 20-131	1		12/03/02 22:33	AR	1421984

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-143 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-08

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			MCL	OK_GRO	Units: ug/L			
Gasoline Range Organics	4700	0.19	200	10		12/09/02 22:11	D_R	1422217
Surr: 1,4-Difluorobenzene	100	0	% 62-144	10		12/09/02 22:11	D_R	1422217
Surr: 4-Bromofluorobenzene	106	0	% 44-153	10		12/09/02 22:11	D_R	1422217

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-143

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-08

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		12/04/02 19:28	JC	1416939
1,1,1-Trichloroethane	ND	0.43	1.0	1		12/04/02 19:28	JC	1416939
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		12/04/02 19:28	JC	1416939
1,1,2-Trichloroethane	2	0.84	1.0	1		12/04/02 19:28	JC	1416939
1,1-Dichloroethane	ND	0.6	1.0	1		12/04/02 19:28	JC	1416939
1,1-Dichloroethene	18	0.51	1.0	1		12/04/02 19:28	JC	1416939
1,2,3-Trichloropropane	ND	0.87	1.0	1		12/04/02 19:28	JC	1416939
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		12/04/02 19:28	JC	1416939
1,2,4-Trimethylbenzene	1	0.28	1.0	1		12/04/02 19:28	JC	1416939
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		12/04/02 19:28	JC	1416939
1,2-Dichlorobenzene	ND	0.56	1.0	1		12/04/02 19:28	JC	1416939
1,2-Dichloroethane	12	0.38	1.0	1		12/04/02 19:28	JC	1416939
1,2-Dichloropropane	ND	0.7	1.0	1		12/04/02 19:28	JC	1416939
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		12/04/02 19:28	JC	1416939
1,3-Dichlorobenzene	ND	0.31	1.0	1		12/04/02 19:28	JC	1416939
1,4-Dichlorobenzene	ND	0.56	1.0	1		12/04/02 19:28	JC	1416939
2-Butanone	ND	3.1	25	1		12/04/02 19:28	JC	1416939
2-Hexanone	ND	0.7	50	1		12/04/02 19:28	JC	1416939
4-Methyl-2-pentanone	ND	0.53	50	1		12/04/02 19:28	JC	1416939
Acetone	ND	16	25	1		12/04/02 19:28	JC	1416939
Benzene	15	0.25	1.0	1		12/04/02 19:28	JC	1416939
Bromochloromethane	ND	0.54	1.0	1		12/04/02 19:28	JC	1416939
Bromodichloromethane	ND	0.31	1.0	1		12/04/02 19:28	JC	1416939
Bromoform	ND	0.56	1.0	1		12/04/02 19:28	JC	1416939
Bromomethane	ND	0.9	1.0	1		12/04/02 19:28	JC	1416939
Carbon disulfide	ND	0.42	5.0	1		12/04/02 19:28	JC	1416939
Carbon tetrachloride	ND	0.42	1.0	1		12/04/02 19:28	JC	1416939
Chlorobenzene	ND	0.44	1.0	1		12/04/02 19:28	JC	1416939
Chloroethane	ND	0.76	1.0	1		12/04/02 19:28	JC	1416939
Chloroform	5	0.39	1.0	1		12/04/02 19:28	JC	1416939
Chloromethane	ND	0.7	1.0	1		12/04/02 19:28	JC	1416939
Dibromochloromethane	ND	0.65	1.0	1		12/04/02 19:28	JC	1416939
Dibromomethane	ND	0.88	1.0	1		12/04/02 19:28	JC	1416939
Dichlorodifluoromethane	ND	0.46	1.0	1		12/04/02 19:28	JC	1416939
Ethyl Ether	ND	1.5	20	1		12/04/02 19:28	JC	1416939
Ethylbenzene	ND	0.34	1.0	1		12/04/02 19:28	JC	1416939
Iodomethane	ND	0.49	10	1		12/04/02 19:28	JC	1416939
Isopropylbenzene	ND	0.61	5.0	1		12/04/02 19:28	JC	1416939
Methylene chloride	ND	0.94	5.0	1		12/04/02 19:28	JC	1416939
n-Propylbenzene	ND	0.44	5.0	1		12/04/02 19:28	JC	1416939

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-143

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-08

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		12/04/02 19:28	JC	1416939
Styrene	ND	0.31	1.0	1		12/04/02 19:28	JC	1416939
Tetrachloroethene	ND	1	1.0	1		12/04/02 19:28	JC	1416939
Toluene	40	0.54	1.0	1		12/04/02 19:28	JC	1416939
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		12/04/02 19:28	JC	1416939
Trichloroethene	220	0.71	1.0	1	E	12/04/02 19:28	JC	1416939
Vinyl chloride	2800	380	500	500		12/03/02 23:49	TL	1416765
cis-1,2-Dichloroethene	13000	280	500	500		12/03/02 23:49	TL	1416765
cis-1,3-Dichloropropene	ND	0.48	1.0	1		12/04/02 19:28	JC	1416939
trans-1,2-Dichloroethene	360 J	310	500	500		12/03/02 23:49	TL	1416765
trans-1,3-Dichloropropene	ND	0.48	1.0	1		12/04/02 19:28	JC	1416939
Xylenes, Total	49	0.42	3.0	1		12/04/02 19:28	JC	1416939
Surr: 1,2-Dichloroethane-d4	92.0	0	% 62-130	1		12/04/02 19:28	JC	1416939
Surr: 1,2-Dichloroethane-d4	112	0	% 62-130	500		12/03/02 23:49	TL	1416765
Surr: 4-Bromofluorobenzene	94.0	0	% 70-130	1		12/04/02 19:28	JC	1416939
Surr: 4-Bromofluorobenzene	88.0	0	% 70-130	500		12/03/02 23:49	TL	1416765
Surr: Toluene-d8	104	0	% 74-122	500		12/03/02 23:49	TL	1416765
Surr: Toluene-d8	94.0	0	% 74-122	1		12/04/02 19:28	JC	1416939

Qualifiers:

ND/U - Not Detected at the Reporting Limit

>MCL - Result Over Maximum Contamination Limit(MCL)

B - Analyte detected in the associated Method Blank

D - Surrogate Recovery Unreportable due to Dilution

* - Surrogate Recovery Outside Advisable QC Limits

MI - Matrix Interference

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-143

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-08

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND				MCL	E410.1	Units: mg/L		
Chemical Oxygen Demand	47.5	2.1	3.0	1		12/07/02 14:35	CV	1422397
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L		
Chloride	788	6.6	10	10		12/09/02 11:45	CV	1423399

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-145

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-09

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				MCL	OK_DRO	Units: mg/L		
Diesel Range Organics	0.49	0.15	0.1	1		12/03/02 23:12	AR	1421985
Surr: n-Pentacosane	77.8	0	% 20-131	1		12/03/02 23:12	AR	1421985

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference

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12/11/2002 2:06:33 PM



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-145 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-09

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			MCL	OK_GRO	Units: ug/L			
Gasoline Range Organics	21000	0.48	500	25		12/07/02 12:00	D_R	1420346
Surr: 1,4-Difluorobenzene	100	0	% 62-144	25		12/07/02 12:00	D_R	1420346
Surr: 4-Bromofluorobenzene	110	0	% 44-153	25		12/07/02 12:00	D_R	1420346

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-145

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-09

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		11/30/02 22:42	TL	1414647
1,1,1-Trichloroethane	ND	0.43	1.0	1		11/30/02 22:42	TL	1414647
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		11/30/02 22:42	TL	1414647
1,1,2-Trichloroethane	ND	0.84	1.0	1		11/30/02 22:42	TL	1414647
1,1-Dichloroethane	ND	0.6	1.0	1		11/30/02 22:42	TL	1414647
1,1-Dichloroethene	220	0.51	1.0	1	E	11/30/02 22:42	TL	1414647
1,2,3-Trichloropropane	ND	0.87	1.0	1		11/30/02 22:42	TL	1414647
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		11/30/02 22:42	TL	1414647
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		11/30/02 22:42	TL	1414647
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		11/30/02 22:42	TL	1414647
1,2-Dichlorobenzene	ND	0.56	1.0	1		11/30/02 22:42	TL	1414647
1,2-Dichloroethane	ND	0.38	1.0	1		11/30/02 22:42	TL	1414647
1,2-Dichloropropane	ND	0.7	1.0	1		11/30/02 22:42	TL	1414647
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		11/30/02 22:42	TL	1414647
1,3-Dichlorobenzene	ND	0.31	1.0	1		11/30/02 22:42	TL	1414647
1,4-Dichlorobenzene	ND	0.56	1.0	1		11/30/02 22:42	TL	1414647
2-Butanone	ND	3.1	25	1		11/30/02 22:42	TL	1414647
2-Hexanone	ND	0.7	50	1		11/30/02 22:42	TL	1414647
4-Methyl-2-pentanone	ND	0.53	50	1		11/30/02 22:42	TL	1414647
Acetone	ND	16	25	1		11/30/02 22:42	TL	1414647
Benzene	160	0.25	1.0	1		11/30/02 22:42	TL	1414647
Bromochloromethane	ND	0.54	1.0	1		11/30/02 22:42	TL	1414647
Bromodichloromethane	ND	0.31	1.0	1		11/30/02 22:42	TL	1414647
Bromoform	ND	0.56	1.0	1		11/30/02 22:42	TL	1414647
Bromomethane	ND	0.9	1.0	1		11/30/02 22:42	TL	1414647
Carbon disulfide	5	0.42	5.0	1		11/30/02 22:42	TL	1414647
Carbon tetrachloride	ND	0.42	1.0	1		11/30/02 22:42	TL	1414647
Chlorobenzene	ND	0.44	1.0	1		11/30/02 22:42	TL	1414647
Chloroethane	ND	0.76	1.0	1		11/30/02 22:42	TL	1414647
Chloroform	ND	0.39	1.0	1		11/30/02 22:42	TL	1414647
Chloromethane	ND	0.7	1.0	1		11/30/02 22:42	TL	1414647
Dibromochloromethane	ND	0.65	1.0	1		11/30/02 22:42	TL	1414647
Dibromomethane	ND	0.88	1.0	1		11/30/02 22:42	TL	1414647
Dichlorodifluoromethane	ND	0.46	1.0	1		11/30/02 22:42	TL	1414647
Ethyl Ether	ND	1.5	20	1		11/30/02 22:42	TL	1414647
Ethylbenzene	7	0.34	1.0	1		11/30/02 22:42	TL	1414647
Iodomethane	ND	0.49	10	1		11/30/02 22:42	TL	1414647
Isopropylbenzene	ND	0.61	5.0	1		11/30/02 22:42	TL	1414647
Methylene chloride	ND	0.94	5.0	1		11/30/02 22:42	TL	1414647
n-Propylbenzene	ND	0.44	5.0	1		11/30/02 22:42	TL	1414647

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-145

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-09

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		11/30/02 22:42	TL	1414647
Styrene	ND	0.31	1.0	1		11/30/02 22:42	TL	1414647
Tetrachloroethene	ND	1	1.0	1		11/30/02 22:42	TL	1414647
Toluene	480	0.54	1.0	1	E	11/30/02 22:42	TL	1414647
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		11/30/02 22:42	TL	1414647
Trichloroethene	780	0.71	1.0	1	E	11/30/02 22:42	TL	1414647
Vinyl chloride	74000	1500	2000	2000		12/04/02 0:43	TL	1416769
cis-1,2-Dichloroethene	60000	1100	2000	2000		12/04/02 0:43	TL	1416769
cis-1,3-Dichloropropene	ND	0.48	1.0	1		11/30/02 22:42	TL	1414647
trans-1,2-Dichloroethene	2200	1200	2000	2000		12/04/02 0:43	TL	1416769
trans-1,3-Dichloropropene	ND	0.48	1.0	1		11/30/02 22:42	TL	1414647
Xylenes, Total	100	0.42	3.0	1		11/30/02 22:42	TL	1414647
Surr: 1,2-Dichloroethane-d4	102	0	% 62-130	1		11/30/02 22:42	TL	1414647
Surr: 1,2-Dichloroethane-d4	120	0	% 62-130	2000		12/04/02 0:43	TL	1416769
Surr: 4-Bromofluorobenzene	100	0	% 70-130	1		11/30/02 22:42	TL	1414647
Surr: 4-Bromofluorobenzene	86.0	0	% 70-130	2000		12/04/02 0:43	TL	1416769
Surr: Toluene-d8	110	0	% 74-122	2000		12/04/02 0:43	TL	1416769
Surr: Toluene-d8	104	0	% 74-122	1		11/30/02 22:42	TL	1414647

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference

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12/11/2002 2:06:33 PM



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-145 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-09

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND				MCL	E410.1	Units: mg/L		
Chemical Oxygen Demand	135	2.1	3.0	1		12/07/02 14:35	CV	1422398
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L		
Chloride	753	6.6	10	10		12/09/02 11:45	CV	1423400

Qualifiers:

ND/U - Not Detected at the Reporting Limit

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J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-144 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-10

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	OK_DRO	Units: mg/L			
Diesel Range Organics	0.75	0.15	0.1	1		12/03/02 23:50	AR	1421986
Surr: n-Pentacosane	54.8	0	% 20-131	1		12/03/02 23:50	AR	1421986

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-144 Collected: 11/25/2002 0:00 SPL Sample ID: 02110768-10

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS				MCL	OK_GRO	Units: ug/L		
Gasoline Range Organics	12000	0.48	500	25		12/07/02 12:28	D_R	1420347
Surr: 1,4-Difluorobenzene	101	0	% 62-144	25		12/07/02 12:28	D_R	1420347
Surr: 4-Bromofluorobenzene	108	0	% 44-153	25		12/07/02 12:28	D_R	1420347

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-144

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-10

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		11/30/02 23:09	TL	1414648
1,1,1-Trichloroethane	ND	0.43	1.0	1		11/30/02 23:09	TL	1414648
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		11/30/02 23:09	TL	1414648
1,1,2-Trichloroethane	ND	0.84	1.0	1		11/30/02 23:09	TL	1414648
1,1-Dichloroethane	ND	0.6	1.0	1		11/30/02 23:09	TL	1414648
1,1-Dichloroethene	28	0.51	1.0	1		11/30/02 23:09	TL	1414648
1,2,3-Trichloropropane	ND	0.87	1.0	1		11/30/02 23:09	TL	1414648
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		11/30/02 23:09	TL	1414648
1,2,4-Trimethylbenzene	10	0.28	1.0	1		11/30/02 23:09	TL	1414648
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		11/30/02 23:09	TL	1414648
1,2-Dichlorobenzene	1	0.56	1.0	1		11/30/02 23:09	TL	1414648
1,2-Dichloroethane	ND	0.38	1.0	1		11/30/02 23:09	TL	1414648
1,2-Dichloropropane	ND	0.7	1.0	1		11/30/02 23:09	TL	1414648
1,3,5-Trimethylbenzene	4	0.3	1.0	1		11/30/02 23:09	TL	1414648
1,3-Dichlorobenzene	ND	0.31	1.0	1		11/30/02 23:09	TL	1414648
1,4-Dichlorobenzene	ND	0.56	1.0	1		11/30/02 23:09	TL	1414648
2-Butanone	ND	3.1	25	1		11/30/02 23:09	TL	1414648
2-Hexanone	ND	0.7	50	1		11/30/02 23:09	TL	1414648
4-Methyl-2-pentanone	ND	0.53	50	1		11/30/02 23:09	TL	1414648
Acetone	ND	16	25	1		11/30/02 23:09	TL	1414648
Benzene	43	0.25	1.0	1		11/30/02 23:09	TL	1414648
Bromochloromethane	ND	0.54	1.0	1		11/30/02 23:09	TL	1414648
Bromodichloromethane	ND	0.31	1.0	1		11/30/02 23:09	TL	1414648
Bromoform	ND	0.56	1.0	1		11/30/02 23:09	TL	1414648
Bromomethane	ND	0.9	1.0	1		11/30/02 23:09	TL	1414648
Carbon disulfide	ND	0.42	5.0	1		11/30/02 23:09	TL	1414648
Carbon tetrachloride	ND	0.42	1.0	1		11/30/02 23:09	TL	1414648
Chlorobenzene	ND	0.44	1.0	1		11/30/02 23:09	TL	1414648
Chloroethane	ND	0.76	1.0	1		11/30/02 23:09	TL	1414648
Chloroform	ND	0.39	1.0	1		11/30/02 23:09	TL	1414648
Chloromethane	ND	0.7	1.0	1		11/30/02 23:09	TL	1414648
Dibromochloromethane	ND	0.65	1.0	1		11/30/02 23:09	TL	1414648
Dibromomethane	ND	0.88	1.0	1		11/30/02 23:09	TL	1414648
Dichlorodifluoromethane	ND	0.46	1.0	1		11/30/02 23:09	TL	1414648
Ethyl Ether	ND	1.5	20	1		11/30/02 23:09	TL	1414648
Ethylbenzene	30	0.34	1.0	1		11/30/02 23:09	TL	1414648
Iodomethane	ND	0.49	10	1		11/30/02 23:09	TL	1414648
Isopropylbenzene	38	0.61	5.0	1		11/30/02 23:09	TL	1414648
Methylene chloride	ND	0.94	5.0	1		11/30/02 23:09	TL	1414648
n-Propylbenzene	ND	0.44	5.0	1		11/30/02 23:09	TL	1414648

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-144

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-10

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		11/30/02 23:09	TL	1414648
Styrene	7	0.31	1.0	1		11/30/02 23:09	TL	1414648
Tetrachloroethene	ND	1	1.0	1		11/30/02 23:09	TL	1414648
Toluene	1200	540	1000	1000		12/04/02 0:16	TL	1416767
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		11/30/02 23:09	TL	1414648
Trichloroethene	14	0.71	1.0	1		11/30/02 23:09	TL	1414648
Vinyl chloride	73000	750	1000	1000		12/04/02 0:16	TL	1416767
cis-1,2-Dichloroethene	29000	560	1000	1000		12/04/02 0:16	TL	1416767
cis-1,3-Dichloropropene	ND	0.48	1.0	1		11/30/02 23:09	TL	1414648
trans-1,2-Dichloroethene	860 J	620	1000	1000		12/04/02 0:16	TL	1416767
trans-1,3-Dichloropropene	ND	0.48	1.0	1		11/30/02 23:09	TL	1414648
Xylenes, Total	ND	420	3000	1000		12/04/02 0:16	TL	1416767
Surr: 1,2-Dichloroethane-d4	104	0	% 62-130	1		11/30/02 23:09	TL	1414648
Surr: 1,2-Dichloroethane-d4	110	0	% 62-130	1000		12/04/02 0:16	TL	1416767
Surr: 4-Bromofluorobenzene	110	0	% 70-130	1		11/30/02 23:09	TL	1414648
Surr: 4-Bromofluorobenzene	84.0	0	% 70-130	1000		12/04/02 0:16	TL	1416767
Surr: Toluene-d8	106	0	% 74-122	1000		12/04/02 0:16	TL	1416767
Surr: Toluene-d8	104	0	% 74-122	1		11/30/02 23:09	TL	1414648

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112502-MM-144

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-10

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND			MCL	E410.1	Units: mg/L			
Chemical Oxygen Demand	240	8.4	12	4		12/09/02 17:00	CV	1423906
CHLORIDE, TOTAL			MCL	E325.3	Units: mg/L			
Chloride	946	6.6	10	10		12/09/02 11:45	CV	1423401

Qualifiers:

ND/U - Not Detected at the Reporting Limit

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D - Surrogate Recovery Unreportable due to Dilution

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID TB-17303-112502-MM-147

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-11

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		12/02/02 21:22	TL	1416573
1,1,1-Trichloroethane	ND	0.43	1.0	1		12/02/02 21:22	TL	1416573
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		12/02/02 21:22	TL	1416573
1,1,2-Trichloroethane	ND	0.84	1.0	1		12/02/02 21:22	TL	1416573
1,1-Dichloroethane	ND	0.6	1.0	1		12/02/02 21:22	TL	1416573
1,1-Dichloroethene	ND	0.51	1.0	1		12/02/02 21:22	TL	1416573
1,2,3-Trichloropropane	ND	0.87	1.0	1		12/02/02 21:22	TL	1416573
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		12/02/02 21:22	TL	1416573
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		12/02/02 21:22	TL	1416573
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		12/02/02 21:22	TL	1416573
1,2-Dichlorobenzene	ND	0.56	1.0	1		12/02/02 21:22	TL	1416573
1,2-Dichloroethane	ND	0.38	1.0	1		12/02/02 21:22	TL	1416573
1,2-Dichloropropane	ND	0.7	1.0	1		12/02/02 21:22	TL	1416573
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		12/02/02 21:22	TL	1416573
1,3-Dichlorobenzene	ND	0.31	1.0	1		12/02/02 21:22	TL	1416573
1,4-Dichlorobenzene	ND	0.56	1.0	1		12/02/02 21:22	TL	1416573
2-Butanone	ND	3.1	25	1		12/02/02 21:22	TL	1416573
2-Hexanone	ND	0.7	50	1		12/02/02 21:22	TL	1416573
4-Methyl-2-pentanone	ND	0.53	50	1		12/02/02 21:22	TL	1416573
Acetone	ND	16	25	1		12/02/02 21:22	TL	1416573
Benzene	ND	0.25	1.0	1		12/02/02 21:22	TL	1416573
Bromochloromethane	ND	0.54	1.0	1		12/02/02 21:22	TL	1416573
Bromodichloromethane	ND	0.31	1.0	1		12/02/02 21:22	TL	1416573
Bromoform	ND	0.56	1.0	1		12/02/02 21:22	TL	1416573
Bromomethane	ND	0.9	1.0	1		12/02/02 21:22	TL	1416573
Carbon disulfide	ND	0.42	5.0	1		12/02/02 21:22	TL	1416573
Carbon tetrachloride	ND	0.42	1.0	1		12/02/02 21:22	TL	1416573
Chlorobenzene	ND	0.44	1.0	1		12/02/02 21:22	TL	1416573
Chloroethane	ND	0.76	1.0	1		12/02/02 21:22	TL	1416573
Chloroform	ND	0.39	1.0	1		12/02/02 21:22	TL	1416573
Chloromethane	ND	0.7	1.0	1		12/02/02 21:22	TL	1416573
Dibromochloromethane	ND	0.65	1.0	1		12/02/02 21:22	TL	1416573
Dibromomethane	ND	0.88	1.0	1		12/02/02 21:22	TL	1416573
Dichlorodifluoromethane	ND	0.46	1.0	1		12/02/02 21:22	TL	1416573
Ethyl Ether	ND	1.5	20	1		12/02/02 21:22	TL	1416573
Ethylbenzene	ND	0.34	1.0	1		12/02/02 21:22	TL	1416573
Iodomethane	ND	0.49	10	1		12/02/02 21:22	TL	1416573
Isopropylbenzene	ND	0.61	5.0	1		12/02/02 21:22	TL	1416573
Methylene chloride	ND	0.94	5.0	1		12/02/02 21:22	TL	1416573
n-Propylbenzene	ND	0.44	5.0	1		12/02/02 21:22	TL	1416573

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID TB-17303-112502-MM-147

Collected: 11/25/2002 0:00

SPL Sample ID: 02110768-11

Site: #17303-20 WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		12/02/02 21:22	TL	1416573
Styrene	ND	0.31	1.0	1		12/02/02 21:22	TL	1416573
Tetrachloroethene	ND	1	1.0	1		12/02/02 21:22	TL	1416573
Toluene	ND	0.54	1.0	1		12/02/02 21:22	TL	1416573
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		12/02/02 21:22	TL	1416573
Trichloroethene	ND	0.71	1.0	1		12/02/02 21:22	TL	1416573
Vinyl chloride	ND	0.75	1.0	1		12/02/02 21:22	TL	1416573
cis-1,2-Dichloroethene	ND	0.56	1.0	1		12/02/02 21:22	TL	1416573
cis-1,3-Dichloropropene	ND	0.48	1.0	1		12/02/02 21:22	TL	1416573
trans-1,2-Dichloroethene	ND	0.62	1.0	1		12/02/02 21:22	TL	1416573
trans-1,3-Dichloropropene	ND	0.48	1.0	1		12/02/02 21:22	TL	1416573
Xylenes, Total	ND	0.42	3.0	1		12/02/02 21:22	TL	1416573
Surr: 1,2-Dichloroethane-d4	108	0	% 62-130	1		12/02/02 21:22	TL	1416573
Surr: 4-Bromofluorobenzene	90.0	0	% 70-130	1		12/02/02 21:22	TL	1416573
Surr: Toluene-d8	108	0	% 74-122	1		12/02/02 21:22	TL	1416573

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference

Quality Control Documentation



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Diesel Range Organics
Method: OK_DRO

WorkOrder: 02110768
Lab Batch ID: 24043

Method Blank

RunID: HP_V_021203D-1421973 Units: mg/L
Analysis Date: 12/03/2002 14:47 Analyst: AR
Preparation Date: 11/29/2002 9:52 Prep By: KL Method SW3510C

Analyte	Result	Qual	Rep Limit
Diesel Range Organics	ND		0.10
Surr: n-Pentacosane	77.2		20-131

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02110768-01B	GW-17303-112502-MM-138
02110768-02B	GW-17303-112502-MM-139
02110768-03B	GW-17303-112502-MM-140
02110768-04B	GW-17303-112502-MM-141
02110768-05B	GW-17303-112502-MM-137
02110768-07B	GW-17303-112502-MM-142
02110768-08B	GW-17303-112502-MM-143
02110768-09B	GW-17303-112502-MM-145
02110768-10B	GW-17303-112502-MM-144

Laboratory Control Sample (LCS)

RunID: HP_V_021203D-1421983 Units: mg/L
Analysis Date: 12/03/2002 21:54 Analyst: AR
Preparation Date: 11/29/2002 9:52 Prep By: KL Method SW3510C

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Diesel Range Organics	2.5	2.01	80	60	140

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110844-04
RunID: HP_V_021203D-1421996 Units: mg/L
Analysis Date: 12/04/2002 6:55 Analyst: AR
Preparation Date: 11/29/2002 9:52 Prep By: KL Method SW3510C

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Diesel Range Organics	1.67	10	5.94	42.7	10	8.61	69.4	47.7 *	39	21	175

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Gasoline Range Organics
Method: OK_GRO

WorkOrder: 02110768
Lab Batch ID: R72853

Method Blank

Samples in Analytical Batch:

RunID: VARE_021207A-1420325 Units: ug/L
Analysis Date: 12/07/2002 5:42 Analyst: D_R

Lab Sample ID	Client Sample ID
02110768-01E	GW-17303-112502-MM-138
02110768-02E	GW-17303-112502-MM-139
02110768-03E	GW-17303-112502-MM-140
02110768-04E	GW-17303-112502-MM-141
02110768-05E	GW-17303-112502-MM-137
02110768-07E	GW-17303-112502-MM-142
02110768-09E	GW-17303-112502-MM-145
02110768-10E	GW-17303-112502-MM-144

Analyte	Result	Qual	Rep Limit
Gasoline Range Organics	8.34	BJ	20
Surr: 1,4-Difluorobenzene	101.6		62-144
Surr: 4-Bromofluorobenzene	103.3		44-153

Laboratory Control Sample (LCS)

RunID: VARE_021207A-1419466 Units: ug/L
Analysis Date: 12/07/2002 5:17 Analyst: D_R

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1000	919	92	60	140

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110844-04
RunID: VARE_021207A-1420326 Units: ug/L
Analysis Date: 12/07/2002 6:10 Analyst: D_R

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	4050	25000	24500	81.9	25000	25400	85.4	4.29	36	36	160

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Gasoline Range Organics
Method: OK_GRO

WorkOrder: 02110768
Lab Batch ID: R72990

Method Blank

RunID: VARE_021209C-1422224 Units: ug/L
Analysis Date: 12/09/2002 15:56 Analyst: D_R

Samples in Analytical Batch:

Lab Sample ID Client Sample ID
02110768-08E GW-17303-112502-MM-143

Analyte	Result	Qual	Rep Limit
Gasoline Range Organics	3.03	BJ	20
Surr: 1,4-Difluorobenzene	100.0		62-144
Surr: 4-Bromofluorobenzene	111.3		44-153

Laboratory Control Sample (LCS)

RunID: VARE_021209C-1422213 Units: ug/L
Analysis Date: 12/09/2002 14:20 Analyst: D_R

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1000	915	91	60	140

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110880-05
RunID: VARE_021209C-1423749 Units: ug/L
Analysis Date: 12/10/2002 22:21 Analyst: D_R

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	ND	1000	999	98.4	1000	897	88.2	10.9	36	36	160

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110768
Lab Batch ID: R72607

Method Blank

Samples in Analytical Batch:

RunID: K_021129A-1414470 Units: ug/L
Analysis Date: 11/29/2002 13:29 Analyst: TL

Lab Sample ID	Client Sample ID
02110768-01A	GW-17303-112502-MM-138
02110768-02A	GW-17303-112502-MM-139

Analyte	Result	Qual	Rep Limit
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-chloropropane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Butanone	ND		25
2-Hexanone	ND		50
4-Methyl-2-pentanone	ND		50
Acetone	ND		25
Benzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethyl Ether	ND		20
Ethylbenzene	ND		1.0
Iodomethane	ND		10
Isopropylbenzene	ND		5.0
Methylene chloride	ND		5.0
n-Propylbenzene	ND		5.0
Naphthalene	ND		5.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,4-Dichloro-2-Butene	ND		50
Trichloroethene	ND		1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

One percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110768
Lab Batch ID: R72607

Method Blank

RunID: K_021129A-1414470 Units: ug/L
Analysis Date: 11/29/2002 13:29 Analyst: TL

Analyte	Result	Qual	Rep Limit
Vinyl chloride	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Xylenes, Total	ND		3.0
Surr: 1,2-Dichloroethane-d4	98.0		62-130
Surr: 4-Bromofluorobenzene	88.0		70-130
Surr: Toluene-d8	102.0		74-122

Laboratory Control Sample (LCS)

RunID: K_021129A-1414469 Units: ug/L
Analysis Date: 11/29/2002 12:22 Analyst: TL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	53	106	61	145
Benzene	50	46	92	76	127
Chlorobenzene	50	49	98	70	130
Toluene	50	46	92	70	129
Trichloroethene	50	53	106	60	140

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110844-04
RunID: K_021129A-1414476 Units: ug/L
Analysis Date: 11/29/2002 16:10 Analyst: TL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	20.0	50	72	104	50	63	86.0	19 *	14	61	145
Benzene	21.0	50	67	92	50	60	78.0	16 *	11	76	127
Chlorobenzene	ND	50	50	100	50	44	88.0	13	13	70	130

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110768
Lab Batch ID: R72607

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110844-04
RunID: K_021129A-1414476 Units: ug/L
Analysis Date: 11/29/2002 16:10 Analyst: TL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
uene	300	50	360	N/C	50	320	N/C	100 *	13	70	129
Trichloroethene	1000	50	1200	N/C	50	1000	N/C	200 *	14	60	140

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110768
Lab Batch ID: R72618

Method Blank

Unit ID: K_021130A-1414632 Units: ug/L
Analysis Date: 11/30/2002 15:37 Analyst: TL

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02110768-03A	GW-17303-112502-MM-140
02110768-04A	GW-17303-112502-MM-141
02110768-05A	GW-17303-112502-MM-137
02110768-06A	TB-17303-112502-MM-146
02110768-09A	GW-17303-112502-MM-145
02110768-10A	GW-17303-112502-MM-144

Analyte	Result	Qual	Rep Limit
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-chloropropane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Butanone	ND		25
2-Hexanone	ND		50
4-Methyl-2-pentanone	ND		50
Acetone	ND		25
Benzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethyl Ether	ND		20
Ethylbenzene	ND		1.0
Iodomethane	ND		10
Isopropylbenzene	ND		5.0
Methylene chloride	ND		5.0
n-Propylbenzene	ND		5.0
Naphthalene	ND		5.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,4-Dichloro-2-Butene	ND		50
Trichloroethene	ND		1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110768
Lab Batch ID: R72618

Method Blank

RunID: K_021130A-1414632 Units: ug/L
Analysis Date: 11/30/2002 15:37 Analyst: TL

Analyte	Result	Qual	Rep Limit
Vinyl chloride	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Xylenes, Total	ND		3.0
Surr: 1,2-Dichloroethane-d4	104.0		62-130
Surr: 4-Bromofluorobenzene	88.0		70-130
Surr: Toluene-d8	106.0		74-122

Laboratory Control Sample (LCS)

RunID: K_021130A-1414630 Units: ug/L
Analysis Date: 11/30/2002 14:19 Analyst: TL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	56	112	61	145
Benzene	50	49	98	76	127
Chlorobenzene	50	53	106	70	130
Toluene	50	49	98	70	129
Trichloroethene	50	56	112	60	140

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110658-02
RunID: K_021130A-1414638 Units: ug/L
Analysis Date: 11/30/2002 18:41 Analyst: TL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	50	52	104	50	46	92.0	12	14	61	145
Benzene	ND	50	46	92	50	43	86.0	7	11	76	127
Chlorobenzene	ND	50	51	102	50	42	84.0	19 *	13	70	130

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110768
Lab Batch ID: R72618

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110658-02
RunID: K_021130A-1414638 Units: ug/L
Analysis Date: 11/30/2002 18:41 Analyst: TL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
toluene	ND	50	48	96	50	52	104	8	13	70	129
trichloroethene	ND	50	47	94	50	37	74.0	24 *	14	60	140

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110768
Lab Batch ID: R72721

Method Blank

Samples in Analytical Batch:

RunID: K_021202B-1416572 Units: ug/L
Analysis Date: 12/02/2002 15:46 Analyst: TL

Lab Sample ID	Client Sample ID
02110768-03A	GW-17303-112502-MM-140
02110768-11A	TB-17303-112502-MM-147

Analyte	Result	Qual	Rep Limit
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-chloropropane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Butanone	ND		25
2-Hexanone	ND		50
4-Methyl-2-pentanone	ND		50
Acetone	ND		25
Benzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethyl Ether	ND		20
Ethylbenzene	ND		1.0
Iodomethane	ND		10
Isopropylbenzene	ND		5.0
Methylene chloride	ND		5.0
n-Propylbenzene	ND		5.0
Naphthalene	ND		5.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,4-Dichloro-2-Butene	ND		50
Trichloroethene	ND		1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110768
Lab Batch ID: R72721

Method Blank

RunID: K_021202B-1416572 Units: ug/L
Analysis Date: 12/02/2002 15:46 Analyst: TL

Analyte	Result	Qual	Rep Limit
Vinyl chloride	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Xylenes, Total	ND		3.0
Surr: 1,2-Dichloroethane-d4	100.0		62-130
Surr: 4-Bromofluorobenzene	88.0		70-130
Surr: Toluene-d8	104.0		74-122

Laboratory Control Sample (LCS)

RunID: K_021202B-1416571 Units: ug/L
Analysis Date: 12/02/2002 14:39 Analyst: TL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	57	114	61	145
Benzene	50	48	96	76	127
Chlorobenzene	50	53	106	70	130
Toluene	50	48	96	70	129
Trichloroethene	50	56	112	60	140

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110768-03
RunID: K_021202B-1416575 Units: ug/L
Analysis Date: 12/02/2002 22:15 Analyst: TL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	500	630	126	500	590	118	7	14	61	145
Benzene	ND	500	500	100	500	480	96.0	4	11	76	127
Chlorobenzene	ND	500	560	112	500	530	106	6	13	70	130

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110768
Lab Batch ID: R72721

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110768-03
RunID: K_021202B-1416575 Units: ug/L
Analysis Date: 12/02/2002 22:15 Analyst: TL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	500	530	106	500	500	100	6	13	70	129
Trichloroethene	570	500	1200	126	500	1100	106	17 *	14	60	140

Qualifiers: ND/U - Not Detected at the Reporting Limit

MI - Matrix Interference

B - Analyte detected in the associated Method Blank

D - Recovery Unreportable due to Dilution

J - Estimated value between MDL and PQL

* - Recovery Outside Advisable QC Limits

E - Concentrations exceeding Calibration range of Instrument

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110768
Lab Batch ID: R72730

Method Blank

Samples in Analytical Batch:

UnitID: K_021203D-1416758 Units: ug/L
Analysis Date: 12/03/2002 19:47 Analyst: TL

Lab Sample ID	Client Sample ID
02110768-07A	GW-17303-112502-MM-142
02110768-08A	GW-17303-112502-MM-143
02110768-09A	GW-17303-112502-MM-145
02110768-10A	GW-17303-112502-MM-144

Analyte	Result	Qual	Rep Limit
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-chloropropane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Butanone	ND		25
2-Hexanone	ND		50
4-Methyl-2-pentanone	ND		50
Acetone	ND		25
Benzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethyl Ether	ND		20
Ethylbenzene	ND		1.0
Iodomethane	ND		10
Isopropylbenzene	ND		5.0
Methylene chloride	ND		5.0
n-Propylbenzene	ND		5.0
Naphthalene	ND		5.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,4-Dichloro-2-Butene	ND		50
Trichloroethene	ND		1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110768
Lab Batch ID: R72730

Method Blank

RunID: K_021203D-1416758 Units: ug/L
Analysis Date: 12/03/2002 19:47 Analyst: TL

Analyte	Result	Qual	Rep Limit
Vinyl chloride	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Xylenes, Total	ND		3.0
Surr: 1,2-Dichloroethane-d4	106.0		62-130
Surr: 4-Bromofluorobenzene	90.0		70-130
Surr: Toluene-d8	106.0		74-122

Laboratory Control Sample (LCS)

RunID: K_021203D-1416757 Units: ug/L
Analysis Date: 12/03/2002 18:31 Analyst: TL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	57	114	61	145
Benzene	50	50	100	76	127
Chlorobenzene	50	56	112	70	130
Toluene	50	52	104	70	129
Trichloroethene	50	60	120	60	140

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110768-07
RunID: K_021203D-1416762 Units: ug/L
Analysis Date: 12/03/2002 22:55 Analyst: TL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	2500	3400	136	2500	3400	136	0	14	61	145
Benzene	ND	2500	2600	104	2500	2700	108	4	11	76	127
Chlorobenzene	ND	2500	2900	116	2500	2900	116	0	13	70	130

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

Percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110768
Lab Batch ID: R72730

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110768-07
RunID: K_021203D-1416762 Units: ug/L
Analysis Date: 12/03/2002 22:55 Analyst: TL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
toluene	ND	2500	2700	108	2500	2800	112	4	13	70	129
trichloroethene	2200	2500	4300	84	2500	4300	84.0	0	14	60	140

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110768
Lab Batch ID: R72735

Method Blank

Samples in Analytical Batch:

RunID: Q_021204A-1416899 Units: ug/L
Analysis Date: 12/04/2002 12:19 Analyst: JC

Lab Sample ID: 02110768-08A
Client Sample ID: GW-17303-112502-MM-143

Analyte	Result	Qual	Rep Limit
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-chloropropane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Butanone	ND		25
2-Hexanone	ND		50
4-Methyl-2-pentanone	ND		50
Acetone	ND		25
Benzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethyl Ether	ND		20
Ethylbenzene	ND		1.0
Iodomethane	ND		10
Isopropylbenzene	ND		5.0
Methylene chloride	ND		5.0
n-Propylbenzene	ND		5.0
Naphthalene	ND		5.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,4-Dichloro-2-Butene	ND		50
Trichloroethene	ND		1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

99 percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110768
Lab Batch ID: R72735

Method Blank

RunID: Q_021204A-1416899 Units: ug/L
Analysis Date: 12/04/2002 12:19 Analyst: JC

Analyte	Result	Qual	Rep Limit
cis-1,3-Dichloropropene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Xylenes, Total	ND		3.0
Surr: 1,2-Dichloroethane-d4	90.0		62-130
Surr: 4-Bromofluorobenzene	92.0		70-130
Surr: Toluene-d8	98.0		74-122

Laboratory Control Sample (LCS)

RunID: Q_021204A-1416896 Units: ug/L
Analysis Date: 12/04/2002 11:02 Analyst: JC

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	50	100	61	145
Benzene	50	51	102	76	127
Chlorobenzene	50	51	102	70	130
Toluene	50	50	100	70	129
Trichloroethene	50	55	110	60	140

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02120071-01
RunID: Q_021204A-1416907 Units: ug/L
Analysis Date: 12/04/2002 13:11 Analyst: JC

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	50	50	100	50	49	98.0	2	14	61	145
Benzene	ND	50	50	100	50	50	100	0	11	76	127
Chlorobenzene	ND	50	50	100	50	50	100	0	13	70	130
Toluene	ND	50	48	96	50	48	96.0	0	13	70	129
Trichloroethene	ND	50	53	106	50	51	102	4	14	60	140

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110768
Lab Batch ID: R72735

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

Percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Chemical Oxygen Demand
Method: E410.1

WorkOrder: 02110768
Lab Batch ID: R73000

Method Blank

RunID: WET_021207J-1422382 Units: mg/L
Analysis Date: 12/07/2002 14:35 Analyst: CV

Analyte	Result	Qual	Rep Limit
Chemical Oxygen Demand	ND		3.0

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02110768-01D	GW-17303-112502-MM-138
02110768-02D	GW-17303-112502-MM-139
02110768-03D	GW-17303-112502-MM-140
02110768-04D	GW-17303-112502-MM-141
02110768-05D	GW-17303-112502-MM-137
02110768-07D	GW-17303-112502-MM-142
02110768-08D	GW-17303-112502-MM-143
02110768-09D	GW-17303-112502-MM-145

Laboratory Control Sample (LCS)

RunID: WET_021207J-1422385 Units: mg/L
Analysis Date: 12/07/2002 14:35 Analyst: CV

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chemical Oxygen Demand	104	105	101	87	106

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110768-01
RunID: WET_021207J-1422387 Units: mg/L
Analysis Date: 12/07/2002 14:35 Analyst: CV

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chemical Oxygen Demand	ND	50	55	105.0	50	55	105.0	0	10	80	120

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Chloride, Total
Method: E325.3

WorkOrder: 02110768
Lab Batch ID: R73037

Method Blank

RunID: WET_021209M-1423385 Units: mg/L
Analysis Date: 12/09/2002 11:45 Analyst: CV

Analyte	Result	Qual	Rep Limit
Chloride	ND		1.0

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02110768-01C	GW-17303-112502-MM-138
02110768-02C	GW-17303-112502-MM-139
02110768-03C	GW-17303-112502-MM-140
02110768-04C	GW-17303-112502-MM-141
02110768-05C	GW-17303-112502-MM-137
02110768-07C	GW-17303-112502-MM-142
02110768-08C	GW-17303-112502-MM-143
02110768-09C	GW-17303-112502-MM-145
02110768-10C	GW-17303-112502-MM-144

Laboratory Control Sample (LCS)

RunID: WET_021209M-1423387 Units: mg/L
Analysis Date: 12/09/2002 11:45 Analyst: CV

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	233	227.7	98	90	110

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110768-01
RunID: WET_021209M-1423389 Units: mg/L
Analysis Date: 12/09/2002 11:45 Analyst: CV

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	162.0	250	389.6	91.06	250	398.4	94.57	3.774	20	85	115

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20 WRC

Analysis: Chemical Oxygen Demand
Method: E410.1

WorkOrder: 02110768
Lab Batch ID: R73053

Method Blank

Samples in Analytical Batch:

RunID: WET_021209N-1423902 Units: mg/L
Analysis Date: 12/09/2002 17:00 Analyst: CV

Lab Sample ID: 02110768-10D
Client Sample ID: GW-17303-112502-MM-144

Analyte	Result	Qual	Rep Limit
Chemical Oxygen Demand	ND		3.0

Laboratory Control Sample (LCS)

RunID: WET_021209N-1423905 Units: mg/L
Analysis Date: 12/09/2002 17:00 Analyst: CV

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chemical Oxygen Demand	104	105	101	87	106

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110792-12
RunID: WET_021209N-1423919 Units: mg/L
Analysis Date: 12/09/2002 17:00 Analyst: CV

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chemical Oxygen Demand	5.000	50	55	100.0	50	57.5	105.0	4.878	10	80	120

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

*Sample Receipt Checklist
And
Chain of Custody*



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder: 02110768

Date and Time Received: 11/26/2002 9:30:00 AM

Temperature: 3

Received By: DS

Carrier name: FedEx

Chilled by: Water Ice

- | | | | |
|--|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes ☒ | No ☐ | Not Present ☐ |
| 2. Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | Not Present ☒ |
| 3. Custody seals intact on sample bottles? | Yes ☒ | No ☐ | Not Present ☐ |
| 4. Chain of custody present? | Yes ☒ | No ☐ | |
| 5. Chain of custody signed when relinquished and received? | Yes ☒ | No ☐ | |
| 6. Chain of custody agrees with sample labels? | Yes ☒ | No ☐ | |
| 7. Samples in proper container/bottle? | Yes ☒ | No ☐ | |
| 8. Sample containers intact? | Yes ☒ | No ☐ | |
| 9. Sufficient sample volume for indicated test? | Yes ☒ | No ☐ | |
| 10. All samples received within holding time? | Yes ☒ | No ☐ | |
| 11. Container/Temp Blank temperature in compliance? | Yes ☒ | No ☐ | |
| 12. Water - VOA vials have zero headspace? | Yes ☒ | No ☐ | Not Applicable ☐ |
| 13. Water - pH acceptable upon receipt? | Yes ☒ | No ☐ | Not Applicable ☐ |

SPL Representative:

Contact Date & Time:

Client Name Contacted:

Non Conformance
Issues:

Client Instructions:

CRA**CONESTOGA-ROVERS & ASSOCIATES, INC.**

14496 Sheldon Road, Suite 200

Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

SPL - HOUSTON, TX

02110768

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17303-20

PROJECT NAME:

WRC

SAMPLER'S
SIGNATURE:*M. Mathe*PRINTED
NAME:

MARIE MATHE

PARAMETERS:

*chloride
COD
GPD*

REMARKS

*2WK TAT*SEQ:
No.

DATE

TIME

SAMPLE
TYPENo. OF
CONTAINERS

SEQ: No.	DATE	TIME	SAMPLE TYPE	No. OF CONTAINERS
	11/25/02		6W-17303-112502-MMM-140	WATER 5
	11/25/02		-141	WATER 5

PARAMETERS
<i>chloride</i>
<i>COD</i>
<i>GPD</i>

RELINQUISHED BY:

1. *M. Mathe*

DATE: 11/25/02

TIME: 2000

RECEIVED BY:

1. _____

DATE:

TIME:

RELINQUISHED BY:

2. _____

DATE:

TIME:

RECEIVED BY:

2. _____

DATE:

TIME:

RELINQUISHED BY:

3. _____

DATE:

TIME:

RECEIVED BY:

1. _____

DATE:

TIME:

METHOD OF SHIPMENT:

FED EX

AIR BILL No.

83817295182

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

SAMPLE TEAM:

*M. MATHE
W. EKREN*

RECEIVED FOR LABORATORY BY:

Danna Steele
DATE: 11/26/02 TIME: 930

30

22311

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

SHIPPED TO (Laboratory Name):

SPL-HOUSTON, TX

02110768

REFERENCE NUMBER:

17303-20

PROJECT NAME:

WRC

CHAIN OF CUSTODY RECORD

SAMPLER'S
SIGNATURE:

PRINTED

NAME:

MARIE MATHÉ

SEQ:
No.

DATE

TIME

SAMPLE
TYPENo. OF
CONTAINERS

PARAMETERS

REMARKS

pH, TOC, Chloride, COD, GRD

2WK TAT

11/25/02

GW-17303-112502-MM-142

WATER

9

X X X X X

-143

9

X X X X X

-145

5

X X

-144

5

X X

-147

1

X

Tb

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY:

1. M. Mathé

DATE: 11/25/02

TIME: 2000

RECEIVED BY:

1. _____

DATE:

TIME:

RELINQUISHED BY:

2. _____

DATE:

TIME:

RECEIVED BY:

2. _____

DATE:

TIME:

RELINQUISHED BY:

3. _____

DATE:

TIME:

RECEIVED BY:

1. _____

DATE:

TIME:

METHOD OF SHIPMENT:

FED EX

AIR BILL No. 838172995193

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

SAMPLE TEAM:

M. MATHÉ

W. EKREN

RECEIVED FOR LABORATORY BY:

Danne Steel

DATE: 11/26/02 TIME: 930

30

22313

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

SHIPPED TO (Laboratory Name):

SPL-NORTH CANTON

0211.0768

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17303-20

PROJECT NAME:

WRC

SAMPLER'S
SIGNATURE:

M. Mathis

PRINTED

NAME: *MARIEMATHE*

No. OF
CONTAINERS

PARAMETERS

*Chloride
COD
GRO*

REMARKS

2WK TAT

SEQ:
No.

DATE

TIME

SAMPLE
TYPE

GW-17303-112502-MM-144
↓ ↓ ↓ ↓ ↓ -145
WATER
↓

4
4

XXX
XXX

*CRA CONTACT
PAUL WISEMAN*

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY:

1. *M. Mathis*

DATE: *11/25/02*

TIME: *2000*

RECEIVED BY:

1. _____

DATE:

TIME:

RELINQUISHED BY:

2. _____

DATE:

TIME:

RECEIVED BY:

2. _____

DATE:

TIME:

RELINQUISHED BY:

3. _____

DATE:

TIME:

RECEIVED BY:

1. _____

DATE:

TIME:

METHOD OF SHIPMENT:

AIR BILL No. *83817395208* *(S)*

White
Yellow

-Fully Executed Copy
-Receiving Laboratory Copy

Pink
Goldenrod

-Shipper Copy
-Sampler Copy

SAMPLE TEAM:

M. Mathis

W. Ekren

RECEIVED FOR LABORATORY BY:

Dannell Lee

30

DATE: *11/26/02* TIME: *930*

22312



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates, Inc.

Certificate of Analysis Number:

02110844

Report To: Conestoga-Rovers & Associates, Inc. Paul Wiseman 14496 Sheldon Rd. Suite 200 Plymouth MI 48170- ph: (734) 453-5123 fax: (734) 453-5201	Project Name: #17303-20/WRC Site: #17303-20/WRC Site Address: PO Number: 40-0017478 State: Michigan State Cert. No.: Date Reported: 12/12/2002
--	---

This Report Contains A Total Of 66 Pages

Excluding This Page

And

Chain Of Custody

ORIGINAL ANALYTICAL REPORT

Project#: 17303-20 Lab#: 02110844

Name: FORMER WILLOW RUN.

Description

Event: GW Monitoring

Samples: 9 waters (MM 148-156; T8; 11/26/02)

Analysis: Select VOCs; DRO; GRO;

Chloride; COD;

TAT: STANDARD (14 DAYS)

Lab: SPL HOUSTON.

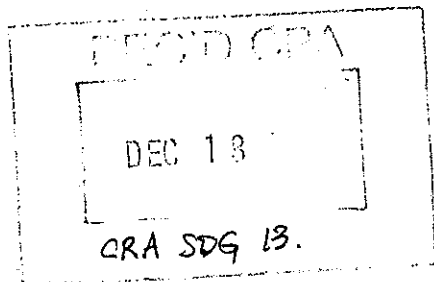
Checked Against Preliminary Data:

Date: 2/26/03 Init.: [Signature]

Date of Validation Memo: 2/27/03

Invoice Approval Date: 12/12/2002

Comments: _____ Date: _____



[Signature: Sonia West]
Sonia West
Project Manager



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:
Conestoga-Rovers & Associates, Inc.

Certificate of Analysis Number:

02110844

Report To: Conestoga-Rovers & Associates, Inc. Paul Wiseman 14496 Sheldon Rd. Suite 200 Plymouth MI 48170- ph: (734) 453-5123 fax: (734) 453-5201	Project Name: #17303-20/WRC Site: #17303-20/WRC Site Address: PO Number: 40-0017478 State: Michigan State Cert. No.: Date Reported: 12/12/2002
---	---

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

DEC 18

Sonia West
Senior Project Manager



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conestoga-Rovers & Associates, Inc.

Certificate of Analysis Number:

02110844

Report To: Conestoga-Rovers & Associates, Inc.

Paul Wiseman
14496 Sheldon Rd.
Suite 200
Plymouth
MI

48170-

ph: (734) 453-5123 fax: (734) 453-5201

Project Name: #17303-20/WRC

Site: #17303-20/WRC

Site Address:

PO Number: 40-0017478

State: Michigan

State Cert. No.:

Date Reported: 12/12/2002

Fax To:

Conestoga-Rovers & Associates, Inc.

Paul Wiseman fax : (734) 453-5201

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
V-17303-112602-MM-148	02110844-01	Water	11/26/2002	11/27/2002 9:30:00 AM	22322	☐
V-17303-112602-MM-149	02110844-02	Water	11/26/2002	11/27/2002 9:30:00 AM	22321	☐
GW-17303-112602-MM-149	02110844-02	Water	11/26/2002	11/27/2002 9:30:00 AM	22322	☐
GW-17303-112602-MM-150	02110844-03	Water	11/26/2002	11/27/2002 9:30:00 AM	22321	☐
V-17303-112602-MM-150	02110844-03	Water	11/26/2002	11/27/2002 9:30:00 AM	22322	☐
GW-17303-112602-MM-151	02110844-04	Water	11/26/2002	11/27/2002 9:30:00 AM	22322	☐
GW-17303-112602-MM-152	02110844-05	Water	11/26/2002	11/27/2002 9:30:00 AM	22321	☐
V-17303-112602-MM-152	02110844-05	Water	11/26/2002	11/27/2002 9:30:00 AM	22322	☐
V-17303-112602-MM-153	02110844-06	Water	11/26/2002	11/27/2002 9:30:00 AM	22320	☐
GW-17303-112602-MM-153	02110844-06	Water	11/26/2002	11/27/2002 9:30:00 AM	22322	☐
V-17303-112602-MM-154	02110844-07	Water	11/26/2002	11/27/2002 9:30:00 AM	22320	☐
V-17303-112602-MM-154	02110844-07	Water	11/26/2002	11/27/2002 9:30:00 AM	22322	☐
GW-17303-112602-MM-155	02110844-08	Water	11/26/2002	11/27/2002 9:30:00 AM	22320	☐
GW-17303-112602-MM-155	02110844-08	Water	11/26/2002	11/27/2002 9:30:00 AM	22322	☐
V-17303-112602-MM-156 12/10/01	02110844-09	Water	11/26/2002	11/27/2002 9:30:00 AM	22322	☐

Sonia West
Sonia West

12/12/2002

Date

Senior Project Manager

Joel Grice
Laboratory Director

Ted Yen
Quality Assurance Officer



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Method Summary

Conestoga-Rovers & Associates, Inc.

02110844

Client Sample ID	Lab Sample ID	Test Name	Test Number
GW-17303-112602-MM-148	02110844-01	Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
GW-17303-112602-MM-149	02110844-02	Chemical Oxygen Demand	E410.1
		Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
		Volatile Organics by Method 8260B	SW8260B
GW-17303-112602-MM-150	02110844-03	Chemical Oxygen Demand	E410.1
		Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO

12/12/2002

Date



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Method Summary

Conestoga-Rovers & Associates, Inc.

02110844

Client Sample ID	Lab Sample ID	Test Name	Test Number
GW-17303-112602-MM-151	02110844-04	Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
		Volatile Organics by Method 8260B	SW8260B
GW-17303-112602-MM-152	02110844-05	Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
GW-17303-112602-MM-153	02110844-06	Volatile Organics by Method 8260B	SW8260B
		Chemical Oxygen Demand	E410.1
		Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
		Volatile Organics by Method 8260B	SW8260B

12/12/2002

Date

02110844 Page 4

12/12/2002 9:10:23 AM



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Method Summary

Conestoga-Rovers & Associates, Inc.

02110844

Client Sample ID	Lab Sample ID	Test Name	Test Number
GW-17303-112602-MM-154	02110844-07	Chloride, Total	E325.3
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
		Volatile Organics by Method 8260B	SW8260B
		Chemical Oxygen Demand	E410.1
		Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Diesel Range Organics	OK_DRO
GW-17303-112602-MM-155	02110844-08	Gasoline Range Organics	OK_GRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
		Volatile Organics by Method 8260B	SW8260B
		Chemical Oxygen Demand	E410.1
		Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Chloride, Total	E325.3

12/12/2002

Date

02110844 Page 5

12/12/2002 9:10:23 AM



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Method Summary

Conestoga-Rovers & Associates, Inc.

02110844

Client Sample ID	Lab Sample ID	Test Name	Test Number
TB-17303-112602-MM-156 12/10	02110844-09	Diesel Range Organics	OK_DRO
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B
		Volatile Organics by Method 8260B	SW8260B
		Chemical Oxygen Demand	E410.1
		Chloride, Total	E325.3
		Diesel Range Organics	OK_DRO
		Gasoline Range Organics	OK_GRO
		Sep. Funnel Extraction - Oklahoma Diesel	SW3510C
		Volatile Organics by Method 8260B	SW8260B

12/12/2002

Date

02110844 Page 6

12/12/2002 9:10:23 AM



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-148

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-01

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				MCL	OK_DRO	Units: mg/L		
Diesel Range Organics	1	0.15	0.1	1		12/04/02 1:47	AR	1421989
Surr: n-Pentacosane	49.2	0	% 20-131	1		12/04/02 1:47	AR	1421989

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-148 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-01

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			MCL	OK_GRO	Units: ug/L			
Gasoline Range Organics	16000	0.95	1000	50		12/07/02 12:56	D_R	1420348
Surr: 1,4-Difluorobenzene	99.9	0	% 62-144	50		12/07/02 12:56	D_R	1420348
Surr: 4-Bromofluorobenzene	106	0	% 44-153	50		12/07/02 12:56	D_R	1420348

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-148

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-01

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 14:23	TL	1414472
1,1,1-Trichloroethane	ND	0.43	1.0	1		11/29/02 14:23	TL	1414472
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 14:23	TL	1414472
1,1,2-Trichloroethane	ND	0.84	1.0	1		11/29/02 14:23	TL	1414472
1,1-Dichloroethane	ND	0.6	1.0	1		11/29/02 14:23	TL	1414472
1,1-Dichloroethene	77	0.51	1.0	1		11/29/02 14:23	TL	1414472
1,2,3-Trichloropropane	ND	0.87	1.0	1		11/29/02 14:23	TL	1414472
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		11/29/02 14:23	TL	1414472
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		11/29/02 14:23	TL	1414472
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		11/29/02 14:23	TL	1414472
1,2-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 14:23	TL	1414472
1,2-Dichloroethane	ND	0.38	1.0	1		11/29/02 14:23	TL	1414472
1,2-Dichloropropane	ND	0.7	1.0	1		11/29/02 14:23	TL	1414472
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		11/29/02 14:23	TL	1414472
1,3-Dichlorobenzene	ND	0.31	1.0	1		11/29/02 14:23	TL	1414472
1,4-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 14:23	TL	1414472
2-Butanone	ND	3.1	25	1		11/29/02 14:23	TL	1414472
2-Hexanone	ND	0.7	50	1		11/29/02 14:23	TL	1414472
4-Methyl-2-pentanone	ND	0.53	50	1		11/29/02 14:23	TL	1414472
Acetone	ND	16	25	1		11/29/02 14:23	TL	1414472
Benzene	48	0.25	1.0	1		11/29/02 14:23	TL	1414472
Bromochloromethane	ND	0.54	1.0	1		11/29/02 14:23	TL	1414472
Bromodichloromethane	ND	0.31	1.0	1		11/29/02 14:23	TL	1414472
Bromoform	ND	0.56	1.0	1		11/29/02 14:23	TL	1414472
Bromomethane	ND	0.9	1.0	1		11/29/02 14:23	TL	1414472
Carbon disulfide	ND	0.42	5.0	1		11/29/02 14:23	TL	1414472
Carbon tetrachloride	ND	0.42	1.0	1		11/29/02 14:23	TL	1414472
Chlorobenzene	ND	0.44	1.0	1		11/29/02 14:23	TL	1414472
Chloroethane	ND	0.76	1.0	1		11/29/02 14:23	TL	1414472
Chloroform	ND	0.39	1.0	1		11/29/02 14:23	TL	1414472
Chloromethane	ND	0.7	1.0	1		11/29/02 14:23	TL	1414472
Dibromochloromethane	ND	0.65	1.0	1		11/29/02 14:23	TL	1414472
Dibromomethane	ND	0.88	1.0	1		11/29/02 14:23	TL	1414472
Dichlorodifluoromethane	ND	0.46	1.0	1		11/29/02 14:23	TL	1414472
Ethyl Ether	ND	1.5	20	1		11/29/02 14:23	TL	1414472
Ethylbenzene	ND	0.34	1.0	1		11/29/02 14:23	TL	1414472
Iodomethane	ND	0.49	10	1		11/29/02 14:23	TL	1414472
Isopropylbenzene	ND	0.61	5.0	1		11/29/02 14:23	TL	1414472
Methylene chloride	ND	0.94	5.0	1		11/29/02 14:23	TL	1414472
n-Propylbenzene	ND	0.44	5.0	1		11/29/02 14:23	TL	1414472

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-148 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-01

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		11/29/02 14:23	TL	1414472
Styrene	ND	0.31	1.0	1		11/29/02 14:23	TL	1414472
Tetrachloroethene	ND	1	1.0	1		11/29/02 14:23	TL	1414472
Toluene	110	0.54	1.0	1		11/29/02 14:23	TL	1414472
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		11/29/02 14:23	TL	1414472
Trichloroethene	58	0.71	1.0	1		11/29/02 14:23	TL	1414472
Vinyl chloride	49000	1500	2000	2000		12/04/02 17:45	JC	1416930
cis-1,2-Dichloroethene	53000	1100	2000	2000		12/04/02 17:45	JC	1416930
cis-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 14:23	TL	1414472
trans-1,2-Dichloroethene	1800 J	1200	2000	2000		12/04/02 17:45	JC	1416930
trans-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 14:23	TL	1414472
Xylenes, Total	83	0.42	3.0	1		11/29/02 14:23	TL	1414472
Surr: 1,2-Dichloroethane-d4	91.0	0	% 62-130	2000		12/04/02 17:45	JC	1416930
Surr: 1,2-Dichloroethane-d4	96.0	0	% 62-130	1		11/29/02 14:23	TL	1414472
Surr: 4-Bromofluorobenzene	91.0	0	% 70-130	2000		12/04/02 17:45	JC	1416930
Surr: 4-Bromofluorobenzene	96.0	0	% 70-130	1		11/29/02 14:23	TL	1414472
Surr: Toluene-d8	94.0	0	% 74-122	2000		12/04/02 17:45	JC	1416930
Surr: Toluene-d8	100	0	% 74-122	1		11/29/02 14:23	TL	1414472

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of instrument



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8880 INTERCHANGE DRIVE
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Client Sample ID GW-17303-112602-MM-148 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-01

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND				MCL	E410.1	Units: mg/L		
Chemical Oxygen Demand	133	2.1	3.0	1		12/10/02 16:50	CV	1424286
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L		
Chloride	928	6.6	10	10		12/11/02 11:00	CV	1425262

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
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J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



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8880 INTERCHANGE DRIVE
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(713) 660-0901

Client Sample ID GW-17303-112602-MM-149 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-02

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	OK_DRO	Units: mg/L			
Diesel Range Organics	1.6	0.15	0.1	1		12/04/02 1:08	AR	1421988
Surr: n-Pentacosane	72.8	0	% 20-131	1		12/04/02 1:08	AR	1421988

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
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J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-149

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-02

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS				MCL	OK_GRO	Units: ug/L		
Gasoline Range Organics	19000	0.95	1000	50		12/07/02 13:24	D_R	1420349
Surr: 1,4-Difluorobenzene	100	0	% 62-144	50		12/07/02 13:24	D_R	1420349
Surr: 4-Bromofluorobenzene	103	0	% 44-153	50		12/07/02 13:24	D_R	1420349

Qualifiers:

ND/U - Not Detected at the Reporting Limit

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-149

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-02

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 14:50	TL	1414473
1,1,1-Trichloroethane	ND	0.43	1.0	1		11/29/02 14:50	TL	1414473
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 14:50	TL	1414473
1,1,2-Trichloroethane	ND	0.84	1.0	1		11/29/02 14:50	TL	1414473
1,1-Dichloroethane	ND	0.6	1.0	1		11/29/02 14:50	TL	1414473
1,1-Dichloroethene	330	0.51	1.0	1	E	11/29/02 14:50	TL	1414473
1,2,3-Trichloropropane	ND	0.87	1.0	1		11/29/02 14:50	TL	1414473
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		11/29/02 14:50	TL	1414473
1,2,4-Trimethylbenzene	20	0.28	1.0	1		11/29/02 14:50	TL	1414473
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		11/29/02 14:50	TL	1414473
1,2-Dichlorobenzene	3	0.56	1.0	1		11/29/02 14:50	TL	1414473
1,2-Dichloroethane	ND	0.38	1.0	1		11/29/02 14:50	TL	1414473
1,2-Dichloropropane	ND	0.7	1.0	1		11/29/02 14:50	TL	1414473
1,3,5-Trimethylbenzene	7	0.3	1.0	1		11/29/02 14:50	TL	1414473
1,3-Dichlorobenzene	ND	0.31	1.0	1		11/29/02 14:50	TL	1414473
1,4-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 14:50	TL	1414473
2-Butanone	ND	3.1	25	1		11/29/02 14:50	TL	1414473
2-Hexanone	ND	0.7	50	1		11/29/02 14:50	TL	1414473
4-Methyl-2-pentanone	ND	0.53	50	1		11/29/02 14:50	TL	1414473
Acetone	ND	16	25	1		11/29/02 14:50	TL	1414473
Benzene	160	0.25	1.0	1		11/29/02 14:50	TL	1414473
Bromochloromethane	ND	0.54	1.0	1		11/29/02 14:50	TL	1414473
Bromodichloromethane	ND	0.31	1.0	1		11/29/02 14:50	TL	1414473
Bromoform	ND	0.56	1.0	1		11/29/02 14:50	TL	1414473
Bromomethane	ND	0.9	1.0	1		11/29/02 14:50	TL	1414473
Carbon disulfide	ND	0.42	5.0	1		11/29/02 14:50	TL	1414473
Carbon tetrachloride	ND	0.42	1.0	1		11/29/02 14:50	TL	1414473
Chlorobenzene	ND	0.44	1.0	1		11/29/02 14:50	TL	1414473
Chloroethane	ND	0.76	1.0	1		11/29/02 14:50	TL	1414473
Chloroform	ND	0.39	1.0	1		11/29/02 14:50	TL	1414473
Chloromethane	ND	0.7	1.0	1		11/29/02 14:50	TL	1414473
Dibromochloromethane	ND	0.65	1.0	1		11/29/02 14:50	TL	1414473
Dibromomethane	ND	0.88	1.0	1		11/29/02 14:50	TL	1414473
Dichlorodifluoromethane	ND	0.46	1.0	1		11/29/02 14:50	TL	1414473
Ethyl Ether	ND	1.5	20	1		11/29/02 14:50	TL	1414473
Ethylbenzene	5	0.34	1.0	1		11/29/02 14:50	TL	1414473
Iodomethane	ND	0.49	10	1		11/29/02 14:50	TL	1414473
Isopropylbenzene	94	0.61	5.0	1		11/29/02 14:50	TL	1414473
Methylene chloride	ND	0.94	5.0	1		11/29/02 14:50	TL	1414473
n-Propylbenzene	ND	0.44	5.0	1		11/29/02 14:50	TL	1414473

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
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>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-149

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-02

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	73	0.24	5.0	1		11/29/02 14:50	TL	1414473
Styrene	1	0.31	1.0	1		11/29/02 14:50	TL	1414473
Tetrachloroethene	ND	1	1.0	1		11/29/02 14:50	TL	1414473
Toluene	270	0.54	1.0	1	E	11/29/02 14:50	TL	1414473
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		11/29/02 14:50	TL	1414473
Trichloroethene	26	0.71	1.0	1		11/29/02 14:50	TL	1414473
Vinyl chloride	75000	1500	2000	2000		12/04/02 18:10	JC	1416933
cis-1,2-Dichloroethene	58000	1100	2000	2000		12/04/02 18:10	JC	1416933
cis-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 14:50	TL	1414473
trans-1,2-Dichloroethene	3800	1200	2000	2000		12/04/02 18:10	JC	1416933
trans-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 14:50	TL	1414473
Xylenes, Total	260	0.42	3.0	1		11/29/02 14:50	TL	1414473
Surr: 1,2-Dichloroethane-d4	91.0	0	% 62-130	2000		12/04/02 18:10	JC	1416933
Surr: 1,2-Dichloroethane-d4	96.0	0	% 62-130	1		11/29/02 14:50	TL	1414473
Surr: 4-Bromofluorobenzene	89.0	0	% 70-130	2000		12/04/02 18:10	JC	1416933
Surr: 4-Bromofluorobenzene	110	0	% 70-130	1		11/29/02 14:50	TL	1414473
Surr: Toluene-d8	95.0	0	% 74-122	2000		12/04/02 18:10	JC	1416933
Surr: Toluene-d8	100	0	% 74-122	1		11/29/02 14:50	TL	1414473

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference.



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-149 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-02

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND				MCL	E410.1	Units: mg/L		
Chemical Oxygen Demand	174	2.1	3.0	1		12/10/02 16:50	CV	1424287
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L		
Chloride	1490	16	25	25		12/11/02 11:00	CV	1425263

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
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J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-150 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-03

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	OK_DRO	Units: mg/L			
Diesel Range Organics	0.29	0.15	0.1	1		12/04/02 0:29	AR	1421987
Surr: n-Pentacosane	83.6	0	% 20-131	1		12/04/02 0:29	AR	1421987

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-150 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-03

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS				MCL	OK_GRO	Units: ug/L		
Gasoline Range Organics	20000	0.48	500	25		12/07/02 14:48	D_R	1420351
Surr: 1,4-Difluorobenzene	101	0	% 62-144	25		12/07/02 14:48	D_R	1420351
Surr: 4-Bromofluorobenzene	114	0	% 44-153	25		12/07/02 14:48	D_R	1420351

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-150

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-03

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 15:16	TL	1414474
1,1,1-Trichloroethane	ND	0.43	1.0	1		11/29/02 15:16	TL	1414474
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 15:16	TL	1414474
1,1,2-Trichloroethane	ND	0.84	1.0	1		11/29/02 15:16	TL	1414474
1,1-Dichloroethane	ND	0.6	1.0	1		11/29/02 15:16	TL	1414474
1,1-Dichloroethene	320	0.51	1.0	1	E	11/29/02 15:16	TL	1414474
1,2,3-Trichloropropane	ND	0.87	1.0	1		11/29/02 15:16	TL	1414474
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		11/29/02 15:16	TL	1414474
1,2,4-Trimethylbenzene	20	0.28	1.0	1		11/29/02 15:16	TL	1414474
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		11/29/02 15:16	TL	1414474
1,2-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 15:16	TL	1414474
1,2-Dichloroethane	ND	0.38	1.0	1		11/29/02 15:16	TL	1414474
1,2-Dichloropropane	ND	0.7	1.0	1		11/29/02 15:16	TL	1414474
1,3,5-Trimethylbenzene	8	0.3	1.0	1		11/29/02 15:16	TL	1414474
1,3-Dichlorobenzene	ND	0.31	1.0	1		11/29/02 15:16	TL	1414474
1,4-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 15:16	TL	1414474
2-Butanone	ND	3.1	25	1		11/29/02 15:16	TL	1414474
2-Hexanone	ND	0.7	50	1		11/29/02 15:16	TL	1414474
4-Methyl-2-pentanone	ND	0.53	50	1		11/29/02 15:16	TL	1414474
Acetone	ND	16	25	1		11/29/02 15:16	TL	1414474
Benzene	150	0.25	1.0	1		11/29/02 15:16	TL	1414474
Bromochloromethane	ND	0.54	1.0	1		11/29/02 15:16	TL	1414474
Bromodichloromethane	ND	0.31	1.0	1		11/29/02 15:16	TL	1414474
Bromoform	ND	0.56	1.0	1		11/29/02 15:16	TL	1414474
Bromomethane	ND	0.9	1.0	1		11/29/02 15:16	TL	1414474
Carbon disulfide	ND	0.42	5.0	1		11/29/02 15:16	TL	1414474
Carbon tetrachloride	ND	0.42	1.0	1		11/29/02 15:16	TL	1414474
Chlorobenzene	ND	0.44	1.0	1		11/29/02 15:16	TL	1414474
Chloroethane	ND	0.76	1.0	1		11/29/02 15:16	TL	1414474
Chloroform	ND	0.39	1.0	1		11/29/02 15:16	TL	1414474
Chloromethane	ND	0.7	1.0	1		11/29/02 15:16	TL	1414474
Dibromochloromethane	ND	0.65	1.0	1		11/29/02 15:16	TL	1414474
Dibromomethane	ND	0.88	1.0	1		11/29/02 15:16	TL	1414474
Dichlorodifluoromethane	ND	0.46	1.0	1		11/29/02 15:16	TL	1414474
Ethyl Ether	ND	1.5	20	1		11/29/02 15:16	TL	1414474
Ethylbenzene	5	0.34	1.0	1		11/29/02 15:16	TL	1414474
Iodomethane	ND	0.49	10	1		11/29/02 15:16	TL	1414474
Isopropylbenzene	94	0.61	5.0	1		11/29/02 15:16	TL	1414474
Methylene chloride	ND	0.94	5.0	1		11/29/02 15:16	TL	1414474
n-Propylbenzene	ND	0.44	5.0	1		11/29/02 15:16	TL	1414474

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

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>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-150

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-03

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	83	0.24	5.0	1		11/29/02 15:16	TL	1414474
Styrene	ND	0.31	1.0	1		11/29/02 15:16	TL	1414474
Tetrachloroethene	ND	1	1.0	1		11/29/02 15:16	TL	1414474
Toluene	260	0.54	1.0	1	E	11/29/02 15:16	TL	1414474
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		11/29/02 15:16	TL	1414474
Trichloroethene	26	0.71	1.0	1		11/29/02 15:16	TL	1414474
Vinyl chloride	75000	1500	2000	2000		12/04/02 18:36	JC	1416936
cis-1,2-Dichloroethene	60000	1100	2000	2000		12/04/02 18:36	JC	1416936
cis-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 15:16	TL	1414474
trans-1,2-Dichloroethene	4100	1200	2000	2000		12/04/02 18:36	JC	1416936
trans-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 15:16	TL	1414474
Xylenes, Total	260	0.42	3.0	1	E	11/29/02 15:16	TL	1414474
Surr: 1,2-Dichloroethane-d4	91.0	0	% 62-130	2000		12/04/02 18:36	JC	1416936
Surr: 1,2-Dichloroethane-d4	98.0	0	% 62-130	1		11/29/02 15:16	TL	1414474
Surr: 4-Bromofluorobenzene	89.0	0	% 70-130	2000		12/04/02 18:36	JC	1416936
Surr: 4-Bromofluorobenzene	106	0	% 70-130	1		11/29/02 15:16	TL	1414474
Surr: Toluene-d8	95.0	0	% 74-122	2000		12/04/02 18:36	JC	1416936
Surr: Toluene-d8	100	0	% 74-122	1		11/29/02 15:16	TL	1414474

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-150

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-03

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND				MCL	E410.1	Units: mg/L		
Chemical Oxygen Demand	169	2.1	3.0	1		12/10/02 16:50	CV	1424288
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L		
Chloride	1490	16	25	25		12/11/02 11:00	CV	1425264

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-151 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-04

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	OK_DRO	Units: mg/L			
Diesel Range Organics	1.7	0.15	0.1	1		12/03/02 15:26	AR	1421974
Surr: n-Pentacosane	67.8	0	% 20-131	1		12/03/02 15:26	AR	1421974

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-151

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-04

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS				MCL	OK_GRO	Units: ug/L		
Gasoline Range Organics	4100	0.48	500	25		12/07/02 7:35	D_R	1420328
Surr: 1,4-Difluorobenzene	99.2	0	% 62-144	25		12/07/02 7:35	D_R	1420328
Surr: 4-Bromofluorobenzene	94.2	0	% 44-153	25		12/07/02 7:35	D_R	1420328

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-151

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-04

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L		
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 15:43	TL	1414475
1,1,1-Trichloroethane	ND	0.43	1.0	1		11/29/02 15:43	TL	1414475
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 15:43	TL	1414475
1,1,2-Trichloroethane	ND	0.84	1.0	1		11/29/02 15:43	TL	1414475
1,1-Dichloroethane	ND	0.6	1.0	1		11/29/02 15:43	TL	1414475
1,1-Dichloroethene	20	0.51	1.0	1		11/29/02 15:43	TL	1414475
1,2,3-Trichloropropane	ND	0.87	1.0	1		11/29/02 15:43	TL	1414475
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		11/29/02 15:43	TL	1414475
1,2,4-Trimethylbenzene	36	0.28	1.0	1		11/29/02 15:43	TL	1414475
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		11/29/02 15:43	TL	1414475
1,2-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 15:43	TL	1414475
1,2-Dichloroethane	ND	0.38	1.0	1		11/29/02 15:43	TL	1414475
1,2-Dichloropropane	ND	0.7	1.0	1		11/29/02 15:43	TL	1414475
1,3,5-Trimethylbenzene	7	0.3	1.0	1		11/29/02 15:43	TL	1414475
1,3-Dichlorobenzene	ND	0.31	1.0	1		11/29/02 15:43	TL	1414475
1,4-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 15:43	TL	1414475
2-Butanone	ND	3.1	25	1		11/29/02 15:43	TL	1414475
2-Hexanone	ND	0.7	50	1		11/29/02 15:43	TL	1414475
4-Methyl-2-pentanone	ND	0.53	50	1		11/29/02 15:43	TL	1414475
Acetone	ND	16	25	1		11/29/02 15:43	TL	1414475
Benzene	21	0.25	1.0	1		11/29/02 15:43	TL	1414475
Bromochloromethane	ND	0.54	1.0	1		11/29/02 15:43	TL	1414475
Bromodichloromethane	ND	0.31	1.0	1		11/29/02 15:43	TL	1414475
Bromoform	ND	0.56	1.0	1		11/29/02 15:43	TL	1414475
Bromomethane	ND	0.9	1.0	1		11/29/02 15:43	TL	1414475
Carbon disulfide	ND	0.42	5.0	1		11/29/02 15:43	TL	1414475
Carbon tetrachloride	ND	0.42	1.0	1		11/29/02 15:43	TL	1414475
Chlorobenzene	ND	0.44	1.0	1		11/29/02 15:43	TL	1414475
Chloroethane	ND	0.76	1.0	1		11/29/02 15:43	TL	1414475
Chloroform	ND	0.39	1.0	1		11/29/02 15:43	TL	1414475
Chloromethane	ND	0.7	1.0	1		11/29/02 15:43	TL	1414475
Dibromochloromethane	ND	0.65	1.0	1		11/29/02 15:43	TL	1414475
Dibromomethane	ND	0.88	1.0	1		11/29/02 15:43	TL	1414475
Dichlorodifluoromethane	ND	0.46	1.0	1		11/29/02 15:43	TL	1414475
Ethyl Ether	ND	1.5	20	1		11/29/02 15:43	TL	1414475
Ethylbenzene	28	0.34	1.0	1		11/29/02 15:43	TL	1414475
Iodomethane	ND	0.49	10	1		11/29/02 15:43	TL	1414475
Isopropylbenzene	58	0.61	5.0	1		11/29/02 15:43	TL	1414475
Methylene chloride	ND	0.94	5.0	1		11/29/02 15:43	TL	1414475
n-Propylbenzene	ND	0.44	5.0	1		11/29/02 15:43	TL	1414475

Qualifiers: ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-151

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-04

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	100	0.24	5.0	1		11/29/02 15:43	TL	1414475
Styrene	ND	0.31	1.0	1		11/29/02 15:43	TL	1414475
Tetrachloroethene	ND	1	1.0	1		11/29/02 15:43	TL	1414475
Toluene	300	0.54	1.0	1	E	11/29/02 15:43	TL	1414475
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		11/29/02 15:43	TL	1414475
Trichloroethene	700	360	500	500		12/04/02 17:19	JC	1416927
Vinyl chloride	12000	380	500	500		12/04/02 17:19	JC	1416927
cis-1,2-Dichloroethene	13000	280	500	500		12/04/02 17:19	JC	1416927
cis-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 15:43	TL	1414475
trans-1,2-Dichloroethene	440 J	310	500	500		12/04/02 17:19	JC	1416927
trans-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 15:43	TL	1414475
Xylenes, Total	120	0.42	3.0	1		11/29/02 15:43	TL	1414475
Surr: 1,2-Dichloroethane-d4	96.0	0	% 62-130	500		12/04/02 17:19	JC	1416927
Surr: 1,2-Dichloroethane-d4	100	0	% 62-130	1		11/29/02 15:43	TL	1414475
Surr: 4-Bromofluorobenzene	106	0	% 70-130	1		11/29/02 15:43	TL	1414475
Surr: 4-Bromofluorobenzene	88.0	0	% 70-130	500		12/04/02 17:19	JC	1416927
Surr: Toluene-d8	96.0	0	% 74-122	500		12/04/02 17:19	JC	1416927
Surr: Toluene-d8	100	0	% 74-122	1		11/29/02 15:43	TL	1414475

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

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D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-151

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-04

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND				MCL	E410.1	Units: mg/L		
Chemical Oxygen Demand	76.9	2.1	3.0	1		12/10/02 16:50	CV	1424289
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L		
Chloride	560	6.6	10	10		12/11/02 11:00	CV	1425265

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-152 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-05

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	OK_DRO	Units: mg/L			
Diesel Range Organics	ND	0.15	0.1	1		12/04/02 4:22	AR	1421992
Surr: n-Pentacosane	68.2	0	% 20-131	1		12/04/02 4:22	AR	1421992

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-152 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-05

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			MCL	OK_GRO	Units: ug/L			
Gasoline Range Organics	3800	0.48	500	25		12/07/02 15:16	D_R	1420352
Surr: 1,4-Difluorobenzene	101	0	% 62-144	25		12/07/02 15:16	D_R	1420352
Surr: 4-Bromofluorobenzene	107	0	% 44-153	25		12/07/02 15:16	D_R	1420352

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-152

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-05

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		12/04/02 20:19	JC	1417705
1,1,1-Trichloroethane	ND	0.43	1.0	1		12/04/02 20:19	JC	1417705
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		12/04/02 20:19	JC	1417705
1,1,2-Trichloroethane	ND	0.84	1.0	1		12/04/02 20:19	JC	1417705
1,1-Dichloroethane	ND	0.6	1.0	1		12/04/02 20:19	JC	1417705
1,1-Dichloroethene	15	0.51	1.0	1		12/04/02 20:19	JC	1417705
1,2,3-Trichloropropane	ND	0.87	1.0	1		12/04/02 20:19	JC	1417705
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		12/04/02 20:19	JC	1417705
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		12/04/02 20:19	JC	1417705
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		12/04/02 20:19	JC	1417705
1,2-Dichlorobenzene	ND	0.56	1.0	1		12/04/02 20:19	JC	1417705
1,2-Dichloroethane	ND	0.38	1.0	1		12/04/02 20:19	JC	1417705
1,2-Dichloropropane	ND	0.7	1.0	1		12/04/02 20:19	JC	1417705
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		12/04/02 20:19	JC	1417705
1,3-Dichlorobenzene	ND	0.31	1.0	1		12/04/02 20:19	JC	1417705
1,4-Dichlorobenzene	ND	0.56	1.0	1		12/04/02 20:19	JC	1417705
2-Butanone	ND	3.1	25	1		12/04/02 20:19	JC	1417705
2-Hexanone	ND	0.7	50	1		12/04/02 20:19	JC	1417705
4-Methyl-2-pentanone	ND	0.53	50	1		12/04/02 20:19	JC	1417705
Acetone	ND	16	25	1		12/04/02 20:19	JC	1417705
Benzene	59	0.25	1.0	1		12/04/02 20:19	JC	1417705
Bromochloromethane	ND	0.54	1.0	1		12/04/02 20:19	JC	1417705
Bromodichloromethane	ND	0.31	1.0	1		12/04/02 20:19	JC	1417705
Bromoform	ND	0.56	1.0	1		12/04/02 20:19	JC	1417705
Bromomethane	ND	0.9	1.0	1		12/04/02 20:19	JC	1417705
Carbon disulfide	ND	0.42	5.0	1		12/04/02 20:19	JC	1417705
Carbon tetrachloride	ND	0.42	1.0	1		12/04/02 20:19	JC	1417705
Chlorobenzene	ND	0.44	1.0	1		12/04/02 20:19	JC	1417705
Chloroethane	ND	0.76	1.0	1		12/04/02 20:19	JC	1417705
Chloroform	ND	0.39	1.0	1		12/04/02 20:19	JC	1417705
Chloromethane	ND	0.7	1.0	1		12/04/02 20:19	JC	1417705
Dibromochloromethane	ND	0.65	1.0	1		12/04/02 20:19	JC	1417705
Dibromomethane	ND	0.88	1.0	1		12/04/02 20:19	JC	1417705
Dichlorodifluoromethane	ND	0.46	1.0	1		12/04/02 20:19	JC	1417705
Ethyl Ether	ND	1.5	20	1		12/04/02 20:19	JC	1417705
Ethylbenzene	1	0.34	1.0	1		12/04/02 20:19	JC	1417705
Iodomethane	ND	0.49	10	1		12/04/02 20:19	JC	1417705
Isopropylbenzene	ND	0.61	5.0	1		12/04/02 20:19	JC	1417705
Methylene chloride	ND	0.94	5.0	1		12/04/02 20:19	JC	1417705
n-Propylbenzene	ND	0.44	5.0	1		12/04/02 20:19	JC	1417705

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-152

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-05

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		12/04/02 20:19	JC	1417705
Styrene	ND	0.31	1.0	1		12/04/02 20:19	JC	1417705
Tetrachloroethene	ND	1	1.0	1		12/04/02 20:19	JC	1417705
Toluene	48	0.54	1.0	1		12/04/02 20:19	JC	1417705
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		12/04/02 20:19	JC	1417705
Trichloroethene	1	0.71	1.0	1		12/04/02 20:19	JC	1417705
Vinyl chloride	19000	380	500	500		12/04/02 19:02	JC	1416938
cis-1,2-Dichloroethene	9800	280	500	500		12/04/02 19:02	JC	1416938
cis-1,3-Dichloropropene	ND	0.48	1.0	1		12/04/02 20:19	JC	1417705
trans-1,2-Dichloroethene	420 J	310	500	500		12/04/02 19:02	JC	1416938
trans-1,3-Dichloropropene	ND	0.48	1.0	1		12/04/02 20:19	JC	1417705
Xylenes, Total	6	0.42	3.0	1		12/04/02 20:19	JC	1417705
Surr: 1,2-Dichloroethane-d4	92.0	0	% 62-130	1		12/04/02 20:19	JC	1417705
Surr: 1,2-Dichloroethane-d4	88.0	0	% 62-130	500		12/04/02 19:02	JC	1416938
Surr: 4-Bromofluorobenzene	92.0	0	% 70-130	1		12/04/02 20:19	JC	1417705
Surr: 4-Bromofluorobenzene	92.0	0	% 70-130	500		12/04/02 19:02	JC	1416938
Surr: Toluene-d8	96.0	0	% 74-122	500		12/04/02 19:02	JC	1416938
Surr: Toluene-d8	92.0	0	% 74-122	1		12/04/02 20:19	JC	1417705

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-152

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-05

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND				MCL	E410.1	Units: mg/L		
Chemical Oxygen Demand	71.8	2.1	3.0	1		12/10/02 16:50	CV	1424293
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L		
Chloride	595	6.6	10	10		12/11/02 11:00	CV	1425268

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and POL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-153 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-06

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	OK_DRO	Units: mg/L			
Diesel Range Organics	0.25	0.15	0.1	1		12/04/02 5:00	AR	1421993
Surr: n-Pentacosane	71.8	0	% 20-131	1		12/04/02 5:00	AR	1421993

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-153

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-06

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			MCL	OK_GRO	Units: ug/L			
Gasoline Range Organics	4300	1.9	2000	100		12/07/02 15:44	D_R	1420353
Surr: 1,4-Difluorobenzene	101	0	% 62-144	100		12/07/02 15:44	D_R	1420353
Surr: 4-Bromofluorobenzene	107	0	% 44-153	100		12/07/02 15:44	D_R	1420353

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQI

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
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Client Sample ID GW-17303-112602-MM-153 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-06

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 17:31	TL	1414481
1,1,1-Trichloroethane	ND	0.43	1.0	1		11/29/02 17:31	TL	1414481
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 17:31	TL	1414481
1,1,2-Trichloroethane	3	0.84	1.0	1		11/29/02 17:31	TL	1414481
1,1-Dichloroethane	2	0.6	1.0	1		11/29/02 17:31	TL	1414481
1,1-Dichloroethene	33	0.51	1.0	1		11/29/02 17:31	TL	1414481
1,2,3-Trichloropropane	ND	0.87	1.0	1		11/29/02 17:31	TL	1414481
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		11/29/02 17:31	TL	1414481
1,2,4-Trimethylbenzene	3	0.28	1.0	1		11/29/02 17:31	TL	1414481
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		11/29/02 17:31	TL	1414481
1,2-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 17:31	TL	1414481
1,2-Dichloroethane	4	0.38	1.0	1		11/29/02 17:31	TL	1414481
1,2-Dichloropropane	ND	0.7	1.0	1		11/29/02 17:31	TL	1414481
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		11/29/02 17:31	TL	1414481
1,3-Dichlorobenzene	ND	0.31	1.0	1		11/29/02 17:31	TL	1414481
1,4-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 17:31	TL	1414481
2-Butanone	ND	3.1	25	1		11/29/02 17:31	TL	1414481
2-Hexanone	ND	0.7	50	1		11/29/02 17:31	TL	1414481
4-Methyl-2-pentanone	ND	0.53	50	1		11/29/02 17:31	TL	1414481
Acetone	ND	16	25	1		11/29/02 17:31	TL	1414481
Benzene	180	0.25	1.0	1		11/29/02 17:31	TL	1414481
Bromochloromethane	ND	0.54	1.0	1		11/29/02 17:31	TL	1414481
Bromodichloromethane	ND	0.31	1.0	1		11/29/02 17:31	TL	1414481
Bromoform	ND	0.56	1.0	1		11/29/02 17:31	TL	1414481
Bromomethane	ND	0.9	1.0	1		11/29/02 17:31	TL	1414481
Carbon disulfide	ND	0.42	5.0	1		11/29/02 17:31	TL	1414481
Carbon tetrachloride	ND	0.42	1.0	1		11/29/02 17:31	TL	1414481
Chlorobenzene	ND	0.44	1.0	1		11/29/02 17:31	TL	1414481
Chloroethane	ND	0.76	1.0	1		11/29/02 17:31	TL	1414481
Chloroform	1	0.39	1.0	1		11/29/02 17:31	TL	1414481
Chloromethane	ND	0.7	1.0	1		11/29/02 17:31	TL	1414481
Dibromochloromethane	ND	0.65	1.0	1		11/29/02 17:31	TL	1414481
Dibromomethane	ND	0.88	1.0	1		11/29/02 17:31	TL	1414481
Dichlorodifluoromethane	ND	0.46	1.0	1		11/29/02 17:31	TL	1414481
Ethyl Ether	ND	1.5	20	1		11/29/02 17:31	TL	1414481
Ethylbenzene	ND	0.34	1.0	1		11/29/02 17:31	TL	1414481
Iodomethane	ND	0.49	10	1		11/29/02 17:31	TL	1414481
Isopropylbenzene	ND	0.61	5.0	1		11/29/02 17:31	TL	1414481
Methylene chloride	ND	0.94	5.0	1		11/29/02 17:31	TL	1414481
n-Propylbenzene	ND	0.44	5.0	1		11/29/02 17:31	TL	1414481

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
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(713) 660-0901

Client Sample ID GW-17303-112602-MM-153

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-06

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		11/29/02 17:31	TL	1414481
Styrene	ND	0.31	1.0	1		11/29/02 17:31	TL	1414481
Tetrachloroethene	ND	1	1.0	1		11/29/02 17:31	TL	1414481
Toluene	210	0.54	1.0	1	E	11/29/02 17:31	TL	1414481
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		11/29/02 17:31	TL	1414481
Trichloroethene	150	0.71	1.0	1		11/29/02 17:31	TL	1414481
Vinyl chloride	100000	750	1000	1000		12/06/02 16:44	LT	1421007
cis-1,2-Dichloroethene	7400	560	1000	1000		12/06/02 16:44	LT	1421007
cis-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 17:31	TL	1414481
trans-1,2-Dichloroethene	600	0.62	1.0	1	E	11/29/02 17:31	TL	1414481
trans-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 17:31	TL	1414481
Xylenes, Total	196	0.42	3.0	1		11/29/02 17:31	TL	1414481
Surr: 1,2-Dichloroethane-d4	102	0	% 62-130	1		11/29/02 17:31	TL	1414481
Surr: 1,2-Dichloroethane-d4	94.0	0	% 62-130	1000		12/06/02 16:44	LT	1421007
Surr: 4-Bromofluorobenzene	98.0	0	% 70-130	1		11/29/02 17:31	TL	1414481
Surr: 4-Bromofluorobenzene	96.0	0	% 70-130	1000		12/06/02 16:44	LT	1421007
Surr: Toluene-d8	100	0	% 74-122	1000		12/06/02 16:44	LT	1421007
Surr: Toluene-d8	102	0	% 74-122	1		11/29/02 17:31	TL	1414481

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-153 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-06

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND				MCL	E410.1	Units: mg/L		
Chemical Oxygen Demand	146	2.1	3.0	1		12/10/02 16:50	CV	1424294
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L		
Chloride	2010	16	25	25		12/11/02 11:00	CV	1425270

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
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Client Sample ID GW-17303-112602-MM-154

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-07

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				MCL	OK_DRO	Units: mg/L		
Diesel Range Organics	0.66	0.15	0.1	1		12/04/02 5:39	AR	1421994
Surr: n-Pentacosane	76.6	0	% 20-131	1		12/04/02 5:39	AR	1421994

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



HOUSTON LABORATORY
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(713) 660-0901

Client Sample ID GW-17303-112602-MM-154 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-07

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			MCL	OK_GRO	Units: ug/L			
Gasoline Range Organics	47000	4.8	5000	250		12/07/02 16:12	D_R	1420354
Surr: 1,4-Difluorobenzene	100	0	% 62-144	250		12/07/02 16:12	D_R	1420354
Surr: 4-Bromofluorobenzene	107	0	% 44-153	250		12/07/02 16:12	D_R	1420354

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-154

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-07

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 17:58	TL	1414484
1,1,1-Trichloroethane	ND	0.43	1.0	1		11/29/02 17:58	TL	1414484
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 17:58	TL	1414484
1,1,2-Trichloroethane	ND	0.84	1.0	1		11/29/02 17:58	TL	1414484
1,1-Dichloroethane	ND	0.6	1.0	1		11/29/02 17:58	TL	1414484
1,1-Dichloroethene	1300	0.51	1.0	1	E	11/29/02 17:58	TL	1414484
1,2,3-Trichloropropane	ND	0.87	1.0	1		11/29/02 17:58	TL	1414484
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		11/29/02 17:58	TL	1414484
1,2,4-Trimethylbenzene	44	0.28	1.0	1		11/29/02 17:58	TL	1414484
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		11/29/02 17:58	TL	1414484
1,2-Dichlorobenzene	2	0.56	1.0	1		11/29/02 17:58	TL	1414484
1,2-Dichloroethane	ND	0.38	1.0	1		11/29/02 17:58	TL	1414484
1,2-Dichloropropane	ND	0.7	1.0	1		11/29/02 17:58	TL	1414484
1,3,5-Trimethylbenzene	10	0.3	1.0	1		11/29/02 17:58	TL	1414484
1,3-Dichlorobenzene	ND	0.31	1.0	1		11/29/02 17:58	TL	1414484
1,4-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 17:58	TL	1414484
2-Butanone	ND	3.1	25	1		11/29/02 17:58	TL	1414484
2-Hexanone	ND	0.7	50	1		11/29/02 17:58	TL	1414484
4-Methyl-2-pentanone	ND	0.53	50	1		11/29/02 17:58	TL	1414484
Acetone	ND	16	25	1		11/29/02 17:58	TL	1414484
Benzene	32	0.25	1.0	1		11/29/02 17:58	TL	1414484
Bromochloromethane	ND	0.54	1.0	1		11/29/02 17:58	TL	1414484
Bromodichloromethane	ND	0.31	1.0	1		11/29/02 17:58	TL	1414484
Bromoform	ND	0.56	1.0	1		11/29/02 17:58	TL	1414484
Bromomethane	ND	0.9	1.0	1		11/29/02 17:58	TL	1414484
Carbon disulfide	ND	0.42	5.0	1		11/29/02 17:58	TL	1414484
Carbon tetrachloride	ND	0.42	1.0	1		11/29/02 17:58	TL	1414484
Chlorobenzene	ND	0.44	1.0	1		11/29/02 17:58	TL	1414484
Chloroethane	ND	0.76	1.0	1		11/29/02 17:58	TL	1414484
Chloroform	1	0.39	1.0	1		11/29/02 17:58	TL	1414484
Chloromethane	ND	0.7	1.0	1		11/29/02 17:58	TL	1414484
Dibromochloromethane	ND	0.65	1.0	1		11/29/02 17:58	TL	1414484
Dibromomethane	ND	0.88	1.0	1		11/29/02 17:58	TL	1414484
Dichlorodifluoromethane	ND	0.46	1.0	1		11/29/02 17:58	TL	1414484
Ethyl Ether	ND	1.5	20	1		11/29/02 17:58	TL	1414484
Ethylbenzene	170	0.34	1.0	1		11/29/02 17:58	TL	1414484
Iodomethane	ND	0.49	10	1		11/29/02 17:58	TL	1414484
Isopropylbenzene	16	0.61	5.0	1		11/29/02 17:58	TL	1414484
Methylene chloride	ND	0.94	5.0	1		11/29/02 17:58	TL	1414484
n-Propylbenzene	5	0.44	5.0	1		11/29/02 17:58	TL	1414484

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-154

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-07

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	20	0.24	5.0	1		11/29/02 17:58	TL	1414484
Styrene	ND	0.31	1.0	1		11/29/02 17:58	TL	1414484
Tetrachloroethene	ND	1	1.0	1		11/29/02 17:58	TL	1414484
Toluene	1400 J	1100	2000	2000		12/06/02 16:17	LT	1421006
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		11/29/02 17:58	TL	1414484
Trichloroethene	24000	1400	2000	2000		12/06/02 16:17	LT	1421006
Vinyl chloride	17000	1500	2000	2000		12/06/02 16:17	LT	1421006
cis-1,2-Dichloroethene	76000	1100	2000	2000		12/06/02 16:17	LT	1421006
cis-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 17:58	TL	1414484
trans-1,2-Dichloroethene	8400	1200	2000	2000		12/06/02 16:17	LT	1421006
trans-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 17:58	TL	1414484
Xylenes, Total	1360	0.42	3.0	1	E	11/29/02 17:58	TL	1414484
Surr: 1,2-Dichloroethane-d4	98.0	0	% 62-130	1		11/29/02 17:58	TL	1414484
Surr: 1,2-Dichloroethane-d4	100	0	% 62-130	2000		12/06/02 16:17	LT	1421006
Surr: 4-Bromofluorobenzene	104	0	% 70-130	1		11/29/02 17:58	TL	1414484
Surr: 4-Bromofluorobenzene	94.0	0	% 70-130	2000		12/06/02 16:17	LT	1421006
Surr: Toluene-d8	100	0	% 74-122	2000		12/06/02 16:17	LT	1421006
Surr: Toluene-d8	98.0	0	% 74-122	1		11/29/02 17:58	TL	1414484

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-154

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-07

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND				MCL	E410.1	Units: mg/L		
Chemical Oxygen Demand	126	2.1	3.0	1		12/10/02 16:50	CV	1424295
CHLORIDE, TOTAL				MCL	E325.3	Units: mg/L		
Chloride	1580	16	25	25		12/11/02 11:00	CV	1425271

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



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Client Sample ID GW-17303-112602-MM-155 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-08

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	OK_DRO	Units: mg/L			
Diesel Range Organics	ND	0.15	0.1	1		12/04/02 6:17	AR	1421995
Surr: n-Pentacosane	77.0	0	% 20-131	1		12/04/02 6:17	AR	1421995

Prep Method	Prep Date	Prep Initials
SW3510C	11/29/2002 9:52	KL

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



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HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-155 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-08

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS				MCL	OK_GRO	Units: ug/L		
Gasoline Range Organics	ND	0.019	20	1		12/07/02 16:40	D_R	1420355
Surr: 1,4-Difluorobenzene	102	0 %	62-144	1		12/07/02 16:40	D_R	1420355
Surr: 4-Bromofluorobenzene	114	0 %	44-153	1		12/07/02 16:40	D_R	1420355

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-155

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-08

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		12/05/02 20:29	TL	1419265
1,1,1-Trichloroethane	ND	0.43	1.0	1		12/05/02 20:29	TL	1419265
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		12/05/02 20:29	TL	1419265
1,1,2-Trichloroethane	ND	0.84	1.0	1		12/05/02 20:29	TL	1419265
1,1-Dichloroethane	ND	0.6	1.0	1		12/05/02 20:29	TL	1419265
1,1-Dichloroethene	ND	0.51	1.0	1		12/05/02 20:29	TL	1419265
1,2,3-Trichloropropane	ND	0.87	1.0	1		12/05/02 20:29	TL	1419265
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		12/05/02 20:29	TL	1419265
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		12/05/02 20:29	TL	1419265
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		12/05/02 20:29	TL	1419265
1,2-Dichlorobenzene	ND	0.56	1.0	1		12/05/02 20:29	TL	1419265
1,2-Dichloroethane	ND	0.38	1.0	1		12/05/02 20:29	TL	1419265
1,2-Dichloropropane	ND	0.7	1.0	1		12/05/02 20:29	TL	1419265
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		12/05/02 20:29	TL	1419265
1,3-Dichlorobenzene	ND	0.31	1.0	1		12/05/02 20:29	TL	1419265
1,4-Dichlorobenzene	ND	0.56	1.0	1		12/05/02 20:29	TL	1419265
2-Butanone	ND	3.1	25	1		12/05/02 20:29	TL	1419265
2-Hexanone	ND	0.7	50	1		12/05/02 20:29	TL	1419265
4-Methyl-2-pentanone	ND	0.53	50	1		12/05/02 20:29	TL	1419265
Acetone	ND	16	25	1		12/05/02 20:29	TL	1419265
Benzene	ND	0.25	1.0	1		12/05/02 20:29	TL	1419265
Bromochloromethane	ND	0.54	1.0	1		12/05/02 20:29	TL	1419265
Bromodichloromethane	ND	0.31	1.0	1		12/05/02 20:29	TL	1419265
Bromoform	ND	0.56	1.0	1		12/05/02 20:29	TL	1419265
Bromomethane	ND	0.9	1.0	1		12/05/02 20:29	TL	1419265
Carbon disulfide	ND	0.42	5.0	1		12/05/02 20:29	TL	1419265
Carbon tetrachloride	ND	0.42	1.0	1		12/05/02 20:29	TL	1419265
Chlorobenzene	ND	0.44	1.0	1		12/05/02 20:29	TL	1419265
Chloroethane	ND	0.76	1.0	1		12/05/02 20:29	TL	1419265
Chloroform	ND	0.39	1.0	1		12/05/02 20:29	TL	1419265
Chloromethane	ND	0.7	1.0	1		12/05/02 20:29	TL	1419265
Dibromochloromethane	ND	0.65	1.0	1		12/05/02 20:29	TL	1419265
Dibromomethane	ND	0.88	1.0	1		12/05/02 20:29	TL	1419265
Dichlorodifluoromethane	ND	0.46	1.0	1		12/05/02 20:29	TL	1419265
Ethyl Ether	ND	1.5	20	1		12/05/02 20:29	TL	1419265
Ethylbenzene	ND	0.34	1.0	1		12/05/02 20:29	TL	1419265
Iodomethane	ND	0.49	10	1		12/05/02 20:29	TL	1419265
Isopropylbenzene	ND	0.61	5.0	1		12/05/02 20:29	TL	1419265
Methylene chloride	ND	0.94	5.0	1		12/05/02 20:29	TL	1419265
n-Propylbenzene	ND	0.44	5.0	1		12/05/02 20:29	TL	1419265

Qualifiers: ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID GW-17303-112602-MM-155

Collected: 11/26/2002 0:00

SPL Sample ID: 02110844-08

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		12/05/02 20:29	TL	1419265
Styrene	ND	0.31	1.0	1		12/05/02 20:29	TL	1419265
Tetrachloroethene	ND	1	1.0	1		12/05/02 20:29	TL	1419265
Toluene	ND	0.54	1.0	1		12/05/02 20:29	TL	1419265
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		12/05/02 20:29	TL	1419265
Trichloroethene	ND	0.71	1.0	1		12/05/02 20:29	TL	1419265
Vinyl chloride	ND	0.75	1.0	1		12/05/02 20:29	TL	1419265
cis-1,2-Dichloroethene	ND	0.56	1.0	1		12/05/02 20:29	TL	1419265
cis-1,3-Dichloropropene	ND	0.48	1.0	1		12/05/02 20:29	TL	1419265
trans-1,2-Dichloroethene	ND	0.62	1.0	1		12/05/02 20:29	TL	1419265
trans-1,3-Dichloropropene	ND	0.48	1.0	1		12/05/02 20:29	TL	1419265
Xylenes, Total	ND	0.42	3.0	1		12/05/02 20:29	TL	1419265
Surr: 1,2-Dichloroethane-d4	94.0	0	% 62-130	1		12/05/02 20:29	TL	1419265
Surr: 4-Bromofluorobenzene	88.0	0	% 70-130	1		12/05/02 20:29	TL	1419265
Surr: Toluene-d8	94.0	0	% 74-122	1		12/05/02 20:29	TL	1419265

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

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MI - Matrix Interference



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Client Sample ID GW-17303-112602-MM-155 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-08

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CHEMICAL OXYGEN DEMAND					MCL	E410.1	Units: mg/L	
Chemical Oxygen Demand	18	2.1	3.0	1		12/10/02 16:50	CV	1424296
CHLORIDE, TOTAL					MCL	E325.3	Units: mg/L	
Chloride	1530	16	25	25		12/11/02 11:00	CV	1425272

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
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J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
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Client Sample ID TB-17303-112602-MM-156 12/10/01 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-09

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L			
1,1,1,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 13:56	TL	1414471
1,1,1-Trichloroethane	ND	0.43	1.0	1		11/29/02 13:56	TL	1414471
1,1,2,2-Tetrachloroethane	ND	0.4	1.0	1		11/29/02 13:56	TL	1414471
1,1,2-Trichloroethane	ND	0.84	1.0	1		11/29/02 13:56	TL	1414471
1,1-Dichloroethane	ND	0.6	1.0	1		11/29/02 13:56	TL	1414471
1,1-Dichloroethene	ND	0.51	1.0	1		11/29/02 13:56	TL	1414471
1,2,3-Trichloropropane	ND	0.87	1.0	1		11/29/02 13:56	TL	1414471
1,2,4-Trichlorobenzene	ND	0.49	1.0	1		11/29/02 13:56	TL	1414471
1,2,4-Trimethylbenzene	ND	0.28	1.0	1		11/29/02 13:56	TL	1414471
1,2-Dibromo-3-chloropropane	ND	0.68	1.0	1		11/29/02 13:56	TL	1414471
1,2-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 13:56	TL	1414471
1,2-Dichloroethane	ND	0.38	1.0	1		11/29/02 13:56	TL	1414471
1,2-Dichloropropane	ND	0.7	1.0	1		11/29/02 13:56	TL	1414471
1,3,5-Trimethylbenzene	ND	0.3	1.0	1		11/29/02 13:56	TL	1414471
1,3-Dichlorobenzene	ND	0.31	1.0	1		11/29/02 13:56	TL	1414471
1,4-Dichlorobenzene	ND	0.56	1.0	1		11/29/02 13:56	TL	1414471
2-Butanone	ND	3.1	25	1		11/29/02 13:56	TL	1414471
2-Hexanone	ND	0.7	50	1		11/29/02 13:56	TL	1414471
4-Methyl-2-pentanone	ND	0.53	50	1		11/29/02 13:56	TL	1414471
Acetone	ND	16	25	1		11/29/02 13:56	TL	1414471
Benzene	ND	0.25	1.0	1		11/29/02 13:56	TL	1414471
Bromochloromethane	ND	0.54	1.0	1		11/29/02 13:56	TL	1414471
Bromodichloromethane	ND	0.31	1.0	1		11/29/02 13:56	TL	1414471
Bromoform	ND	0.56	1.0	1		11/29/02 13:56	TL	1414471
Bromomethane	ND	0.9	1.0	1		11/29/02 13:56	TL	1414471
Carbon disulfide	ND	0.42	5.0	1		11/29/02 13:56	TL	1414471
Carbon tetrachloride	ND	0.42	1.0	1		11/29/02 13:56	TL	1414471
Chlorobenzene	ND	0.44	1.0	1		11/29/02 13:56	TL	1414471
Chloroethane	ND	0.76	1.0	1		11/29/02 13:56	TL	1414471
Chloroform	ND	0.39	1.0	1		11/29/02 13:56	TL	1414471
Chloromethane	ND	0.7	1.0	1		11/29/02 13:56	TL	1414471
Dibromochloromethane	ND	0.65	1.0	1		11/29/02 13:56	TL	1414471
Dibromomethane	ND	0.88	1.0	1		11/29/02 13:56	TL	1414471
Dichlorodifluoromethane	ND	0.46	1.0	1		11/29/02 13:56	TL	1414471
Ethyl Ether	ND	1.5	20	1		11/29/02 13:56	TL	1414471
Ethylbenzene	ND	0.34	1.0	1		11/29/02 13:56	TL	1414471
Iodomethane	ND	0.49	10	1		11/29/02 13:56	TL	1414471
Isopropylbenzene	ND	0.61	5.0	1		11/29/02 13:56	TL	1414471
Methylene chloride	ND	0.94	5.0	1		11/29/02 13:56	TL	1414471
n-Propylbenzene	ND	0.44	5.0	1		11/29/02 13:56	TL	1414471

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



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(713) 660-0901

Client Sample ID TB-17303-112602-MM-156 12/10/01 Collected: 11/26/2002 0:00 SPL Sample ID: 02110844-09

Site: #17303-20/WRC

Analyses/Method	Result	MDL	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
Naphthalene	ND	0.24	5.0	1		11/29/02 13:56	TL	1414471
Styrene	ND	0.31	1.0	1		11/29/02 13:56	TL	1414471
Tetrachloroethene	ND	1	1.0	1		11/29/02 13:56	TL	1414471
Toluene	ND	0.54	1.0	1		11/29/02 13:56	TL	1414471
trans-1,4-Dichloro-2-Butene	ND	6.6	50	1		11/29/02 13:56	TL	1414471
Trichloroethene	ND	0.71	1.0	1		11/29/02 13:56	TL	1414471
Vinyl chloride	ND	0.75	1.0	1		11/29/02 13:56	TL	1414471
cis-1,2-Dichloroethene	ND	0.56	1.0	1		11/29/02 13:56	TL	1414471
cis-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 13:56	TL	1414471
trans-1,2-Dichloroethene	ND	0.62	1.0	1		11/29/02 13:56	TL	1414471
trans-1,3-Dichloropropene	ND	0.48	1.0	1		11/29/02 13:56	TL	1414471
Xylenes, Total	ND	0.42	3.0	1		11/29/02 13:56	TL	1414471
Surr: 1,2-Dichloroethane-d4	106	0	% 62-130	1		11/29/02 13:56	TL	1414471
Surr: 4-Bromofluorobenzene	88.0	0	% 70-130	1		11/29/02 13:56	TL	1414471
Surr: Toluene-d8	104	0	% 74-122	1		11/29/02 13:56	TL	1414471

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
J - Estimated Value between MDL and PQL
E - Concentrations exceeding Calibration range of Instrument

Quality Control Documentation



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20/WRC

Analysis: Diesel Range Organics
Method: OK_DRO

WorkOrder: 02110844
Lab Batch ID: 24043

Method Blank

Samples in Analytical Batch:

RunID: HP_V_021203D-1421973 Units: mg/L
Analysis Date: 12/03/2002 14:47 Analyst: AR
Preparation Date: 11/29/2002 9:52 Prep By: KL Method SW3510C

Lab Sample ID	Client Sample ID
02110844-01C	GW-17303-112602-MM-148
02110844-02C	GW-17303-112602-MM-149
02110844-03C	GW-17303-112602-MM-150
02110844-04C	GW-17303-112602-MM-151
02110844-05C	GW-17303-112602-MM-152
02110844-06C	GW-17303-112602-MM-153
02110844-07C	GW-17303-112602-MM-154
02110844-08C	GW-17303-112602-MM-155

Analyte	Result	Qual	Rep Limit
Diesel Range Organics	ND		0.10
Surr: n-Pentacosane	77.2		20-131

Laboratory Control Sample (LCS)

RunID: HP_V_021203D-1421983 Units: mg/L
Analysis Date: 12/03/2002 21:54 Analyst: AR
Preparation Date: 11/29/2002 9:52 Prep By: KL Method SW3510C

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Diesel Range Organics	2.5	2.01	80	60	140

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110844-04
RunID: HP_V_021203D-1421996 Units: mg/L
Analysis Date: 12/04/2002 6:55 Analyst: AR
Preparation Date: 11/29/2002 9:52 Prep By: KL Method SW3510C

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Diesel Range Organics	1.67	10	5.94	42.7	10	8.61	69.4	47.7 *	39	21	175

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20/WRC

Analysis: Gasoline Range Organics
Method: OK_GRO

WorkOrder: 02110844
Lab Batch ID: R72853

Method Blank

RunID: VARE_021207A-1420325 Units: ug/L
Analysis Date: 12/07/2002 5:42 Analyst: D_R

Analyte	Result	Qual	Rep Limit
Gasoline Range Organics	8.34	BJ	20
Surr: 1,4-Difluorobenzene	101.6		62-144
Surr: 4-Bromofluorobenzene	103.3		44-153

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02110844-01B	GW-17303-112602-MM-148
02110844-02B	GW-17303-112602-MM-149
02110844-03B	GW-17303-112602-MM-150
02110844-04B	GW-17303-112602-MM-151
02110844-05B	GW-17303-112602-MM-152
02110844-06B	GW-17303-112602-MM-153
02110844-07B	GW-17303-112602-MM-154
02110844-08B	GW-17303-112602-MM-155

Laboratory Control Sample (LCS)

RunID: VARE_021207A-1419466 Units: ug/L
Analysis Date: 12/07/2002 5:17 Analyst: D_R

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1000	919	92	60	140

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110844-04
RunID: VARE_021207A-1420326 Units: ug/L
Analysis Date: 12/07/2002 6:10 Analyst: D_R

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	4050	25000	24500	81.9	25000	25400	85.4	4.29	36	36	160

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20/WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110844
Lab Batch ID: R72607

Method Blank

RunID: K_021129A-1414470 Units: ug/L
Analysis Date: 11/29/2002 13:29 Analyst: TL

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02110844-01A	GW-17303-112602-MM-148
02110844-02A	GW-17303-112602-MM-149
02110844-03A	GW-17303-112602-MM-150
02110844-04A	GW-17303-112602-MM-151
02110844-06A	GW-17303-112602-MM-153
02110844-07A	GW-17303-112602-MM-154
02110844-09A	TB-17303-112602-MM-156 1

Analyte	Result	Qual	Rep Limit
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-chloropropane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Butanone	ND		25
2-Hexanone	ND		50
4-Methyl-2-pentanone	ND		50
Acetone	ND		25
Benzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethyl Ether	ND		20
Ethylbenzene	ND		1.0
Iodomethane	ND		10
Isopropylbenzene	ND		5.0
Methylene chloride	ND		5.0
n-Propylbenzene	ND		5.0
Naphthalene	ND		5.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,4-Dichloro-2-Butene	ND		50
Trichloroethene	ND		1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20/WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110844
Lab Batch ID: R72607

Method Blank

RunID: K_021129A-1414470 Units: ug/L
Analysis Date: 11/29/2002 13:29 Analyst: TL

Analyte	Result	Qual	Rep Limit
Vinyl chloride	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Xylenes, Total	ND		3.0
Surr: 1,2-Dichloroethane-d4	98.0		62-130
Surr: 4-Bromofluorobenzene	88.0		70-130
Surr: Toluene-d8	102.0		74-122

Laboratory Control Sample (LCS)

RunID: K_021129A-1414469 Units: ug/L
Analysis Date: 11/29/2002 12:22 Analyst: TL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	53	106	61	145
Benzene	50	46	92	76	127
Chlorobenzene	50	49	98	70	130
Toluene	50	46	92	70	129
Trichloroethene	50	53	106	60	140

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110844-04
RunID: K_021129A-1414476 Units: ug/L
Analysis Date: 11/29/2002 16:10 Analyst: TL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	20.0	50	72	104	50	63	86.0	19 *	14	61	145
Benzene	21.0	50	67	92	50	60	78.0	16 *	11	76	127
Chlorobenzene	ND	50	50	100	50	44	88.0	13	13	70	130

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20/WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110844
Lab Batch ID: R72607

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110844-04
RunID: K_021129A-1414476 Units: ug/L
Analysis Date: 11/29/2002 16:10 Analyst: TL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Toluene	300	50	360	N/C	50	320	N/C	100 *	13	70	129
Trichloroethene	1000	50	1200	N/C	50	1000	N/C	200 *	14	60	140

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20/WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110844
Lab Batch ID: R72735

Method Blank

RunID: Q_021204A-1416899 Units: ug/L
Analysis Date: 12/04/2002 12:19 Analyst: JC

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02110844-01A	GW-17303-112602-MM-148
02110844-02A	GW-17303-112602-MM-149
02110844-03A	GW-17303-112602-MM-150
02110844-04A	GW-17303-112602-MM-151
02110844-05A	GW-17303-112602-MM-152

Analyte	Result	Qual	Rep Limit
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-chloropropane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Butanone	ND		25
2-Hexanone	ND		50
4-Methyl-2-pentanone	ND		50
Acetone	ND		25
Benzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethyl Ether	ND		20
Ethylbenzene	ND		1.0
Iodomethane	ND		10
Isopropylbenzene	ND		5.0
Methylene chloride	ND		5.0
n-Propylbenzene	ND		5.0
Naphthalene	ND		5.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,4-Dichloro-2-Butene	ND		50
Trichloroethene	ND		1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20/WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110844
Lab Batch ID: R72735

Method Blank

RunID: Q_021204A-1416899 Units: ug/L
Analysis Date: 12/04/2002 12:19 Analyst: JC

Analyte	Result	Qual	Rep Limit
Vinyl chloride	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Xylenes, Total	ND		3.0
Surr: 1,2-Dichloroethane-d4	90.0		62-130
Surr: 4-Bromofluorobenzene	92.0		70-130
Surr: Toluene-d8	98.0		74-122

Laboratory Control Sample (LCS)

RunID: Q_021204A-1416896 Units: ug/L
Analysis Date: 12/04/2002 11:02 Analyst: JC

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	50	100	61	145
Benzene	50	51	102	76	127
Chlorobenzene	50	51	102	70	130
Toluene	50	50	100	70	129
Trichloroethene	50	55	110	60	140

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02120071-01
RunID: Q_021204A-1416907 Units: ug/L
Analysis Date: 12/04/2002 13:11 Analyst: JC

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	50	50	100	50	49	98.0	2	14	61	145
Benzene	ND	50	50	100	50	50	100	0	11	76	127
Chlorobenzene	ND	50	50	100	50	50	100	0	13	70	130

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20/WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110844
Lab Batch ID: R72735

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02120071-01
RunID: Q_021204A-1416907 Units: ug/L
Analysis Date: 12/04/2002 13:11 Analyst: JC

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Toluene	ND	50	48	96	50	48	96.0	0	13	70	129
Trichloroethene	ND	50	53	106	50	51	102	4	14	60	140

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20/WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110844
Lab Batch ID: R72847

Method Blank

Samples in Analytical Batch:

RunID: Q_021205C-1419264 Units: ug/L
Analysis Date: 12/05/2002 13:12 Analyst: TL

Lab Sample ID Client Sample ID
02110844-08A GW-17303-112602-MM-155

Analyte	Result	Qual	Rep Limit
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-chloropropane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Butanone	ND		25
2-Hexanone	ND		50
4-Methyl-2-pentanone	ND		50
Acetone	ND		25
Benzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		5.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethyl Ether	ND		20
Ethylbenzene	ND		1.0
Iodomethane	ND		10
Isopropylbenzene	ND		5.0
Methylene chloride	ND		5.0
n-Propylbenzene	ND		5.0
Naphthalene	ND		5.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,4-Dichloro-2-Butene	ND		50
Trichloroethene	ND		1.0

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20/WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110844
Lab Batch ID: R72847

Method Blank

RunID: Q_021205C-1419264 Units: ug/L
Analysis Date: 12/05/2002 13:12 Analyst: TL

Analyte	Result	Qual	Rep Limit
Vinyl chloride	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Xylenes, Total	ND		3.0
Surr: 1,2-Dichloroethane-d4	92.0		62-130
Surr: 4-Bromofluorobenzene	92.0		70-130
Surr: Toluene-d8	96.0		74-122

Laboratory Control Sample (LCS)

RunID: Q_021205C-1419263 Units: ug/L
Analysis Date: 12/05/2002 11:43 Analyst: TL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	53	106	61	145
Benzene	50	53	106	76	127
Chlorobenzene	50	52	104	70	130
Toluene	50	49	98	70	129
Trichloroethene	50	56	112	60	140

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110844-06
RunID: Q_021205C-1419267 Units: ug/L
Analysis Date: 12/05/2002 21:20 Analyst: TL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	25000	25000	100	25000	27000	108	8	14	61	145
Benzene	ND	25000	24000	96	25000	25000	100	4	11	76	127
Chlorobenzene	ND	25000	23000	92	25000	22000	88.0	4	13	70	130

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20/WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110844
Lab Batch ID: R72847

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110844-06
RunID: Q_021205C-1419267 Units: ug/L
Analysis Date: 12/05/2002 21:20 Analyst: TL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Toluene	ND	25000	22000	88	25000	23000	92.0	4	13	70	129
Trichloroethene	ND	25000	24000	96	25000	25000	100	4	14	60	140

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20/WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110844
Lab Batch ID: R72927

Method Blank

RunID: L_021206B-1421002 Units: ug/L
Analysis Date: 12/06/2002 12:31 Analyst: LT

Samples in Analytical Batch:

Lab Sample ID Client Sample ID
02110844-06A GW-17303-112602-MM-153
02110844-07A GW-17303-112602-MM-154

Analyte	Result	Qual	Rep Limit
Toluene	ND		1.0
Trichloroethene	ND		1.0
Vinyl chloride	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
Surr: 1,2-Dichloroethane-d4	102.0		62-130
Surr: 4-Bromofluorobenzene	94.0		70-130
Surr: Toluene-d8	102.0		74-122

Laboratory Control Sample (LCS)

RunID: L_021206B-1421001 Units: ug/L
Analysis Date: 12/06/2002 11:12 Analyst: LT

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	42	84	61	145
Benzene	50	48	96	76	127
Chlorobenzene	50	50	100	70	130
Toluene	50	48	96	70	129
Trichloroethene	50	53	106	60	140

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110816-07
RunID: L_021206B-1421009 Units: ug/L
Analysis Date: 12/06/2002 18:04 Analyst: LT

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	50	37	74	50	38	76.0	3	14	61	145
Benzene	8.00	50	50	84	50	49	82.0	2	11	76	127
Chlorobenzene	70.0	50	100	60 *	50	97	54.0 *	11	13	70	130
Toluene	ND	50	45	84	50	45	84.0	0	13	70	129

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20/WRC

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 02110844
Lab Batch ID: R72927

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110816-07
RunID: L_021206B-1421009 Units: ug/L
Analysis Date: 12/06/2002 18:04 Analyst: LT

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-dichloroethene	ND	50	49	98	50	49	98.0	0	14	60	140

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20/WRC

Analysis: Chemical Oxygen Demand
Method: E410.1

WorkOrder: 02110844
Lab Batch ID: R73071

Method Blank

RunID: WET_021210L-1424281 Units: mg/L
Analysis Date: 12/10/2002 16:50 Analyst: CV

Analyte	Result	Qual	Rep Limit
Chemical Oxygen Demand	ND		3.0

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02110844-01D	GW-17303-112602-MM-148
02110844-02D	GW-17303-112602-MM-149
02110844-03D	GW-17303-112602-MM-150
02110844-04D	GW-17303-112602-MM-151
02110844-05D	GW-17303-112602-MM-152
02110844-06D	GW-17303-112602-MM-153
02110844-07D	GW-17303-112602-MM-154
02110844-08D	GW-17303-112602-MM-155

Laboratory Control Sample (LCS)

RunID: WET_021210L-1424283 Units: mg/L
Analysis Date: 12/10/2002 16:50 Analyst: CV

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chemical Oxygen Demand	104	105.1	101	87	106

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110844-04
RunID: WET_021210L-1424290 Units: mg/L
Analysis Date: 12/10/2002 16:50 Analyst: CV

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chemical Oxygen Demand	76.92	50	125.6	97.44	50	125.6	97.44	0	10	80	120

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conestoga-Rovers & Associates, Inc.

#17303-20/WRC

Analysis: Chloride, Total
Method: E325.3

WorkOrder: 02110844
Lab Batch ID: R73121

Method Blank

RunID: WET_021211P-1425259 Units: mg/L
Analysis Date: 12/11/2002 11:00 Analyst: CV

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
02110844-01E	GW-17303-112602-MM-148
02110844-02E	GW-17303-112602-MM-149
02110844-03E	GW-17303-112602-MM-150
02110844-04E	GW-17303-112602-MM-151
02110844-05E	GW-17303-112602-MM-152
02110844-06E	GW-17303-112602-MM-153
02110844-07E	GW-17303-112602-MM-154
02110844-08E	GW-17303-112602-MM-155

Analyte	Result	Qual	Rep Limit
Chloride	ND		1.0

Laboratory Control Sample (LCS)

RunID: WET_021211P-1425261 Units: mg/L
Analysis Date: 12/11/2002 11:00 Analyst: CV

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	233	227.7	98	90	110

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02110844-04
RunID: WET_021211P-1425266 Units: mg/L
Analysis Date: 12/11/2002 11:00 Analyst: CV

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	560.0	500	1007	89.40	500	1016	91.20	1.993	20	85	115

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

*Sample Receipt Checklist
And
Chain of Custody*



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder: 02110844

Received By: DS

Date and Time Received: 11/27/2002 9:30:00 AM

Carrier name: FedEx

Temperature: 2

Chilled by: Water Ice

- | | | | |
|--|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes ☒ | No ☐ | Not Present ☐ |
| 2. Custody seals intact on shipping container/cooler? | Yes ☒ | No ☐ | Not Present ☐ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☒ |
| 4. Chain of custody present? | Yes ☒ | No ☐ | |
| 5. Chain of custody signed when relinquished and received? | Yes ☒ | No ☐ | |
| 6. Chain of custody agrees with sample labels? | Yes ☒ | No ☐ | |
| 7. Samples in proper container/bottle? | Yes ☒ | No ☐ | |
| 8. Sample containers intact? | Yes ☒ | No ☐ | |
| 9. Sufficient sample volume for indicated test? | Yes ☒ | No ☐ | |
| 10. All samples received within holding time? | Yes ☒ | No ☐ | |
| 11. Container/Temp Blank temperature in compliance? | Yes ☒ | No ☐ | |
| 12. Water - VOA vials have zero headspace? | Yes ☒ | No ☐ | Not Applicable ☐ |
| 13. Water - pH acceptable upon receipt? | Yes ☒ | No ☐ | Not Applicable ☐ |

SPL Representative:

Contact Date & Time:

Client Name Contacted:

Non Conformance
Issues:

Client Instructions:

55/bc S1

1001 (FORMS) AT THE 29, 95-HE V.0-1001-01)

APPENDIX B

DATA EVALUATION AND VALIDATION MEMOS



**CONESTOGA-ROVERS
& ASSOCIATES**

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Plymouth, Michigan 48170

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MEMORANDUM

TO: Fred Bickle

REF. NO.: 17303-02

FROM: Kathy Hasenfratz/rm/4/Det. *[Signature]*

DATE: April 8, 2002

RE: Data Quality Assessment and Validation
Groundwater Monitoring
Former Willow Run Assembly Plant - Ypsilanti, Michigan

The following details a quality assessment and validation of the analytical data resulting from the December 13 and 14, 2001, and January 14, 2002, collection of 15 groundwater samples and three (3) quality control samples from the Former Willow Run Assembly Plant in Ypsilanti, Michigan. The sample summary detailing sample identification, sample location, quality control sample, and analytical parameters is presented in Table 1. Sample analysis was completed at Southern Petroleum Laboratories, in Houston, Texas (SPL) in accordance with the methodologies presented in Table 2. The quality control criteria used to assess the data were established by the methods.¹

Sample Quantitation

The laboratory reported detected concentrations of volatile organic compounds (VOC) below the laboratories reporting limit (RL) but above the laboratory's detection limit (DL). The laboratory flagged these samples results with a "J" flag. These results should be qualified as estimated (J) values unless otherwise qualified in this memorandum.

The VOC sample analysis resulted in a number of concentrations in excess of the calibration range. The laboratory flagged these reported values with an "E". These results should be qualified as estimated (J) concentrations.

Holding Time Period and Sample Analysis

The holding time periods are presented in Table 3. The samples, as indicated by the sample collection, extraction and analysis dates on the chain-of-custody forms and analytical reports provided by SPL, were prepared and analyzed within the required holding time periods.

¹ Application of quality assurance criteria was consistent with "U.S. EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999 and "U.S. EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", EPA-540/R-94/013, February 1994.

Method Blank Samples

Contamination of samples contributed by laboratory conditions or procedures was monitored by concurrent preparation and analysis of method blank samples. The method blank samples were reported to be free from detectable concentrations of target analytes, indicating no laboratory-attributable contamination occurred.

Laboratory Control Sample Analysis

The laboratory control sample (LCS) analyses serve as a monitor of the overall performance in all steps of the sample analysis. The LCS percent recoveries were within the laboratory control limits, indicating that an acceptable level of overall performance was achieved.

Surrogate Compound Percent Recoveries (Surrogate Recoveries)

Individual sample performance for the organic analyses was monitored by assessing the results of surrogate compound percent recoveries. The surrogate recovery acceptance criteria was met for all samples.

Matrix Spike/Matrix Spike Duplicate Percent Recoveries - Inorganic Analyses

Matrix spike/matrix spike duplicate (MS/MSD) and the relative percent difference (RPD) of the concentrations were monitored to determine the effects of sample matrix on the laboratories digestion and measurement methods. The MS/MSD percent recoveries and associated RPDs were within acceptance criteria.

Matrix Spike/Matrix Spike Duplicate Percent Recoveries - Organic Analyses

To assess the long term accuracy and precision of the analytical methods on various matrices, MS/MSD percent recoveries and the RPD of the concentrations were determined. The MS/MSD percent recoveries and associated RPDs acceptance criteria were met for all analyses.

Field Quality Assurance/Quality Control

The field quality assurance/quality control consisted of three (3) field duplicate sample sets and three (3) trip blank samples.

Overall precision for the sampling event and laboratory procedures was monitored using the results of the field duplicate sample sets. Table 4 summarizes the results of the detected analytes in the field duplicate sample sets. The data indicate that an adequate level of precision was achieved for the sampling event.

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, a trip blank was submitted to the laboratory for VOC analysis with each shipping cooler. No target analytes were reported as detected in the trip blank samples.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted.

TABLE 1
SAMPLE SUMMARY
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

<i>Sample Identification</i>	<i>Sample Location</i>	<i>Matrix</i>	<i>QC Sample</i>	<i>Parameters</i>
GW-17303-JH-121401-103	IW-46	Water		TCL VOC, Select Metals, Chloride
GW-17303-JH-121401-104	IW-49	Water		TCL VOC, Select Metals, Chloride
GW-17303-JH-121401-105	IW-49	Water	Duplicate (104)	TCL VOC, Select Metals, Chloride
GW-17303-JH-121301-0100	IW-9	Water		TCL VOC, Select Metals, Chloride
GW-17303-JH-121301-0101	IW-12	Water		TCL VOC, Select Metals, Chloride
GW-17303-JH-121301-0102	IW-33	Water		TCL VOC, Select Metals, Chloride
GW-17303-011402-BN-111	IW-9	Water		TCL VOC, Select Metals, Chloride
GW-17303-011402-BN-112	IW-12	Water		TCL VOC, Select Metals, Chloride
GW-17303-011402-BN-113	IW-33	Water		TCL VOC, Select Metals, Chloride
GW-17303-011402-BN-114	IW-46	Water		TCL VOC, Select Metals, Chloride
GW-17303-011402-BN-115	IW-46	Water	Duplicate (114)	TCL VOC, Select Metals, Chloride
GW-17303-011402-BN-116	IW-49	Water		TCL VOC, Select Metals, Chloride
GW-17303-011402-TJ-117	IW-9	Water		TCL VOC, Select Metals, Chloride
GW-17303-011402-TJ-118	IW-12	Water		TCL VOC, Select Metals, Chloride
GW-17303-011402-TJ-119	IW-33	Water	MS/MSD	TCL VOC, Select Metals, Chloride
GW-17303-011402-TJ-120	IW-46	Water		TCL VOC, Select Metals, Chloride
GW-17303-011402-TJ-121	IW-46	Water	Duplicate (120)	TCL VOC, Select Metals, Chloride
GW-17303-011402-TJ-122	IW-47	Water		TCL VOC, Select Metals, Chloride

CL - Target Compound List

VOC - Volatile Organic Compounds

Select Metals -potassium, manganese

QC - Quality Control

MS/MSD - Matrix Spike /Matrix Spike Duplicate

TABLE 2
SUMMARY OF ANALYTICAL METHODS
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

<i>Parameter</i>	<i>Method</i>
TCL VOC	SW-846 8260B ¹
Select Metals	SW-846 6010B
Chloride	EPA-WW 325.3 ²

¹ SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition, and Promulgated updates, November 1986

² EPA-WW - "Methods for the Chemical Analysis of Water and Wastes", 600/4/79-020, revised March 1983

TABLE 3
HOLDING TIME PERIODS
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

<i>Analysis</i>	<i>Holding Time Period</i>
TCL VOC	- 14 days from sample collection to completion of analysis
Chloride	- 28 days from sample collection to completion of analysis
Select Metals	- 180 days from sample collection to completion of analysis

TABLE 4

SUMMARY OF DETECTED ANALYTES IN FIELD DUPLICATE SAMPLE SETS
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

<i>Parameter</i>	<i>Investigative Sample</i>	<i>Duplicate Sample</i>	<i>RPD¹</i>
	GW-17303-JH-121401-104	GW-17303-JH-121401-105	
TCL VOC (µg/L)			
1,1-Dichlorethane	2	2	0
Benzene	5	5	0
Chloroform	10	9	11
Ethylbenzene	ND (1) ²	1	NC ³
Toluene	4	4	0
Vinyl chloride	87 J ⁴	96 J	10
Trichloroethene	10,000	13,000	26
cis-1,2,-Dichloroethene	2,100	2,300	9.1
trans-1,2-Dichloroethene	78	69	12
Chloride (mg/L)	345	362	4.8
Select Metals (mg/L)			
Manganese	1.02	1.03	0.98
Potassium	3.83	4.12	7.3
	GW-17303-011402-BN-114	GW-17303-011402-BN-115	
TCL VOC (µg/L)			
1,1-Dichlorethane	2	2	0
1,2,4-Trimethylbenzene	6	5	18
1,2-Dichloroethane	4	4	0
1,3,5-Trimethylbenzene	2	2	0
Benzene	5	5	0
Chloroform	3	3	0
Ethylbenzene	23	21	9.1
Toluene	25	25	0
Vinyl chloride	1,100	1,200	8.7
Trichloroethene	380	380	0
cis-1,2,-Dichloroethene	1,200	1,400	15
trans-1,2-Dichloroethene	50	51	2.0
Xylenes (total)	170	158	7.3

TABLE 4

SUMMARY OF DETECTED ANALYTES IN FIELD DUPLICATE SAMPLE SETS
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

<i>Parameter</i>	<i>Investigative Sample</i>	<i>Duplicate Sample</i>	<i>RPD¹</i>
	GW-17303-011402-BN-114	GW-17303-011402-BN-115	
Chloride (mg/L)	461	436	5.6
Select Metals (mg/L)			
Manganese	5.76	5.47	5.2
Potassium	324	327	0.92
	GW-17303-011402-TJ-120	GW-17303-011402-TJ-121	
TCL VOC (µg/L)			
1,1,2-Trichloroethane	9	8	12
1,1-Dichloroethene	6	6	0
1,2,4-Trimethylbenzene	16	ND (1)	NC
1,2-Dichloroethane	16	16	0
1,3,5-Trimethylbenzene	6	6	0
Benzene	22	21	4.7
Bromodichloromethane	1	1	0
Chloroform	16	16	0
Ethylbenzene	61	61	0
Isopropylbenzene	3	3	0
n-Propylbenzene	2	2	0
Naphthalene	5	6	18
Toluene	88	83	5.8
Vinyl chloride	1,600	1,400	13
Trichloroethene	350	360	2.8
cis-1,2,-Dichloroethene	13,000	11,000	17
trans-1,2-Dichloroethene	750	660	13
Xylenes (total)	440	430	2.3

TABLE 4

SUMMARY OF DETECTED ANALYTES IN FIELD DUPLICATE SAMPLE SETS
FORMER WILLOW RUN ASSEMBLY PLANT
YPSILANTI, MICHIGAN

<i>Parameter</i>	<i>Investigative Sample</i>	<i>Duplicate Sample</i>	<i>RPD¹</i>
	GW-17303-011402-TJ-120	GW-17303-011402-TJ-121	
Chloride (mg/L)	431	431	0
Select Metals (mg/L)			
Manganese	13.4	15.2	13
Potassium	154	174	12

¹ RPD - Relative Percent Difference

² ND() - Not detected at the quantitation limit stated in parentheses.

³ NC - Not calculable.

⁴ J - The associated numerical value is an estimated quantity.

ANALYTICAL DATA REVIEW NOTES
LEVEL II REPORT

Page 1 of 3

Project No.: 17303-02 Project Name/Activity: Former Willow Run
Chemist: Ku Date: 4/6/02 DQA Memo No.: 4 Date of Memo: 4/8/02

DESCRIPTION/COMMENTS:

1. Sampling Event: GW Monitoring
2. Project Manager/Coordinator: Fred Bickel LAB ID SAMPLES SDG
3. Sample Qty/Matrix/Date: 18/GW/12/14/01, 12/13/01, 1/14/02
4. Lab/SDG ID/Report: SP4/3, 5, 6, 7
5. Sample Analyses: TCL VOC, Pb, Mn (T), CL
6. TQs & Parm. List: _____
7. Holding Time/TAT: _____
8. QC Deliverables: Summary
9. Field QC Samples: 3 dups
10. Comments: _____

Metals 7 - 6010 Mn - 6010

QC Set	Date Ana.	Sample IDs	MeBLK	LCS (%R)	MS /MSD (Sam ID) RPD
16910	12/20/01	103-105	ND	✓	#103 ✓
16857	12/26	0100	ND	✓	# 0100 ✓
		01			
		02			
17395	1/30/02	111-116	ND	✓	not used
18741	3/12	117-122	ND		# 119
					MS ↑ Mn
					Sample > 4x
					spike

ANALYTICAL DATA REVIEW NOTES
LEVEL II REPORT

Page 2 of 3

Project No.: 17303

DQA Memo No.: 4

Date: _____

TCL VOC(8260B)

QC Set	Date Ana.	Sample IDs	MeBLK	Surrogates	LCS (%R)	MS/MSD RPD
R 50730	12/28/01	103	ND	✓	✓	not done
R 50748		04	ND	✓	✓	" "
R		05		✓		
R 50513	12/22	0100	ND	✓	✓	not done
R 50776		01	ND	✓	✓	" "
		02		✓		
R 51681	1/16/02	111	ND	✓	✓	not done
R 51733		12	ND	✓	✓	# 111 ✓
R 52002		13	ND	✓	✓	# 113 ✓
		14		✓		
		15		✓		
		16		✓		
R 55777	3/20	117	ND	✓	✓	not done
R 55868		18	ND	✓	✓	# 119 ✓
		19		✓		
		20		✓		
		21		✓		
		22		✓		

ANALYTICAL DATA REVIEW NOTES
LEVEL II REPORT

Page 3 of 3

Project No.: 17303

DQA Memo No.: 4

Date: _____

Chloride EPA 325.3

QC Set	Date Ana.	Sample IDs	MeBLK	LCS (%R)	MS (Sam ID)	DUP (Sam ID)
R 50608	12/26	103	ND	✓	not us	
		04				
		05				
R 50608	12/26	0100				±0100 ✓
		01				
		02				
R 52309	1/24/02	111	ND	✓		# 111 ✓
		12				
		13				
		14				
		15				
		16				
R 55542	3/18	117	ND	✓		# 117 ✓
		18				
		19				
		20				
		21				
		22				

Page __ of __

Project #: 17303

Received by Lab without incident: ☒ Yes ☐ No Comments:

Changes or corrections are noted on the attached COC, which was forwarded to the laboratory.

Comments: _____

Yes	No	Comments
-----	----	----------

Results consistent with preliminary data: ☒ ☐

Additional Notes:

Yes	No	Comments
-----	----	----------

Final report received on time: ☐ ☒

Additional notes:

Report Comments:

Additional comments and notes: _____

Page ___ of ___

Project #: 17303

Additional comments and notes: _____

Page ___ of ___

Project #: 17303

Received by Lab without incident: ☒ Yes ☐ No Comments:

Changes or corrections are noted on the attached COC, which was forwarded to the laboratory.

Comments: _____

Yes	No	Comments
-----	----	----------

Additional Notes:

Yes	No	Comments
-----	----	----------

Final report received on time: ☒ ☐

Additional notes:

Deliverables Provided: _____ Acceptable: ☒ Yes ☐ No No. of Copies: 2

Report Comments:

Additional comments and notes: _____

Page ___ of ___

Project #: 17303-02

Received by Lab without incident: ☒ Yes ☐ No Comments:

Changes or corrections are noted on the attached COC, which was forwarded to the laboratory.

Comments: _____

Yes	No	Comments
-----	----	----------

Results consistent with preliminary data: ☒ ☐

Additional Notes:

Yes	No	Comments
-----	----	----------

Final report received on time: ☐ ☒

Additional notes: Includes potassium -

Report Comments:

Additional comments and notes: _____

ANALYTICAL DATA REVIEW NOTES
LEVEL II REPORT

Page ___ of ___

Project No.: 17303-02 DQA Memo No.: _____ Date: _____

QUALIFIED DATA SUMMARY

1. Holding Times: i
2. Method Blanks.: NA
3. Surrogates: i
4. LCS/QC Check: ✓
5. Inorganic MS/MSD: ✓ see note
6. Inorganic Dup.: _____
7. Organic MS/MSD ✓
8. Method Summary _____
9. Lab Data Flags: J - estimated ↓
E - estimated ↑
10. Add. Comments: _____
11. Field Trip Blank: ND, ND, ND
12. Field Rinsate: NA
13. Field Duplicates: See table



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MEMORANDUM

TO: Fred Bickie

FROM: Mary Cameron/tl/25/Det. *Wke*

RE: Data Quality Assessment and Validation
Groundwater Monitoring
Former Willow Run Site - Ypsilanti, Michigan

REF. NO.: 17303-02

DATE: May 19, 2003

The following details a quality assessment and validation of the analytical data resulting from the March 14, 2002, collection of five (5) groundwater samples and two (2) quality control samples from the Former Willow Run Site in Ypsilanti, Michigan. The sample summary detailing sample identification, sample location, quality control samples, and analytical parameters is presented in Table 1. Sample analysis was completed at Southern Petroleum Laboratories in Houston, Texas (SPL) in accordance with the methodologies presented in Table 2. The quality control criteria used to assess the data were established by the methods.¹

Sample Quantitation

The volatile organic compounds (VOC) sample analysis resulted in a number of concentrations in excess of the calibration range. The laboratory flagged these reported values with an "E". These results should be qualified as estimated (J) concentrations. The "E" flag may be disregarded.

Holding Time Period and Sample Analysis

The holding time periods are presented in Table 3. The samples, as indicated by the sample collection, extraction and analysis dates on the chain-of-custody forms and analytical reports provided by SPL, were prepared and analyzed within the required holding time periods.

Method Blank Samples

Contamination of samples contributed by laboratory conditions or procedures was monitored by concurrent preparation and analysis of method blank samples. The method blank samples were reported to be free from detectable levels of target analytes, indicating no additional laboratory-attributable contamination occurred.

Laboratory Control Sample Analysis

The laboratory control sample (LCS) analyses serve as a monitor of the overall performance in all steps of

¹ Application of quality assurance criteria was consistent with "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999 and "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Review", EPA-540/R-94/013, February 1994.

Laboratory Control Sample Analysis (Cont'd)

the sample analysis. The LCS percent recoveries were within the laboratory control limits, indicating that an acceptable level of overall performance was achieved.

Surrogate Compound Percent Recoveries (Surrogate Recoveries)

Individual sample performance for the organic analyses was monitored by assessing the results of surrogate compound percent recoveries. The surrogate recovery acceptance criteria was met for all samples.

Matrix Spike/Matrix Spike Duplicate Percent Recoveries - Inorganic Analyses

Matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and the relative percent difference (RPD) of the concentrations were monitored to determine the effects of sample matrix on the laboratories digestion and measurement methods. The samples selected for MS/MSD analysis are identified in Table 1. The MS/MSD percent recoveries and associated RPDs were within the acceptance criteria.

Matrix Spike/Matrix Spike Duplicate Percent Recoveries - Organic Analyses

To assess the long term accuracy and precision of the analytical methods on various matrices, MS/MSD percent recoveries and the RPD of the concentrations were determined. The samples selected for MS/MSD analysis are identified in Table 1. The MS/MSD percent recoveries and associated RPDs were within the acceptance criteria.

Field Quality Assurance/Quality Control

The field quality assurance/quality control consisted of one (1) field duplicate sample set and one (1) trip blank sample.

Overall precision for the sampling event and laboratory procedures was monitored using the results of the field duplicate sample set. Table 4 summarizes the results of the detected analytes in the field duplicate sample set. The data indicates that an adequate level of precision was achieved for the sampling event.

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, a trip blank was submitted to the laboratory for VOC analysis with the shipping cooler containing multiple samples. No target analytes were reported as detected in the trip blank sample.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used without qualification.

TABLE 1

SAMPLE SUMMARY
FORMER WILLOW RUN SITE
YPSILANTI, MICHIGAN

<i>Sample Identification</i>	<i>Sample Location</i>	<i>Matrix</i>	<i>QC Sample</i>	<i>Parameters</i>
GW-17303-031402-TJ-117	IW-9	Water	---	VOC, Select Metals, Chloride
GW-17303-031402-TJ-118	IW-12	Water	---	VOC, Select Metals, Chloride
GW-17303-031402-TJ-119	IW-33	Water	MS/MSD ^{1,2}	VOC, Select Metals, Chloride
GW-17303-031402-TJ-120	IW-46	Water	---	VOC, Select Metals, Chloride
GW-17303-031402-TJ-121	IW-46	Water	Duplicate of 120	VOC, Select Metals, Chloride
GW-17303-031402-TJ-122	IW-49	Water	---	VOC, Select Metals, Chloride
Trip Blank	---	Water	Trip Blank	VOC

VOC - Site-Specific Volatile Organic Compounds

QC - Quality Control

Select Metals - Includes Potassium and Manganese.

MS/MSD - Matrix Spike /Matrix Spike Duplicate.

¹ - Field submitted sample for MS/MSD.

² - Laboratory utilized sample as MS/MSD for VOC, Manganese, and Chloride.

TABLE 2
SUMMARY OF ANALYTICAL METHODS
FORMER WILLOW RUN SITE
YPSILANTI, MICHIGAN

<i>Parameter</i>	<i>Method</i>
Site-Specific VOC	SW-846 8260B ¹
Select Metals	
Manganese	SW-846 6010B
Potassium	SW-846 6010B
Chloride	EPA-WW 325.2

¹ SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods",
SW-846, 3rd Edition, and Promulgated updates, November 1986

² EPA-WW - "Methods for Chemical Analysis of Water and Waste," EPA-600/4-79-020,
revised March 1983.

TABLE 3

HOLDING TIME PERIODS
FORMER WILLOW RUN SITE
YPSILANTI, MICHIGAN

<i>Analysis</i>	<i>Matrix</i>	<i>Holding Time Period</i>
Site-Specific VOC	Water	- 14 days from sample collection to completion of analysis
Select Metals	Water	- 180 days from sample collection to completion of analysis
Chloride	Water	- 28 days from sample collection to completion of analysis

TABLE 4

SUMMARY OF DETECTED ANALYTES IN FIELD DUPLICATE SAMPLE SET
FORMER WILLOW RUN SITE
YPSILANTI, MICHIGAN

<i>Parameter</i>	<i>Investigative Sample</i>	<i>Duplicate Sample</i>	<i>RPD¹</i>
	GW-17303-031402-TJ-120	GW-17303-031402-TJ-121	
Site-Specific VOC (µg/L)			
1,1,2-Trichloroethane	9	8	12
1,1-Dichloroethene	6	6	0
1,2,4-Trimethylbenzene	16	ND (5) ²	NC ³
1,2-Dichloroethane	16	16	0
1,3,5-Trimethylbenzene	6	6	0
Benzene	22	21	4.7
Bromodichloromethane	1	1	0
Chloroform	16	16	0
Ethylbenzene	61	61	0
Isopropylbenzene	3	3	0
n-Propylbenzene	2	2	0
Naphthalene	5	6	18
Toluene	88	83	5.8
Trichloroethene	350	360	2.8
Vinyl chloride	1,600	1,400	13
cis-1,2-Dichloroethene	13,000	11,000	17
trans-1,2-Dichloroethene	750	660	13
Xylenes (Total)	440	430	2.3
Chloride (mg/L)	431	431	0
Select Metals (mg/L)			
Manganese	13.4	15.2	13
Potassium	154	174	12

¹ RPD - Relative Percent Difference

² ND() - Not detected at the quantitation limit stated in parentheses.

³ NC - Not calculable.



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MEMORANDUM

TO: Fred Blickle REF. NO.: 17303
FROM: Kathy Hasenfratz/rm/15/Det. *[Signature]* DATE: December 13, 2002
RE: Data Quality Assessment and Validation
Quarterly Groundwater Monitoring
Former Willow Run Assembly Plant Site - Ypsilanti, Michigan

The following details a quality assessment and validation of the analytical data resulting from the May 6, 2002 and July 22, 2002, collection of 10 groundwater and two (2) quality control samples from the Former Willow Run Assembly Plant Site in Ypsilanti, Michigan. The sample summary detailing sample identification, sample location, quality control samples, and analytical parameters is presented in Table 1. Sample analysis was completed at Southern Petroleum Laboratories, Inc. in Houston, Texas (SPL) in accordance with the methodologies presented in Table 2. The quality control criteria used to assess the data were established by the methods.¹

Holding Time Period and Sample Analysis

The holding time periods are presented in Table 3. The samples, as indicated by the sample collection, extraction and analysis dates on the chain-of-custody forms and analytical reports provided by SPL, were prepared and analyzed within the required holding time periods.

Method Blank Samples

Contamination of samples contributed by laboratory conditions or procedures was monitored by concurrent preparation and analysis of method blank samples. One laboratory method blank was reported with parameters detected but the associated samples results were either non-detect or five (5) times greater than the method blank result therefore, no qualification was required. The remaining method blank samples were reported to be free from detectable levels of target analytes, indicating no additional laboratory-attributable contamination occurred.

Laboratory Control Sample Analysis

The laboratory control sample (LCS) analyses serve as a monitor of the overall performance in all steps of the sample analysis. The LCS percent recoveries were within the laboratory control limits, indicating that an acceptable level of overall performance was achieved.

¹ Application of quality assurance criteria was consistent with "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999 and "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Review", EPA-540/R-94/013, February 1994.

Surrogate Compound Percent Recoveries (Surrogate Recoveries)

Individual sample performance for the organic analyses was monitored by assessing the results of surrogate compound percent recoveries. The surrogate recovery acceptance criteria was met for all samples.

Matrix Spike/Matrix Spike Duplicate Percent Recoveries - Inorganic Analyses

Matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and the relative percent difference (RPD) of the concentrations were monitored to determine the effects of sample matrix on the laboratories digestion and measurement methods. The samples selected for MS/MSD analysis are identified in Table 1.

Matrix Spike/Matrix Spike Duplicate Percent Recoveries - Organic Analyses

To assess the long term accuracy and precision of the analytical methods on various matrices, MS/MSD percent recoveries and the RPD of the concentrations were determined. The samples selected for MS/MSD analysis are identified in Table 1. The samples that should be qualified due to violation of MS/MSD percent recovery criteria are outlined in Table 4. The MS/MSD percent recoveries and associate RPDs acceptance criteria were met for the remaining analyses.

Field Quality Assurance/Quality Control

The field quality assurance/quality control consisted of two (2) field duplicate sample sets and two (2) trip blank samples.

Overall precision for the sampling event and laboratory procedures was monitored using the results of the field duplicate sample sets. Table 5 summarizes the results of the detected analytes in the field duplicate sample sets. The data indicate that an adequate level of precision was achieved for the sampling event.

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, a trip blank was submitted to the laboratory for VOC analysis with each shipping cooler containing multiple samples. No target analytes were reported as detected in the trip blank samples.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted.

TABLE 1
SAMPLE SUMMARY
FORMER WILLOW RUN ASSEMBLY PLANT SITE
YPSILANTI, MICHIGAN

<i>Sample Identification</i>	<i>Sample Location</i>	<i>Matrix</i>	<i>QC Sample</i>	<i>Parameters</i>
GW-17303-050602-MM-123	IW-9	Water		TCL VOC, Chloride, Select Metals
GW-17303-050602-MM-124	IW-12	Water		TCL VOC, Chloride, Select Metals
GW-17303-050602-MM-125	IW-33	Water		TCL VOC, Chloride, Select Metals
GW-17303-050602-MM-126	IW-33	Water	Duplicate (125)	TCL VOC, Chloride, Select Metals
GW-17303-050602-MM-127	IW-46	Water	MS/MSD	TCL VOC, Chloride, Select Metals
GW-17303-050602-MM-128	IW-49	Water		TCL VOC, Chloride, Select Metals
TB-17303-050602-MM-129	--	Water		TCL VOC
GW-072202-MM-130	IW-9	Water		TCL VOC, Chloride, Select Metals
GW-072202-MM-131	IW-9	Water	Duplicate (130)	TCL VOC, Chloride, Select Metals
GW-072202-MM-132	IW-12	Water	MS/MSD	TCL VOC, Chloride, Select Metals
GW-072202-MM-133	IW-46	Water		TCL VOC, Chloride, Select Metals
GW-072202-MM-134	IW-49	Water		TCL VOC, Chloride, Select Metals
GW-072202-MM-135	IW-33	Water		TCL VOC, Chloride, Select Metals
TB-072202-MM-136	--	Water		TCL VOC

TCL - Target Compound List

VOC - Volatile Organic Compounds

Select Metals - Manganese, Potassium

QC - Quality Control

MS/MSD - Matrix Spike /Matrix Spike Duplicate

TABLE 2
SUMMARY OF ANALYTICAL METHODS
FORMER WILLOW RUN ASSEMBLY PLANT SITE
YPSILANTI, MICHIGAN

<i>Parameter</i>	<i>Method</i>
TCL VOC	SW-846 8260B ¹
Select Metals	SW-846 6010B
Chloride	EPA-WW 325.3 ²

¹ SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition, and Promulgated updates, November 1986

² EPA-WW - "Methods for the Chemical Analysis of Water and Wastes", 600/4/79-020, revised March 1983

TABLE 3
HOLDING TIME PERIODS
FORMER WILLOW RUN ASSEMBLY PLANT SITE
YPSILANTI, MICHIGAN

<i>Analysis</i>	<i>Holding Time Period</i>
Select VOC	- 14 days from sample collection to completion of analysis
Chloride	- 28 days from sample collection to completion of Analysis
Select Metals	- 180 days from sample collection to completion of analysis

TABLE 4

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO VIOLATION OF
ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE ACCEPTANCE CRITERIA
FORMER WILLOW RUN ASSEMBLY PLANT SITE
YPSILANTI, MICHIGAN

<i>Analysis</i>	<i>Parameters</i>	<i>Associated Samples</i>	<i>Qualifiers</i> ¹
TCL VOC	1,1-Dichloroethene	GW-17303-050602-MM-127	UJ
	Toluene		J
	Trichloroethene		UJ

¹ The parameter results should be qualified for the listed samples as:

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample (for detected parameters).

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample (non-detected parameters).

TABLE 5

SUMMARY OF DETECTED ANALYTES IN FIELD DUPLICATE SAMPLE SETS
FORMER WILLOW RUN ASSEMBLY PLANT SITE
YPSILANTI, MICHIGAN

<i>Analysis</i>	<i>Parameter</i>	<i>Investigative Sample</i>	<i>Duplicate Sample</i>	<i>RPD¹</i>
		GW-17303-050602-MM-125	GW-17303-050602-MM-126	
TCL VOC (µg/L)				
	1,2-Dichloroethane	1	1	0
	1,2-Dichloropropane	1	2	67
	Acetone	400	380	5.1
	Benzene	58	62	6.7
	Bromodichloromethane	2	2	0
	Carbon disulfide	10	11	10
	Chloroform	6	6	0
	Dibromochloromethane	3	3	0
	Ethylbenzene	1	2	67
	Toluene	48	53	10
	Xylenes-total	20	21	4.9
Chloride (mg/L)				
		521	521	0
Select Metals (mg/L)				
	Manganese	20.6	24.2	16
	Potassium	826	857	3.7
		GW-072202-MM-130	GW-072202-MM-131	
TCL VOC (µg/L)				
	1,1-Dichloroethene	12	11	8.7
	1,2,4-Trimethylbenzene	5	4	22
	1,3,5-Trimethylbenzene	2	ND (1.0) ²	NC ³
	Acetone	100	100	0
	Benzene	37	38	2.7
	Carbon disulfide	6	7	15
	Chloroform	1	2	67
	Ethylbenzene	110	120	8.7
	Isopropylbenzene	ND (1.0)	25	NC
	Naphthalene	33	33	0
	Toluene	900	1,100	20
	Trichloroethene	51	54	5.7

TABLE 5

SUMMARY OF DETECTED ANALYTES IN FIELD DUPLICATE SAMPLE SETS
FORMER WILLOW RUN ASSEMBLY PLANT SITE
YPSILANTI, MICHIGAN

<i>Analysis</i>	<i>Parameter</i>	<i>Investigative Sample</i>	<i>Duplicate Sample</i>	<i>RPD¹</i>
		GW-072202-MM-130	GW-072202-MM-131	
TCL VOC (µg/L) Cont'd				
	Vinyl chloride	36,000	39,000	8.0
	cis-1,2-Dichloroethene	20,000	20,000	0
	trans-1,2-Dichloroethene	810	860	6.0
	Xylenes-total	500	520	3.9
Chloride (mg/L)		478	496	4
Select Metals (mg/L)				
	Manganese	2.2	2.04	8
	Potassium	89	86	3

¹ RPD - Relative Percent Difference

² ND() - Not detected at the quantitation limit stated in parentheses.

³ NC - Not calculable.

ANALYTICAL DATA REVIEW NOTES
LEVEL II REPORT

Page 1 of 1

Project No.: 17303 Project Name/Activity: Former Willow Run AP
Chemist: WJA Date: 12/12/02 DQA Memo No.: 5 Date of Memo: 12/13/02

DESCRIPTION/COMMENTS:

1. Sampling Event: GW monitoring 2 QTRS
2. Project Manager/Coordinator: Fred Blackie LAB ID SAMPLES SDG
3. Sample Qty/Matrix/Date: 12/Water / 5/6 : 7/22/02
4. Lab/SDG ID/Report: SPL / 8, 10 / 02050169, 02070802
5. Sample Analyses: _____
6. TQLs & Parm. List: _____
7. Holding Time/TAT: _____
8. QC Deliverables: Summary
9. Field QC Samples: 2 dup
10. Comments: _____

Metals 60/0 Mn, K

QC Set	Date Ana.	Sample IDs	MeBLK	LCS (%R)	MS /MSD (Sam ID) RPD
19809	5/7/02	123-128	ND	✓	#127 ↓ RPD ↑ ⊕ sample > 4x spec
19809	5/7	123-128	ND	✓	#127 > 4x no f
21564	8/8/02	130-135	Kx5=7.5	✓	#132 K>4x

ANALYTICAL DATA REVIEW NOTES
LEVEL II REPORT

Page 2 of 3

Project No.: 17303

DQA Memo No.: 15

Date: _____

TCL VOC (_____)

QC Set	Date Ana.	Sample IDs	MeBLK	Surrogates	LCS (%R)	MS/MSD RPD
R 58913	5/7/04	123	ND	V, V	✓	not done
R 59002	5/7	24	ND	V, V	✓	#127 -
R 59006	5/8	25	ND	✓	✓	1,1-DCE 0% ND
		26		✓		Toluene RPD ↑ ⊕
		27		✓		TCE 0% -ND
		28		V, V		
R 64969	8/1	130	ND	V, V	✓	#132
R 64980	8/2	31	ND	V, V	✓	Toluene > 4x
		32		V, V		
		33		✓		
		34		V, V		
		35		V, V		

CI E 325.3

R 58927 5/7 123-128 ND ✓ #127 ✓

R 65011 8/2 130-135 ND ✓ #132 ✓

ANALYTICAL DATA REVIEW NOTES
LEVEL II REPORT

Page 3 of 3

Project No.: 17803

DQA Memo No.: 15

Date: _____

QUALIFIED DATA SUMMARY

1. Holding Times: i
2. Method Blanks.: K all samples > x5
3. Surrogates: i
4. LCS/QC Check: i
5. Inorganic MS/MSD: both 74x ant spiked neg
6. Inorganic Dup.: NA
7. Organic MS/MSD #127 0% rec for 1,1-DCE & TCE - LJ, Toluene RPD &
8. Method Summary _____
9. Lab Data Flags: NA
10. Add. Comments: K is missing from #135
11. Field Trip Blank: ND, ND
12. Field Rinsate: NA
13. Field Duplicates: detectable

LABORATORY REPORT COMPLIANCE ASSESSMENT FORM

Page ___ of ___

CRA SDG ID: 0

Lab Report #: 02050169

Project #: 17303

3. Sample Receipt

Received by Lab without incident: ☒ Yes ☐ No Comments: _____

COC Record: A ☒ Complete ☐ Incomplete ☒ CRA ☐ Non CRA COC was included with the samples.

Changes or corrections are noted on the attached COC, which was forwarded to the laboratory.

Comments: _____

4. Laboratory Reporting

	Yes	No	Comments
Sample IDs consistent with COC:	☒	☐	_____
Parameters as designated on COC:	☒	☐	_____
Analytical methods acceptable:	☒	☐	_____
Parameter analyte list correct:	☒	☐	_____
Report limits acceptable:	☒	☐	_____
Results consistent with preliminary data:	☒	☐	_____
Additional Notes: _____			

5. Laboratory Performance

	Yes	No	Comments
Sample holding times met:	☒	☐	_____
Requested turnaround time(s) (TAT) met:	☒	☐	_____
Method blanks reported non-detect:	☒	☐	_____
Final report received on time:	☐	☐	_____
Additional notes: _____			

6. Report Deliverables

Report Deliverables Requested: ☐ Data Only ☒ QC Summary ☐ Expanded ☐ EDD

Deliverables Provided: 8/27/02 Acceptable: ☒ Yes ☐ No No. of Copies: 2

Report Comments: _____

Additional comments and notes: _____

Page ___ of ___

Project #: 17303
Date Rec'd: 8/9

Received by Lab without incident: ☒ Yes ☐ No Comments: _____

Comments: _____

Sample IDs consistent with COC:	☒	☐	_____
Parameters as designated on COC:	☒	☐	_____
Analytical methods acceptable:	☒	☐	_____
Parameter analyte list correct:	☒	☐	_____
Report limits acceptable:	☒	☐	_____
Results consistent with preliminary data:	☒	☐	_____
Additional Notes:			_____

Sample holding times met: ☒ ☐

Requested turnaround time(s) (TAT) met: ☐ ☒

Method blanks reported non-detect: ☒ ☐

Final report received on time: ☐ ☐

Additional notes: _____

Report Deliverables Requested: ☐ Data Only ☒ QC Summary ☐ Expanded ☐ EDD
Deliverables Provided: 8/13/02 Acceptable: ☒ Yes ☐ No No. of Copies: 2
Report Comments:

Additional comments and notes: _____



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RECEIVED FEB 28 2003

MEMORANDUM

TO: Fred Blickle

FROM: Kathy Hasenfratz/mw/17/Det. *[Signature]*

RE: Data Quality Assessment and Validation
Groundwater Monitoring
Former Willow Run Site – Ypsilanti, Michigan

REF. NO.: 17303-20

DATE: February 27, 2003

The following details a quality assessment and validation of the analytical data resulting from the November 25 and 26, 2002, collection of 15 groundwater samples and five (5) quality control samples from the Former Willow Run Site in Ypsilanti, Michigan. The sample summary detailing sample identification, sample location, quality control samples, and analytical parameters is presented in Table 1. Sample analysis was completed at Southern Petroleum Laboratories in Houston, Texas (SPL) in accordance with the methodologies presented in Table 2. The quality control criteria used to assess the data were established by the methods.¹

Sample Quantitation

The laboratory reported detected concentrations of volatile organic compounds (VOC), below the laboratories report limit (RL) but above the laboratories method detection limit (MDL) in samples analyzed at elevated dilutions. The laboratory flagged these sample results with a "J" flag. These results should be qualified as estimated (J) values unless otherwise qualified in this memorandum.

The VOC sample analysis resulted in a number of concentrations in excess of the calibration range. The laboratory flagged these reported values with an "E". These results should be qualified as estimated (J) concentrations.

Holding Time Period and Sample Analysis

The holding time periods are presented in Table 3. The samples, as indicated by the sample collection, extraction and analysis dates on the chain-of-custody forms and analytical reports provided by SPL, were prepared and analyzed within the required holding time periods.

¹ Application of quality assurance criteria was consistent with "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999 and "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Review", EPA-540/R-94/013, February 1994.

Method Blank Samples

Contamination of samples contributed by laboratory conditions or procedures was monitored by concurrent preparation and analysis of method blank samples. Several laboratory method blanks were reported with parameters detected but the associated samples results were either non-detect or five (5) times greater than the method blank result therefore, no qualification was required. The remaining method blank samples were reported to be free from detectable levels of target analytes, indicating no additional laboratory-attributable contamination occurred.

Laboratory Control Sample Analysis

The laboratory control sample (LCS) analyses serve as a monitor of the overall performance in all steps of the sample analysis. The LCS percent recoveries were within the laboratory control limits, indicating that an acceptable level of overall performance was achieved.

Surrogate Compound Percent Recoveries (Surrogate Recoveries)

Individual sample performance for the organic analyses was monitored by assessing the results of surrogate compound percent recoveries. The surrogate recovery acceptance criteria was met for all samples.

Matrix Spike/Matrix Spike Duplicate Percent Recoveries - Inorganic Analyses

Matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and the relative percent difference (RPD) of the concentrations were monitored to determine the effects of sample matrix on the laboratories digestion and measurement methods. The MS/MSD percent recoveries and associated RPDs were within the acceptance criteria.

Matrix Spike/Matrix Spike Duplicate Percent Recoveries - Organic Analyses

To assess the long term accuracy and precision of the analytical methods on various matrices, MS/MSD percent recoveries and the RPD of the concentrations were determined. The samples that should be qualified due to violation of MS/MSD percent recovery criteria are outlined in Table 4. The MS/MSD percent recoveries and associated RPDs acceptance criteria were met for the remaining analyses.

Field Quality Assurance/Quality Control

The field quality assurance/quality control consisted of two (2) field duplicate sample sets and three (3) trip blank samples.

Overall precision for the sampling event and laboratory procedures was monitored using the results of the field duplicate sample sets. Table 5 summarizes the results of the detected analytes in the field duplicate sample sets.

Field Quality Assurance/Quality Control (Cont'd)

The relative percent difference between the investigative sample and the duplicate sample collected is greater than five times the diesel range organic (DRO) sample's concentration and represents a significant difference. No qualification of data was required. The data may be used with caution. The remainder of the data indicates that an adequate level of precision was achieved for the sampling event.

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, a trip blank was submitted to the laboratory for VOC analysis with each shipping cooler containing multiple samples. No target analytes were reported as detected in the trip blank samples.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted.

TABLE 1
SAMPLE SUMMARY
FORMER WILLOW RUN SITE
YPSILANTI, MICHIGAN

<i>Sample Identification</i>	<i>Sample Location</i>	<i>Matrix</i>	<i>QC Sample</i>	<i>Parameters</i>
GW-17303-112502-MM-137	MW-13	Water		VOC, GRO, DRO, Chloride, COD
GW-17303-112502-MM-138	MW-14	Water		VOC, GRO, DRO, Chloride, COD
GW-17303-112502-MM-139	MW-13	Water	Duplicate (137)	VOC, GRO, DRO, Chloride, COD
GW-17303-112502-MM-140	IW-45	Water		VOC, GRO, DRO, Chloride, COD
GW-17303-112502-MM-141	MW-12	Water		VOC, GRO, DRO, Chloride, COD
GW-17303-112502-MM-142	IW-49	Water		VOC, GRO, DRO, Chloride, COD
GW-17303-112502-MM-143	IW-46	Water		VOC, GRO, DRO, Chloride, COD
GW-17303-112502-MM-144	IW-9	Water		VOC, GRO, DRO, Chloride, COD
GW-17303-112502-MM-145	IW-12	Water		VOC, GRO, DRO, Chloride, COD
TB-17303-112502-MM-146	--	Water	Trip Blank	VOC
TB-17303-112502-MM-147	--	Water	Trip Blank	VOC
GW-17303-112602-MM-148	IW-2	Water		VOC, GRO, DRO, Chloride, COD
GW-17303-112602-MM-149	IW-30	Water		VOC, GRO, DRO, Chloride, COD
GW-17303-112602-MM-150	IW-30	Water	Duplicate (149)	VOC, GRO, DRO, Chloride, COD
GW-17303-112602-MM-151	IW-26	Water	MS/MSD	VOC, GRO, DRO, Chloride, COD
GW-17303-112602-MM-152	MW-3	Water		VOC, GRO, DRO, Chloride, COD
GW-17303-112602-MM-153	IW-33	Water		VOC, GRO, DRO, Chloride, COD
GW-17303-112602-MM-154	IW-18	Water		VOC, GRO, DRO, Chloride, COD
GW-17303-112602-MM-155	MW-4	Water		VOC, GRO, DRO, Chloride, COD
TB-17303-112602-MM-156	--	Water	Trip Blank	VOC

TCL - Target Compound List

VOC - Volatile Organic Compounds

GRO - Oklahoma Gasoline Range Organics

DRO - Oklahoma Diesel Range Organics

COD - Chemical Oxygen Demand

QC - Quality Control

MS/MSD - Matrix Spike /Matrix Spike Duplicate

TABLE 2
SUMMARY OF ANALYTICAL METHODS
FORMER WILLOW RUN SITE
YPSILANTI, MICHIGAN

<i>Parameter</i>	<i>Method</i>
Site Specific VOC	SW-846 8260 ¹
GRO (State of Oklahoma method)	SW-846 M 8015 ²
DRO (State of Oklahoma method)	SW-846 M 8015
COD	EPA 410.1 ³
Chloride	EPA 325.3

¹ SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition, and Promulgated Updates, November 1986.

² M - Modified Method

³ EPA-WW - "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, revised March 1983.

TABLE 3
HOLDING TIME PERIODS
FORMER WILLOW RUN SITE
YPSILANTI, MICHIGAN

<i>Analysis</i>	<i>Holding Time Period</i>
Site Specific VOC, GRO	- 14 days from sample collection to completion of analysis
DRO	- 7 days from sample collection to extraction - 40 days from extraction to completion of analysis
Chloride, COD	- 28 days from sample collection to completion of analysis

TABLE 4

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO VIOLATION OF
ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE ACCEPTANCE CRITERIA
FORMER WILLOW RUN SITE
YPSILANTI, MICHIGAN

<i>Analysis</i>	<i>Parameters</i>	<i>Associated Samples</i>	<i>Qualifiers</i> ¹
Site Specific VOC	Trichloroethene	GW-17303-112502-MM-140	J
Site Specific VOC	1,1-Dichloroethene	GW-17303-112602-MM-151	J
	Benzene		J
DRO		GW-17303-112602-MM-151	J

¹ The parameter results should be qualified for the listed samples as:

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample (for detected parameters).

TABLE 5

SUMMARY OF DETECTED ANALYTES IN FIELD DUPLICATE SAMPLE SETS
FORMER WILLOW RUN SITE
YPSILANTI, MICHIGAN

<i>Parameter</i>	<i>Investigative Sample</i>	<i>Duplicate Sample</i>	<i>RPD¹</i>
	GW-17303-112502-MM-137	GW-17303-112502-MM-139	
Chloride (mg/L)	186	151	21
	GW-17303-112602-MM-149	GW-17303-112602-MM-150	
DRO (mg/L)	1.6	0.29	140
GRO (µg/L)	19,000	20,000	5.1
Site Specific VOC (µg/L)			
1,1-Dichloroethene	330 J ²	320 J	3.1
1,2,4-Trimethylbenzene	20	20	0
1,2-Dichlorobenzene	3	ND (1.0) ³	NC ⁴
1,3,5-Trimethylbenzene	7	8	13
Benzene	160	150	6.5
Ethylbenzene	5	5	0
Isopropylbenzene	94	94	0
Naphthalene	73	83	13
Styrene	1	ND (1.0)	NC
Toluene	270 J	260 J	3.8
Trichloroethene	26	26	0
Vinyl chloride	75,000	75,000	0
cis-1,2-Dichloroethene	58,000	60,000	3.4
trans-1,2-Dichloroethene	3,800	4,100	7.6
Xylenes (total)	260	260 J	0
COD (mg/L)	174	169	2.9
Chloride (mg/L)	1,490	1,490	0

¹ RPD - Relative Percent Difference

² J - The associated numerical value is an estimated quantity.

³ ND() - Not detected at the quantitation limit stated in parentheses.

⁴ NC - Not calculable.